

Sustainability Impact Assessment (SIA) of the negotiations of the trade agreement between the European Community and the Countries of the Cooperation Council for the Arab States of the Gulf (GCC)

FINAL REPORT

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I. Highlights

- The liberalisation of the trade in goods under the Free Trade Agreement (FTA) leads to increased economic welfare in the Cooperation Council for the Arab States of the Gulf (GCC) and has negligible overall welfare effects on the European Union (EU). Winners in the GCC are the labour-intensive sectors such as clothing and textiles and more energy intensive sectors that require skilled labour such as petrochemicals and metal products. This will lead to increased environmental pressure within the GCC that can be mitigated through enhanced environmental regulation and enforcement. Even though employment in the industry sectors will probably increase due to the FTA in the GCC, this will not be sufficient to compensate for increases in the workforce in the GCC over the coming years.
- There seems to be ample opportunities to liberalise the trade in Service within the GCC. Regretfully almost no data was available to quantify these opportunities. Nevertheless there is also an emerging consensus that links services to sustainable economic growth. Even a scenario whereby the FTA would go further than the existing agreements under the World Trade Organisation, there is considerable flexibility for national governments to vary the level of obligation they will assume in a particular service sector to accommodate local concerns. Furthermore both the environmental and social impact assessment highlighted the positive impacts a further enhancement of the services sector might have on a sustainable growth within the GCC through better environmental management capacities and increased job opportunities for GCC citizens.
- In order to attain a successful FTA, Foreign Direct Investment and in particular ownership rules need to be relaxed in the GCC. Furthermore government procurement procedures need to be established in such a way that they lead to reciprocal and progressive liberalisation of public procurement aimed at ensuring comparable and effective access to their procurement markets. This will not only increase opportunities for EU companies but could lead to an improvement of the economic performance within the GCC leading to an increased capacity to absorb new entrants in the job market, crucial for the GCC.

II. Executive summary

II.A AIM OF THIS SUSTAINABILITY IMPACT ASSESSMENT

The EU is committed to pursue policies that promote sustainable development, also in the field of trade liberalisation. As such the Commission is dedicated to carry out Sustainable Impact Assessments (SIA) of the trade negotiations in which the EU is involved. External consultants perform these assessments.

Such an analysis should inform the negotiators of the potential impacts of the trade liberalisation under discussion. This should allow maximising positive impacts and minimising negative ones and where necessary mitigation measures should be foreseen. These impacts are not merely limited to the economic domain but also include the environment and the social domain in order to allow for a sustainable development of our societies.

This commitment in the field of trade liberalisation reflects the fact that the world economy has entered an era of globalisation where economic, environmental and social

interrelationships exist between countries. It is crucial that all negotiating parties involved in trade negotiations have common understanding of the potential impacts they face. If there are diverging views of the benefits of further trade liberalisation, then it will be difficult to achieve progress on these issues, as demonstrated by the failure of the World Trade Organisation (WTO) Ministerial meeting in Cancun in September 2003 concerning the Doha Development Agenda.

This SIA concerns specifically the negotiations of the trade agreement between the European Community and the Countries of the Cooperation Council for the Arab States of the Gulf (GCC). The negotiations were initiated in October 1990 but were given a boost in 1999 when the GCC made a commitment to establish a Customs Union (CU) by 2005, which came into effect even earlier on 1 January 2003. The EU took the opportunity to update its own negotiating directive with a focus on ensuring compatibility with ongoing WTO negotiations, and to broadening the scope of the Free Trade Agreement (FTA) to include “new” areas such as services, government procurement and intellectual property rights.

II.B THE EU AND THE GCC, TWO MARKEDLY DIFFERENT REGIONS

II.B.1 Their economies

Both regions attain fairly high welfare levels with an average GDP per capita of 22,520 € in the EU and 16,645 € in the GCC. The EU dwarfs the GCC GDP due to its large population. The economy in the EU is well diversified and integrated into the global market, with a large proportion of its economy consisting out of services. On the other hand, the GCC relies heavily on its key natural resource, oil. The oil sector in the Gulf economies still contributes on average to about one-third of the GDP and accounts for three-quarters or more of annual government revenue and export receipts, making these countries vulnerable to oil price fluctuations. In addition, the growth of non-oil GDP has been slow in some of these countries. Historically, governments could count on high oil prices to assure a healthy economic growth. Due to decreases in oil revenues in the late 1980s and again in the second half of the 1990s, the oil based economic model has been under an increasing strain and even net negative per capita growth rates have been recorded.

Services should be an extremely important and fast-growing component of the economies of the GCC. Unfortunately the domestic size of the services sectors in the GCC economies is smaller, by share of GDP, than in comparable countries and even smaller than in the 10 new Member States of the EU. Intra-GCC trade is small. With the exception of Bahrain and Oman, less than 9 percent of GCC member’s exports go to GCC partner countries whereas in the EU this is over 60 percent.

The EU has seen a far-reaching integration of its economies during the last 50 years. It established a customs union (CU) as early as in 1968 eliminating all tariffs on trade among the Member States and a further removal of all barriers led to the creation of a single market at the end of 1992 in which goods, services, people and capital could move around freely.

The GCC has established a free trade zone¹ in 1983 and a CU in 2003, which sets a Common External Tariff for most goods at 5 %. Uncertainties persist with respect to the implementation of these accords in the field. The GCC’s largest member Saudi Arabia, which represents more than half of the GCC’s total GDP, is still no member of the WTO. Therefore substantial scope remains for increases in both intra- and extra-regional trade.

¹ In this free trade zone goods of national origin have become exempted of customs tariffs whereas the GCC member states retained their own external tariffs.

II.B.2 Their environment

The GCC area is vast, comparable to approximately 80% of the total EU surface. It is sparsely populated with a total population of less than 30 million inhabitants. On the other hand, the EU is relatively densely populated with a total population of 375 million. This amount will increase to 450 million when the new Member States join in 2004. The GCC surface is mainly a desert landscape with limited fresh water resources constraining its agricultural capacities severely. The lack of fresh water resources is the most serious environmental problem within the GCC. Consumption of both surface freshwater and groundwater dramatically exceeds the natural recharge rates, relying heavily on groundwater causing salinization problems of these groundwater resources. The population, with the exception of Saudi Arabia, lives predominantly near the coastline of the Persian Gulf and has seen a rapid urbanisation. Marine pollution is high. Only 60 per cent of the wastewater is partially treated when discharged to sea or low-lying land. Another severe threat to the marine environment is pollution from the oil industry through oil spills from refineries, oil terminals, pipelines, oil tankers, etc. While representing only 0.7 per cent of the sea surface, the Persian Gulf accounts for 17 per cent of marine oil pollution worldwide. This can have a grave effect on the marine environment in a region that contains around 8 per cent of the world's mapped coral reefs.

II.B.3 Their social fabric

All countries within the EU are constitutional democracies with a clear segregation of powers. In the GCC, monarchs with limited public representation head the countries. An extraordinary large foreign labour force and high overall growth rates mark the demographic profiles of the GCC. Well over 30 % of the population within the GCC are non-citizens with highs of 80 % in Qatar and the United Arab Emirates. The majority of foreign labourers are male resulting in a skewed gender distribution with 60% of the population being male. High population growth rates have resulted in a young population. This in turn will require over the coming decade a substantial increase of the total number of citizens employed in the workforce.

Historically, the oil-based economy allowed governments to control the employment of its citizens. Many citizens were employed in the public sector, most of them relatively well paid. But the oil-based economy has been under an increasing strain. This dampened demand for labour during a period that saw increasing numbers of graduates from national secondary schools and universities coming on to the labour market. Many of these do not have the skills required to work in the private sector. This created the unprecedented phenomenon within the GCC of high unemployment rates among mainly young GCC nationals. Data on unemployment in the GCC are not readily available. However, the current structural unemployment has been estimated at a sizable 15 per cent of the total national labour force in the GCC countries.

Gender equality is a critical aspect of human freedom and is linked to economic development. The countries of the GCC typically incur relatively low scores based on international indicators on the status of women, applied by multilateral organisations. Nevertheless, the countries of the GCC have scored important successes in girls' education, increasing the expectations of women. But the involvement of women in the economy and the political decision taking process has not evolved in step with education.

II.C THE ISSUES AT THE NEGOTIATING TABLE OF THE FREE TRADE AGREEMENT THAT COULD HAVE AN IMPACT ON THE SUSTAINABILITY OF THE GCC AND THE EU

Traditionally, trade negotiations focus on the liberalisation of trade in goods through reductions in tariff structures and the abolishment of import quotas. The most successful example of multilateral trade deals was the General Agreement on Tariffs and Trade (GATT) established in the wake of the Second World War, which was succeeded by the WTO in 1995. Within the WTO framework there are also initiatives to liberalise the trade in services through

General Agreement on Trade in Services (GATS). The objective of the FTA between the EU and the GCC is to agree on a far-reaching liberalisation of trade in goods and services including the reduction of non-tariff barriers through the liberalisation of public procurement and the opening of the GCC economies to Foreign Direct Investment. Other non-tariff barriers that will most probably be tackled under the FTA are the adequate protection of intellectual, industrial and commercial property rights, customs and administrative Cooperation, standardisation and conformity assessment, competition policies, dispute settlements and current payments and capital movements.

II.C.1 Trade in goods

Average Import Tariff Rates on goods were substantially higher in the GCC than in the EU but with the introduction of a 5 percent Common External Tariff with the establishment of the CU in 2003 this disparity should be reduced substantially. Of course this SIA assesses the potential impact of an elimination of tariffs on goods traded between the EU and the GCC through the FTA.

II.C.2 Trade in services

There is also an emerging consensus that links services to economic growth. Just as with trade in goods, liberalisation of trade in services can lead to technology transfer and technology spillovers. Unfortunately the domestic size of the services sectors in the GCC economies is smaller, by share of GDP, than in developed countries. Substantial potential should exist to increase the services sectors within the GCC. If the GCC states are to modernise their economic structures, it needs to be accepted that services play an integral role in economic progress, and that their exclusion from any trade liberalisation is likely to severely constrain the benefits that are available from the integration of other sectors such as manufacturing. Inefficient domestic production of services behind trade and investment barriers acts as a burden on the production of goods. The EU instead performs well in the services sector, being the world's largest importer and exporter of services. There are a number of areas where services liberalisation in the GCC could have a direct impact on economic, social and environmental sustainability as for example through consumer protection standards, consumer security and safety, pricing levels, professional training and education, environmental standards, consumer relevant quality, diversity of choices and cultural diversity.

The 'laissez-faire' economics of trade in goods is relatively well understood, trade in services, by contrast, is essentially concerned with harnessing the international legal framework - that evolved to facilitate trade in goods - to the *fresh* challenge of providing services across borders. Trade in services has at its core the need to lock states into binding legal commitments by way of international treaties. Only such (virtually) irreversible legal commitments can serve to underpin the complex and risky investment decisions required by firms in serving overseas markets. Important to note here is the absence of Saudi Arabia in the existing international framework for trade in services, i.e. GATS, being not a member to the WTO. Nevertheless one should note that the GATS framework leaves considerable flexibility for national governments to vary the level of obligation they will assume in a particular service sector or sub-sector.

Nevertheless, one should assume that the FTA negotiations aim for a WTO + scenario, i.e. a scenario whereby both trading blocks take on obligations in the services sector that are more far-reaching than existing obligations under the GATS. Specifically for Saudi Arabia this should be the case, not being a member to the WTO. In a number of sectors, such as telecommunications and finance, this should entail increased imports and Foreign Direct Investment from EU countries whose service suppliers are efficient on a global scale. However, it is also very important that there be reciprocal opening of service markets in the EU for sectors where the GCC countries are relatively efficient. Although the negotiations are not complete, they are most likely to impact the following services sectors in terms of seeking removal of equity caps, nationality and residency requirements, any prohibition on the

purchase of land and buildings: *Business services, Communication services, construction and related engineering services, distribution services, environmental services, financial services, and transport services.*

II.C.3 Foreign Direct Investment

Foreign Direct Investment (FDI) has been one of the main engines of trade creation during the past decade. Whereas FDI has known an impressive increase in the nineties, the GCC countries have not been able to capitalise on this increase of FDI flows. The only country that performed well on this matter, Bahrain, is not surprisingly the GCC economy that can least depend on fossil fuel returns for financing its investments. It is clear, that when the GCC member states want to diversify their economies away from the oil sector, that they will need to be a lot more successful in attracting FDI. It is important to note that foreign ownership is still heavily restricted in many sectors in the GCC member states.

FDI is also stimulated by an efficient financial sector, which directs (foreign) investment funds to the most productive uses and the best managed sectors and enables the pooling of risk over the whole economy. A successful FTA for the sustainability of the GCC countries will need to tackle these issues.

II.C.4 Public Procurement

The very heavy government ownership and control of the GCC economy make government procurement a core feature of any FTA with the GCC. Preferential buying policies directed to local companies exist throughout the GCC. Many require that a portion of public tenders be subcontracted to local entities. None of the GCC countries has committed themselves to the WTO Agreement on Government Procurement. The EU-GCC FTA should strive towards achieving reciprocal and progressive liberalisation of public procurement aimed at ensuring comparable and effective access to their procurement markets on the basis of the principles of non-discrimination and national treatment.

II.D WHAT POTENTIAL IMPACTS HAVE BEEN IDENTIFIED?

II.D.1 Impacts on their Economies

Data concerning the GCC countries are not easily and fully available for all the necessary sustainability indicators, neither the economic ones. Due to this constraint the quantitative economic assessment focused on the assessment of the impact on the reduction of tariffs on trade in goods. To assess the trade and welfare impacts due to changes in the trade of goods, of both the recently adopted GCC CU and the proposed FTA between the EU and the GCC, a computable trade simulation model has been constructed.

Important elements for the relatively weak economic performance in the GCC's natural resource abundant economies are the inward-orientation of the region, with comparatively high rates of trade protection shielding inefficient domestic economic performance, low investment rates (both domestic and foreign), a larger than appropriate government sector along with excessive government planning and regulatory restrictions. Reversing this situation will involve not only lowering protection and encouraging FDI but also fostering reforms to domestic economic policies and restoring greater private sector initiative to the economy – not to mention those of a social and political character.

FDI is concentrated mainly in the oil sector, with little consecutive benefit to the diversification and expansion of industry and employment. The GCC recognised the potential of further trade liberalization to help improve their economies and therefore converted their former free trade area into a CU in January 2003 and agreed to accelerate negotiations of a FTA with the EU – the motive for this study.

II.D.1.1 Potential trade liberalisation winners and losers

Hence, it is helpful to get a rough idea of the possible economic impact of a potential EU-GCC FTA, and before that of the possible benefits to be had from the current GCC CU, once they have worked through. As the Gulf region is predominantly a natural resource exporter to the EU and an importer (largely) of technical goods and services, high-end chemicals and some metals and minerals, we can – given the relative sizes of the economies and current tariff structures – suggest a set of *a priori* hypotheses as to the possible economic effects. Such a set of stylised hypotheses can be examined more formally by means of the GCC CU and EU-GCC FTA scenarios that were analysed in the modelling exercise:

- **Intra-GCC trade might not be expected to increase greatly under the CU** as such trade should already been boosted by the pre-existing GCC free trade area and as the economies are considered by many to be similar in their economic structures, which suggests there may be little current scope for the evolution of domestic comparative advantage within the CU;
- There **may be little scope for GCC exports into the EU under an FTA**, as the average tariff paid on EU imports from the GCC has tended to be low, and in the case of oil and gas products non-existent;
- However, **there should be greater scope for expanding EU exports into the GCC** under the FTA. EU exports to the GCC generally face high tariffs;
- Of course, **these potential EU benefits from an FTA will be mitigated** across the board by the extent to which trade is boosted already in advance by the new GCC CU, where tariffs have been reduced in most areas to a 5 per cent common external tariff.

Finally, we will wish to examine how the two formerly low-tariff economies – Kuwait and Qatar – would be affected as a result of the slight increase of their own tariff rates to the new 5 per cent GCC Common External Tariff due to the CU.

II.D.1.2 Results of the economic modelling exercise

The results do not entirely confirm our prior expectations and in some cases are somewhat surprising. The key results obtained are as follows:

- **Intra-GCC trade increases** more than might be expected under the GCC CU;
- There is probably more scope for **GCC export creation into the EU under an FTA than expected**, as trade liberalisation reveals some competitive sectors in the GCC non-oil economy;
- Potential **EU trade expansion into the GCC is mitigated under an FTA** by a larger than expected boost to intra-GCC trade from the new CU. However **GCC imports also expand more than expected** by the stylised analysis, so EU exports into the GCC increase as well as intra GCC trade under the FTA;
- These **GCC export increases occur due to minimising distortions** within the GCC economies that have stunted the scale of economic activity in sectors in which it can now *reveal* a comparative advantage;
- The GCC import boost occurs as **trade reforms release previously untapped, or under-utilised, human and physical resources** that provide a boost to the scale of domestic demand.

Hence, in general the results are more optimistic than might have been expected, and we are assuming that this is because the GCC economies are (or have been) severely demand constrained. Given appropriate realignment in their outward orientation they generate trade gains under both the CU and the FTA. As the results are somewhat counter intuitive to our

previous expectations, the modelling exercise does appear to have provided some novel, slightly surprising insights which we consider can be justified post hoc by what we know of the GCC economies present inward orientation and economic distortion as a predominantly oil-based region.

In general, the quantitative results indicate that both the new GCC CU *and* the proposed EU-GCC FTA would expand trade and improve economic welfare in the GCC countries, with little significant economic impact on the EU. Given the dominance of petroleum in the exports of the GCC countries, adjustment of trade in this sector dominates much of the quantitative results. However, both the new CU and the proposed preferential trading arrangement stimulate trade in some other important sectors, including GCC exports in labour-intensive sectors such as clothing and textiles and in more energy intensive sectors that require skilled labour such as petrochemicals and metal products. However, export gains for the EU under the FTA into the GCC are also likely, predominantly in high-tech, non-oil sectors.

As might be expected, the proposed EU-GCC FTA results in larger trade and welfare gains for the Gulf countries. Indeed, trade diversion under the FTA is reduced by comparison to trade diversion under the CU because of the capacity of EU exporters to fully satisfy the – currently constrained – GCC demand for imports at duty-free prices in a number of internationally competitive sectors. GCC consumers would get the opportunities to enjoy imports of chemicals, machinery, and transport equipment, among other major categories of trade goods, at internationally competitive prices, with little trade diversion. On the production side, the source of the welfare benefits can also be traced to greater gains for GCC exporters, mainly in response to greater depreciation of the exchange rate under the proposed FTA, rather than preferential access to the lucrative EU market for imports.

The two 'sensitive' GCC countries, Kuwait and Qatar, are the two GCC countries with initial tariff rates below the 5% Common External Tariff. We can see that they are not significantly disadvantaged under the CU, and their position is again improved under the FTA.

II.D.2 Impacts on their Environment

This SIA uses the results of the general GCC-EU modelling exercise to suggest specific environmental issues that might pose general risks, and specific indicators that might be monitored and tracked to track their ultimate impacts. A preliminary consideration based on the general results of the modelling indicates that there may be environmental risks associated with trade-related growth in specific industrial sectors in the short term (for example textiles and apparel) and the medium and longer term (for example petrochemicals). However, these risks can be mitigated by the existence and enforcement of a robust regulatory regime for environmental protection, including high standards and technological developments. They can also be tracked through the development of an effective monitoring system. This discussion also points to the potential for significant benefits that might be offered by liberalisation of trade in services.

II.D.2.1 Trade in Goods

The general discussion of potential for environmental impacts as a result of an EU-GCC FTA is divided into the following five categories, reflecting environmental priorities in the GCC, where most of the impacts are expected to occur:

- The severe shortage of water resources both in quantity and quality.
- Deterioration of coastal and marine areas.
- The limitation of available lands and deterioration of land resources.
- The unsustainable consumption of depletable resources.

- The rapid rates of urbanisation and associated problems.²

The availability of freshwater resources is probably the most important environmental challenge facing all the GCC countries. Water is an important input into production in a number of industrial sectors. Therefore, increases in scale of production, driven by increasing trade, will bring about increases in use of water as an input. In particular, of relevance in this SIA are the (petro-) chemical and the textiles sectors, both of which use large quantities of process water, and in the case of the (petro-) chemical industry, cooling water. Key variables for assessing threats to water quantity include efficiency of water use, technology employed in production practices, and the potential for recycling water for industrial use. Water sources are also used by a number of industrial sectors as mechanisms for the disposal of effluents. Levels of effluents into watercourses will impact the quality of the water, and therefore limit the quantity of clean, freshwater available. Both the chemical and textile sectors, in addition to being large water users, also discharge considerable quantities of effluents. Any increases in scale of production, resulting from trade-induced industry growth could unless properly handled with existing or future infrastructure development, result in increasing levels of effluents in watercourses.

A second priority area for the GCC countries is the state of the coastlines, marine pollution and marine resources. The marine ecosystems in the water surrounding the GCC countries are home to significant amounts of biodiversity, however, it is under increasing threat from both land-based and marine-based sources of pollution. Major land-based sources of pollution include oil pollution, solid waste, sewage, land-based effluents, heavy metals, and hot brine. These will be aggravated by increasing pressures of industrial activity (such as textile or chemical manufacturing) and human settlements along the coastline. Increases in scale of trade will likely translate into increases in production, perhaps new facilities, and perhaps attracting additional populations to the coastal areas in search of work. Impacts on the marine and coastal areas in the GCC countries are further heightened by increasing transportation through the waters surrounding the region, which contributes largely to marine-based sources of marine pollution. Major sources include oil spills and the ongoing discharge of oily waste and ballast waters into the water surrounding the GCC. Environmental impacts of transportation will almost always increase with the volume of goods transported but the modes of transportation employed for the increased movement of goods and levels of regulatory oversight will have an impact on this activity and therefore the associated environmental impacts.

A third area of environmental priority for the GCC countries involved the limitation of available lands and deterioration of land resources. Most land in the region is either deserted or vulnerable to desertification and all countries are faced with soil contamination as a result of industrial activity such as oil and gas production. There are a number of variables that could pose risks to land in the GCC region as a result of increased industrial activity induced by EU related trade in the specified sectors. In particular, the characteristics of the production process including the use of hazardous products, the over-abstraction of water, and the disposal of waste materials are relevant. For example, discharges from textile and chemical industries can include heavy metals and other pollutants, which require specialised treatment and disposal. To the extent that there are increases in scale of trade, there will typically be increases in production and generation of waste. There may also be a need for increasing infrastructure for production and transportation, which can have environmental impacts. For example, building roads can impact land, fragment habitats, and can encourage the increased use of heavy trucks, with associated air quality impacts and casualties. Where transported goods are inherently dangerous products, such as chemicals, this increases the risks of

² Abu Dhabi Declaration on the Future of the Arab Environment Programme (CAMRE, 3 February 2001).

spillage and the resulting threats to contaminate soil, damage habitats and pose a threat to human health. The nature of the regulatory regime and its enforcement, as well as policies to promote safer modes of transportation (such as rail) will make a difference here.

A fourth priority concern for the GCC region is the unsustainable consumption of natural resources, including energy, water and other resources. Increases in trade in various industrial sectors can be expected to have impacts along the production chain beginning with the extraction of natural resources and including the use of resources (such as water and energy) in their production processes and in their ultimate transportation.

The fifth priority issue for the countries of the GCC is the rapid rates of urbanisation and associated environmental problems. From an environmental perspective, these problems include, *inter alia*, urban air pollution, congestion, noise, and waste disposal. Urbanisation is associated with rapid industrialisation and will be encouraged in areas where industrial development occurs in response to trading opportunities and other forces. In all cases where urbanisation occurs at a rate that is not matched by infrastructure to support it, there might be negative impacts across all environmental media including air, water, land, coastal resources and biodiversity.

II.D.2.2 Trade in Services

Taken together, the services sector is typically thought to have lesser trade-related risks for the environment than the production and transportation of goods. This is particularly true in light of the knowledge-intensive nature of many of the services sectors, and that technology and innovation may offer significant environmental benefits.

There are a number of services areas that offer the prospect of knowledge and technical expertise related to environmental protection and enhancement, under an EU-GCC FTA. For example, there are a number of categories of business services that, if liberalized, could have environmental impacts. These include specific areas of expertise related to environmental liability and law-making and regulation, auditing, design and building codes, urban planning, engineering services, measuring and monitoring services, environmental risk analysis, environmental management processes, expertise on environmental impact assessment and other areas of expertise. In these areas, the countries of the GCC could benefit from the extensive experience in Europe to develop their own expertise, which could then be applied throughout the economy to conduct Environmental Impact Assessments on infrastructure projects and policies and diffuse knowledge throughout the economy.

In terms of financial services, insurance for the export of goods in transit is an important service, which has yet to be developed. From an environmental perspective, this is particularly significant for insurance for damage of spills caused by accidents or natural disasters that can be expensive to clean up and require specialised expertise. Management systems that promote environmental and social responsibility, including, for example, procurement practices could also have clear environmental benefits.

Finally, environmental services include a number of general areas of relevance to this SIA, including water treatment services, solid waste management, hazardous waste management, consulting and engineering, remediation and industrial services, and analytical services. For the GCC in particular, the environmental benefits of liberalisation of environmental services could contribute to addressing a number of environmental priorities. Particularly relevant are the prospects of attracting expertise to contribute to the provision of clean water, waste collection, recycling of effluent water for industrial use, use of waste recycling to create alternate sources of energy, opportunities for environmental management, education and training and skill transfer, and the development of innovative infrastructure. The potential opportunities associated with this sector make it worthy of further detailed examination.

II.D.3 Impacts on their Social Fabric

The social impact assessment uses the results of the general GCC-EU economic modelling exercise to determine the possible social impacts. The economic impact assessment pointed out that an FTA would not have a substantial impact on the economies of the EU. Instead, most GCC countries could benefit clearly. Therefore the focus of this social impact assessment of the FTA concentrated on the GCC and more in particular on the job market in the GCC.

It is worthwhile noting from the start that there exist many similarities among the six GCC countries, particularly in regard to labour and employment policies. Collectively, one may characterize that the labour market in the GCC region relies heavily on foreign labour. Due to weak economic growth and a high population growth, open unemployment of nationals has become a specific problem. There are several expectation gaps between the nationals and the labour market (be it the public or private sector as employer) in terms of remuneration and competencies. The economic impact assessment concluded that there is probably more scope for GCC exports growth to the EU under an FTA than expected, as trade liberalisation reveals some competitive sectors in the GCC non-oil economy. The manufacturing sectors that might experience positive impacts are amongst others the textile sector and the petrochemical sector. As a consequence, it can be expected that employment in these sectors will increase.

Due to the low skilled labour employed in the textile sector the potential benefits for the employment of GCC citizens in this sector will be rather limited. On the other hand, the influx of low skilled expatriates could increase in these sectors. The textile industry is a sector renowned for its abuses such as sweatshops and the like. Therefore local governments should set up appropriate Health & Safety policies and social regulations to prevent these abuses.

In the remaining low skilled sectors, i.e. 'Food and beverages', 'Fabricated Metal Products, Machinery and Equipment' and 'Non-Metallic Mineral Products' the FTA could actually lead also to a deterioration of the trade balance. Thereby also putting pressure on labour demand in these sectors. If the GCC countries would like to increase employment of its own citizens within these sectors it will thus need to substitute expatriates for locals which could be difficult due to the low wages paid in these sectors, though still substantially higher than in the textile sector.

Services, related to import of products would create new job opportunities due to the increases in imports. Because of the requirement for mid skilled workers for these services, nationals could fill in these jobs. For the overall Chemical, Petroleum, Mining and Quarrying Mineral Products sector a positive increase of its trade balance is predicted with the FTA. These sectors clearly remain by far the primary sectors that could absorb high skilled citizens.

From the above one could conclude that it is improbable that the liberalisation of the trade in goods under the FTA on itself will cause an increase in labour demand that is sufficient enough to absorb the high amount of newcomers on the market in the coming years.

Therefore it is crucial to have a look at the implications of the FTA on the labour market of those other sectors that constitute the largest net employers of locals in the GCC, i.e. the service sectors. The service sector is a relatively important sector even though much less developed than in the EU. Positive impacts of the EU-GCC FTA could occur in business services, communication services, construction and related engineering services, distribution services, environmental services, financial services, and transport services. These are all sectors where medium to high skilled manpower is required. Given the fact that medium/high skilled occupations are the most suitable jobs for GCC citizens, considerable employment opportunities for nationals are identified in these sectors. Because of these opportunities, the social impact of liberalisation of trade in services will probably be greater to the citizens than will be the liberalisation of trade in goods, making it a crucial part for a successful outcome of the FTA.

II.E SECTOR SPECIFIC IMPACT ASSESSMENTS

The impact of the FTA has been assessed for two sectors that configure clearly in the ongoing negotiations and that will undergo an impact from any future FTA. These are the Petrochemical and Aluminium sectors.

II.E.1 The Petrochemical Sector

As distinct from “Chemicals” where the modelling exercise indicates that opportunities for trade expansion under the FTA are somewhat bleak, petrochemicals depend more on high-volume scale production using proven technologies, and depends on assured access to low or no-cost and possibly preferentially priced feed stocks (i.e., left over from oil production) within close proximity to reduce transportation costs. This suggests that GCC petrochemical exports to the EU should expand once a FTA takes effect. The petrochemical sectors itself, and the connected sectors (upstream (feedstock) and downstream (final products)) have the potential of having important economic, environmental and social impacts in the GCC region if increasing exports from the GCC are realized in the coming years.

The Middle East is expected to benefit from global production increases in the coming years due to its comparative advantages in this sector. The advantages of the sector in the GCC countries are in particular (i) their proximity to the new centres of global demand, (ii) a pre-existing petrochemical capacity, and (iii) the availability of low-cost feedstock. Hence, the production of petrochemicals in the GCC is expanding faster than that of any other region in the world and EU-GCC FTA should enhance this process.

Careful planning and development within the industry should be foreseen to manage the environmental, health and social issues that might be expected due to increased production. This planning will be important as there are a range of critically environmental threats associated with the petrochemical industry, including extraction issues related to inputs such as crude oil and natural gas, the production processes applied, the inherently hazardous nature of the products themselves and the transportation, use, disposal and recycling of these products during their lifecycle.

Similarly, from a social perspective, the inherently hazardous nature of the substances involved in the petrochemical sector demand that attention also be paid to the impacts of increased production on human health and worker health. Risk of exposure to harmful chemicals is highest in the workplace, and for some to a lesser extent among the general population. One key variable which will determine the risks to the general population associated with any increase in export-oriented production is the extent to which production facilities and disposal sites are located near urban areas, major water sources, or coastal areas. A second key variable is the extent of health and safety regulations and the level of its enforcement.

FTA induced export led petrochemical industry expansion could also have several employment enhancing effects. The petrochemical industry is by far one of the best paying sectors in the GCC. Increases in labour demand by this sector could lead to increased absorption of citizens in the workforce. Policies to improve access to labour markets, including better defined educational and training programs geared to the private sector, will contribute to the attainment of a greater share in the overall labour markets of citizens within the GCC. Given the high skill levels required, the premium on research and development and the location of work in the petrochemical industry, it is likely to be more open over the long term to employing women, relative to the basic petroleum industry where a different corporate culture and work conditions prevail.

In general, in order to mitigate the negative effects of any increases in production due to the EU-GCC FTA, regulations should be foreseen and implemented or incentives created that guarantee that the employed production technologies and products within the GCC comply with high health, environmental and safety standards, such as in the EU. This will not only

minimise the externalities from this sector in the GCC but also stimulate its rapid modernisation, which suggests that companies will steadily acquire the world-class technology, plant and operational systems required to compete with the best in the industry.

II.E.2 The Aluminium Sector

The aluminium sector is a sector of particular importance to the FTA negotiations because it involves a specific demand from the GCC. They want to see the EU import tariffs on primary aluminium reduced from 6 % to zero %. The reason of course is that they see this as a potential export growth sector in the GCC.

When one compares the production cycles between the EU and the GCC it becomes apparent that EU companies are active in all stages of the aluminium production cycle with a strong presence in the final stage of the aluminium production itself, i.e. the smelting of aluminium, and the secondary stages where the semi-finished products are produced. Instead the GCC has only major activities in the smelting of aluminium and some limited activity in the secondary phase of aluminium production. Therefore the in depth analysis of the aluminium industry focuses on the primary aluminium production.

The aluminium production in the EU, at roughly 2,5 million tonnes or 10 % of world production, is much larger than the current annual production in the GCC, estimated at one million. The GCC producers have access to low cost energy inputs and are less confronted with internalisation of environmental costs, such as for instance the EU emission trading system for large energy intensive industries implemented in order to attain the Kyoto Protocol greenhouse gas reduction obligations within the EU. Unlike in the EU, the production of aluminium in the GCC is expected to increase substantially. Proposed investment programmes could lead to almost a tripling of production in the medium term. At the moment all production is located in Bahrain and the UAE. Future production plants are foreseen in Oman and Qatar.

Prices in the primary aluminium industry are not very elastic. It is a global commodity for which the reference price is set at the London Metal Exchange. Local prices are then determined by adding a local premium (for transport and insurance) and any increases due to import tariffs. Being a global commodity implies that the liberalisation of trade in primary aluminium under the FTA will not have a significant impact on the price setting globally. Furthermore because 70 % of imports in the EU are already free of import tariffs and because GCC imports represent only a small portion of the rest of the import, reducing the EU import tariffs will neither have a significant impact on the price setting within the EU and thus will have no significant impact on the margins of the existing production capacity within the EU.

The economic consequences of liberalisation can be summarised as follows:

- In the short run, a tariff reduction under the FTA will (most probably) increase the profit margin of the GCC exports into the EU because they will absorb the 6 per cent tariff reduction as extra profit.
- In the long run, due to the FTA and the already planned production increases in the GCC, market penetration by the GCC in the EU is likely to increase. Hence this increase of import is more likely to be detrimental for other import countries without FTA (e.g. Russian imports).
- The FTA will not immediately lead to delocalisation of existing production capacity out of the EU.

The European primary aluminium industry does not see any positive effect for the EU sector from any tariff reduction under the FTA. But they see some mitigation measures to compensate this comparative loss under the FTA that could be included in the FTA:

- Unconditional foreign direct investment possibilities in the aluminium sector in the GCC;
- Equal access conditions for EU investments in the GCC to energy sources.

Energy is an important input in the aluminium-melting sector because it needs large quantities of electricity in its production process. One major environmental impact of the aluminium production is thus the emissions of greenhouse gasses due to the production of electricity based on fossil fuels. In the GCC the electricity production is based on natural gas, an abundant and locally cheap energy source. In the Europe a mix of energy sources produces the electricity. Furthermore greenhouse gasses such as perfluorocarbons are released during the production process itself but can be mitigated substantially by applying sound management techniques and state of the art technologies. No detailed data is available but it is argued in the SIA that greenhouse gas intensity per tonne aluminium produced could well be higher in the EU than the GCC.

As stated above, the FTA might well lead in the long term to higher increases of production in the GCC and lower increases in the EU. At first sight this is positive for the environment because greenhouse gas intensity could well be lower in the GCC than the EU, but one needs to take into account that due to the EU emission trading system for large energy intensive industries increases in the production of primary aluminium in the EU have less impact on the environment because such increases in production and thus greenhouse gas emissions can only happen if this would lead to similar reductions of greenhouse gas emissions in other industries within the EU. Therefore higher increases in production in the GCC with the FTA could have a negative impact on the global environment through increased emissions of greenhouse gases.

As stated before, the FTA could result in a shift in future production increases away from the EU towards the GCC. As such this has a negative impact on the employment within the EU and a positive one within the GCC. Aluminium smelters represent roughly 22000 employees in the EU. The negative impact of the FTA in the EU sector is only foreseen on future production expansions and thus would only constitute a negative impact on the future employment potential.

Instead in the GCC, where the aluminium smelters employ just over 5000 employees the production increase due to the FTA will lead to an increase in employees. The increases in employment within the GCC could be a stimulus for the employment of GCC citizens in the private sector. Nevertheless the total workforce in the aluminium smelters is relatively small, even for Bahrain, so the impact of increased citizens working in the aluminium smelters will be more of a symbolic nature, demonstrating that locals can be employed in internationally competitive and technologically advanced industries with substantial added value. It are these kind of industries that the GCC will need to attract if it wants to create suitable opportunities for its increasing workforce.

II.F POTENTIAL MITIGATION MEASURES

- There are quite some differences in the way environmental and social issues are being approached in the EU and the GCC-region, as well as there are quite some differences in the political, the economic, the social and the cultural context of the respective regions.
- The development of a FTA EU-GCC without any specific mitigation measures, will have distort effects in terms of competitiveness amongst the economic players in both regions in some sectors (micro-level and sector level³), it will have environmental and social

³ See for instance the In-depth analysis on the Aluminium Sector

impacts that are to be steered as to come to a positive effect on the sustainable development of both regions (macro-level).

- We find it unlikely that there will be a spontaneous evolution in the EU, and, even more in the GCC, that will mitigate the social and environmental externalities (already present and those which will be created by the FTA), and that will push forward the sustainable development in aforesaid regions.
- Environmental and social agreements are essential to the long-term sustainable success of the FTA between the EU and the GCC.
- The FTA should integrate economic, environmental and social agreements into one Free Trade Agreement, instead of having separate Agreements.
- In the event the FTA aims to develop Sustainable Trade, one might prefer to talk about a STA (Sustainable Trade Agreement) instead of a FTA, which puts more emphasis on the economic pillar.

II.G FOLLOW-UP/FURTHER STEPS

As follow-up actions in the framework of this Framework Agreement, we suggest 3 major work blocks, which require further attention:

II.G.1 In-depth analysis of Services

Free Trade in Services is, next to such sectors as Aluminium and the Petrochemical industry, the most important cluster of sectors that are likely to have important economic, social and environmental impact for both regions. Currently, the domestic size of the service sectors in the GCC economies is smaller, by share of GDP, than in developed countries. Substantial potential exist to increase the services sectors within the GCC.

Following service sectors are amongst others interesting fields for further in-depth analysis:

- Tourism,
- IT and telecommunications,
- Financial Services

II.G.2 In-depth analysis of the food sector, clustering several sub-sectors:

It is such that specific sectors that reside under the Food-industry are not that important compared to other sectors in the GCC (e.g. the petrochemical and aluminium sector). Nevertheless, some of these sub-sectors are vital economic activities to some territories inside the GCC (Oman fisheries), and the Food-industry as a whole, has a very important role to play, when it comes to the food provision of the whole region. The GCC is for the majority an importer of foodstuffs (total import amounted to Mio USD 7918,5 in 1999).

The food industry in the EU is highly regulated (Food safety, labelling, GMPs, HACCP, etc...). It is a "high tech" industry sector with lot of export potential (in terms of goods and services (technology transfer / know how).

As we have observed in our general environmental impact assessment, there are quite some issues that are related to the food industry, which require action and further attention, as to

come to a sustainable development in the framework of a FTA. A FTA might have substantial impact on the environment and social structure.

Yet, a FTA in these areas could generate beneficial impacts to both regions, if connected with specific cooperation programs to make it more sustainable (e.g. innovation and technologies for sustainable agriculture, utilisation of fresh water resources, waste water treatment, clean-up of pollution, joint research and development of policy models to ensure the management of renewable and non-renewable resources).

II.G.3 Blueprint for cooperation on sustainable development of GCC region as part of the development and implementation of mitigation measures

- Jointly developing sustainable trade in quite different regions from a political, historical, cultural and economic perspective, requires much more than just a set of rules and dispute settlement agreements.
- Such a set of rules and measures, if implemented can have the impact of destroying social structures and disrupt social dynamics. Or in the event, the perceived risk is imminent; the set of rules might just as well have no effect at all (and in such prove to be a waste of time and resources).
- At the end of the day, sustainable development of both regions is only guaranteed if there is a common view on the sustainable development of both regions, and such in full respect of each other's diverse context. The better this is integrated and backed up by the respective cultures, the higher the chances you will have to reach the objective.
- We observe that there are quite some similarities in the views of the EU Commission and the interpretations of the Shari'ah, when it comes to the principles of corporate social responsibility and sustainable development in general.

Further analysis and discussion to come to a blueprint of such a common framework is an opportunity for as well the EU as the GCC, to come to a balanced agreement, in which both diverse societies can find themselves back.

Next to these we think other issues, such as corporate tax policies, foreign direct investment limitations (direct or indirect), as Sanitary and Phytosanitary Standards measures require further attention as to enable free trade and investment possible in the field.

III. Introduction

III.A PURPOSE OF THE SIA

The European Union (EU) is committed to pursuing policies that promote sustainable development. To this end, in 1999 the EU initiated a programme on Sustainability Impact Assessments (SIA) of the trade negotiations. The programme's main goal is the integration of sustainability concerns into the development of trade policy, and the pursuit of complementary policies to mitigate the negative impacts and to enhance the positive impacts of liberalisation. Specifically, a number of studies have been performed to provide an overall framework methodology for assessing the sustainability impacts of trade agreements. The SIAs strive to develop policies that will promote sustainable development while ensuring economic benefits brought about by liberalisation.

The task to consider the sustainability impacts of trade negotiations reflects the fact that the world economy has entered an era of globalisation where economic, environmental and social interrelationships exist between countries. Not only are the trade agreements growing in number, but also in breadth and depth, and liberalisation policies cover a range of sectors wider than ever before and penetrate deeper into areas once considered exclusively national domains. This might make it more difficult for countries to regulate environmental protection, or to protect culture or other social imperatives. Alternatively, on a government-led or voluntary basis, it might encourage an upward movement of environmental and social standards toward a common higher norm that supports modernisation and good governance. The EU approach to SIA reflects the complexities of this reality. It raises the prospect for policy development in ways that meet economic, environmental and social goals simultaneously.

It is crucial that all negotiating parties involved in trade negotiations have common understanding of the potential impacts they face by entering such agreements. If parties appreciate potential impacts of different measures differently, then reaching an agreement will become more difficult. This can lead to serious disturbances in the negotiating process, as we have seen during the Ministerial Conferences of the World Trade Organisation (WTO) in Seattle in 1999 and more recently in Cancún. By conducting this SIA the EU wants to ensure that all parties acquire a better understanding of the potential impacts on their sustainable development of the trade negotiations in order to facilitate a positive outcome of the negotiations. Therefore the general objectives of the SIA are:

- to provide a better basis than what has existed to date to ensure that ongoing negotiations take the sustainable development dimension fully into account, and to provide an SIA-based assessment of the outcome of negotiations when the time comes to present them for formal adoption;
- to provide inputs to the definition of a full package of policies at the EU level and in the domestic context of trade partners, which will produce the optimal outcome in terms not only of trade liberalisation and economic growth but also of other components of sustainable development;
- to create a basis for the discussion with stakeholders about sustainability implications of the negotiations.

III.B EU-GCC FREE TRADE AGREEMENT

The EU is currently involved in trade liberalisation negotiations at the multilateral level in the World Trade Organisation, and at a bilateral and regional level. Among the regional negotiations ongoing are those for a Free Trade Agreement (FTA) between the European Union and the Cooperation Council for the Arab States of the Gulf (GCC). As part of its commitment to undertake SIAs of trade negotiations, the European Commission (EC) has launched a SIA regarding the EU-GCC FTA.

The EC-GCC Cooperation Agreement, signed in Luxembourg on 15 June 1988, provided a basis for the Parties to enter into discussions leading to a FTA. The negotiations were initiated in October 1990 on the basis of negotiating directives, drafted in 1989. Negotiations were renewed in 1999, when the GCC made a commitment to establish a Customs Union by 2005 (later moved up to 2003) and presented a negotiating mandate of its own. The EC took the opportunity to update its own negotiating directive with a focus on ensuring compatibility with ongoing WTO negotiations, and to broaden the scope of the FTA to include “new” areas such as services, government procurement and intellectual property rights. The EC and the GCC Secretariat resumed negotiations on the basis of a working document in March 2002. The GCC Customs Union came into effect on 1 January 2003.

The primary objective of the FTA is to deepen existing relations between the Parties on the basis of reciprocity and mutual interest. To this end, the FTA will strengthen commercial and economic relations through trade liberalisation and will reinforce and broaden Cooperation in related areas. The basic content of the FTA is defined in the negotiating directives. The primary building block is the establishment of a free trade area, by the progressive elimination of tariffs and non-tariff barriers on substantially all trade between the Parties. The FTA will also aim to simplify requirements and procedures related to imports and exports and provide for the progressive and reciprocal liberalisation of trade in services to assure a comparable level of market access opportunities.

The objective of the FTA is to include liberalisation of public procurement, ensuring comparable and effective access to the Parties' procurement markets on the principles of non-discrimination and national treatment. Likewise, the FTA will seek to effectively and adequately protect and enforce intellectual, industrial and commercial property rights in accordance with the international standards. Finally, the FTA should also include coverage related to customs and administrative Cooperation, standardisation and conformity assessment (including sanitary and phytosanitary measures), competition, and current payments and capital movements.

The liberalisation of trade and services by removing barriers to trade can hasten processes of capital and technological modernisation and spur growth. Newly opened markets can provide the revenue and the income to allow firms to accelerate capital turnover, and invest in cleaner, more efficient plants, technologies and processes contributing to the long-term environmental well-being. Economic growth decreases unemployment levels and allows a more equal participation of all age groups and men and women in the workforce, thereby improving the social sustainability of societies.

III.C OVERALL PROJECT DESCRIPTION AND MANAGEMENT

The first phase of the project consisted on developing an inception report (January – March 2003). The inception report laid the groundwork for the following global preliminary SIA and the in-depth SIA analyses of two specific sectors. A methodology report was presented on 03 July 2003 and the draft final report was presented to the Steering Committee at end of October 2003. This process includes an important component of public participation and stakeholder consultation, which involves a series of meetings with civil society organisations as well as electronic and other outreach. Figure 1 illustrates the project's overall organisational structure. All work performed by the consortium has occurred under the supervision of an external Steering Committee that included representatives of the European Commission.

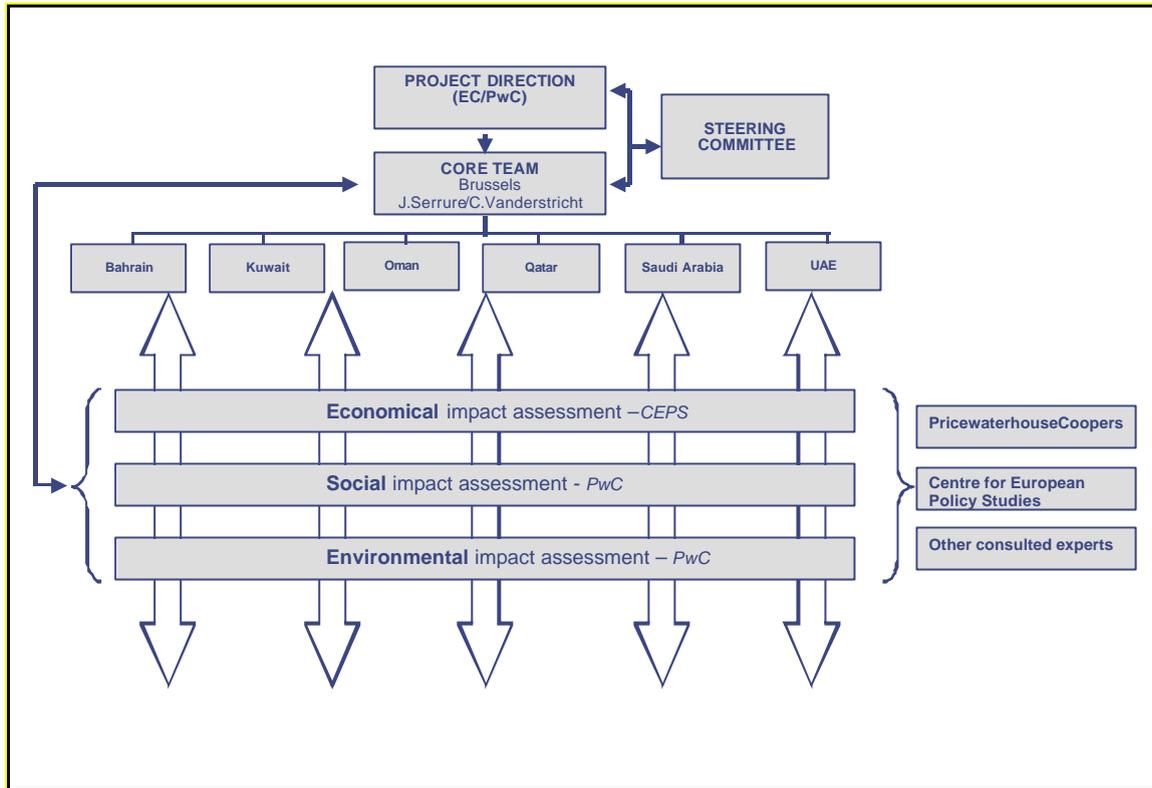


Figure 1: Organisational Structure of the Project Team

III.D CONSULTATION PROCESS

An integral part of this project was the development of a meaningful dialogue with stakeholders in the EU and the GCC about issues related to sustainability and the EU-GCC trade negotiations. Stakeholders included, *inter alia*, government representatives, non-governmental organisations representing business interests, the environment and development issues, academics, and other relevant institutions.

The goal of the consultation process was to:

- Inform all stakeholders about the SIA of the EU-GCC free trade agreement;
- Raise awareness about the SIA process and progress achieved;
- Increase the involvement of all stakeholders in the SIA and invite them to ask questions, make comments and to contribute to the SIA;
- Contribute to a growing understanding on the linkages between trade and sustainability.

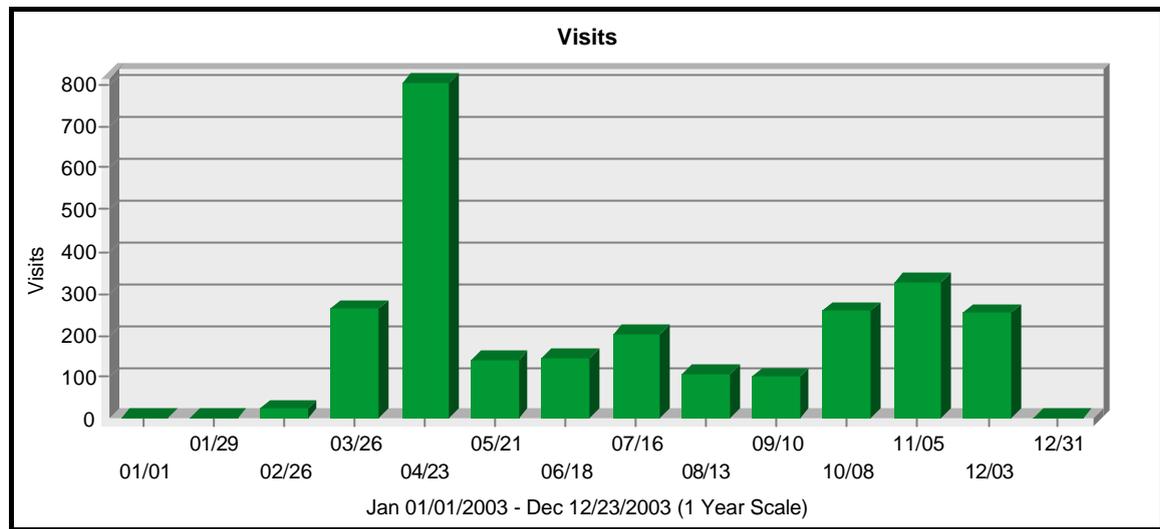
III.D.1 Electronic Mechanisms

A dedicated Internet website has been created for this project (<http://www.sia-gcc.org>). This website allowed stakeholders to access information about the project, receive updates on progress and to provide comments and input to the project team. The website included such features as general information about the project, relevant documents, electronic links to other

related SIA websites, an electronic feedback function that allowed stakeholders to comment on the SIA and a list of events to notify the stakeholders about upcoming meetings.

Whereas more than 12 273 hits were recorded (see Figure 2) in total, this tool did not prove to be very effective in discussing. As such its purpose is merely informative and awareness creating.

Figure 2: Total number of successful hits during the consultation process from January to December 2003.



Next to the totals of successful hits, the electronic tool was able to give us an insight in the region (see Figure 3) and the domain/sector of the visitors (see Figure 4), based upon 2626 retraceable visits. Western Europe, North America and the Middle East are the top three regions of the website visitors.

Figure 3: Geographical Regions

Top Geographic Regions		
	Geographic Regions	Visits ▼
1	Western Europe	1,130
2	North America	855
3	Middle East	243
4	Asia	101
5	Region Unspecified	99
6	Eastern Europe	72
7	Northern Europe	41
8	Region Not Found	27
9	South America	14
10	Western Africa	13
11	Australia	13
12	Central America	5
13	Northern Africa	5
14	Southern Africa	4
15	Eastern Africa	4
Total for the Geographic Regions above		2,626

Figure 4: Top Level Domains

Top-Level Domain Types

	Top-Level Domain Type	Hits	% of Total Hits	Visits ▼
■ 1	Commercial	1,021	33.58%	329
■ 2	Network	1,089	35.82%	129
■ 3	International	346	11.38%	28
■ 4	Education	236	7.76%	22
■ 5	Organization	199	6.54%	19
■ 6	Government	143	4.70%	16
■ 7	Military	1	0.03%	1
■ 8	Arpanet	5	0.16%	1
Total for Known Top-Level Domain Types		3,040	100.00%	545

The most downloaded document on the website was the inception report with 7526 downloads, followed by the brochure with 302 downloads.

III.D.2 Stakeholder Meetings

The consultation process includes a number of meetings with stakeholders.. A broad meeting was organised in Brussels on 19 April 2003. At this meeting the inception report was presented to the stakeholders. Another meeting was held in Cancun in September.

Several meetings were organised in a one-to-one basis with different representatives: The most important were held with:

- Délégation du Conseil de Coopération des pays Arabes du Golfe
- SABIC, EAA, CEFIC,
- Several academics (Islamic studies)

The NGO world did not show a big interest in the topic, nevertheless engagement was done at several moments. NGO from the GCC have not even replied to our requests to get their view, input.

When discussions took place, they proved to be fruitful as to gear their respective positions

III.E DATA AVAILABILITY

Data concerning the GCC countries are not easily and fully available for all the necessary sustainability indicators. Environmental and social data are particularly scarce. Where data is available, the inception report has provided quantitative information to illustrate trade flows, changes in trade flows, investment levels and other issues related to the economic impact of trade liberalisation. In many cases, identifying the impact on sustainability associated with those changes had to rely on standard qualitative methods including extrapolation of relevant datasets. For the two sector-specific SIAs, expert interviews were carried out in order to attain the necessary information.

In the inception report an effort was made to collect preliminary data across major sustainability issues that are comparable among the countries of the GCC, the EU, and to EU candidate countries. In some cases this data collection is incomplete. Major data sources used in this phase of the SIA include, *inter alia*, the United Nations (in particular UNDP, UNEP and ECWAS), the International Monetary Fund, the World Bank, the World Resources Institute, the World Trade Organisation, the GCC Secretariat, the Arab Monetary Fund, National Statistical Offices in the GCC Countries and Eurostat.

IV. Overall approach to the SIA

IV.A.GENERAL APPROACH

This SIA follows the general methodology that was adopted in other SIAs by the EU.⁴ Typically, the analysis was done at a regional level with on one hand the EU and, where possible, the 10 candidate countries slated for EU accession in 2004 and on the other hand the GCC. Consistent with the ongoing work being done on behalf of the EU on SIA, the main stages in the SIA process are the following:

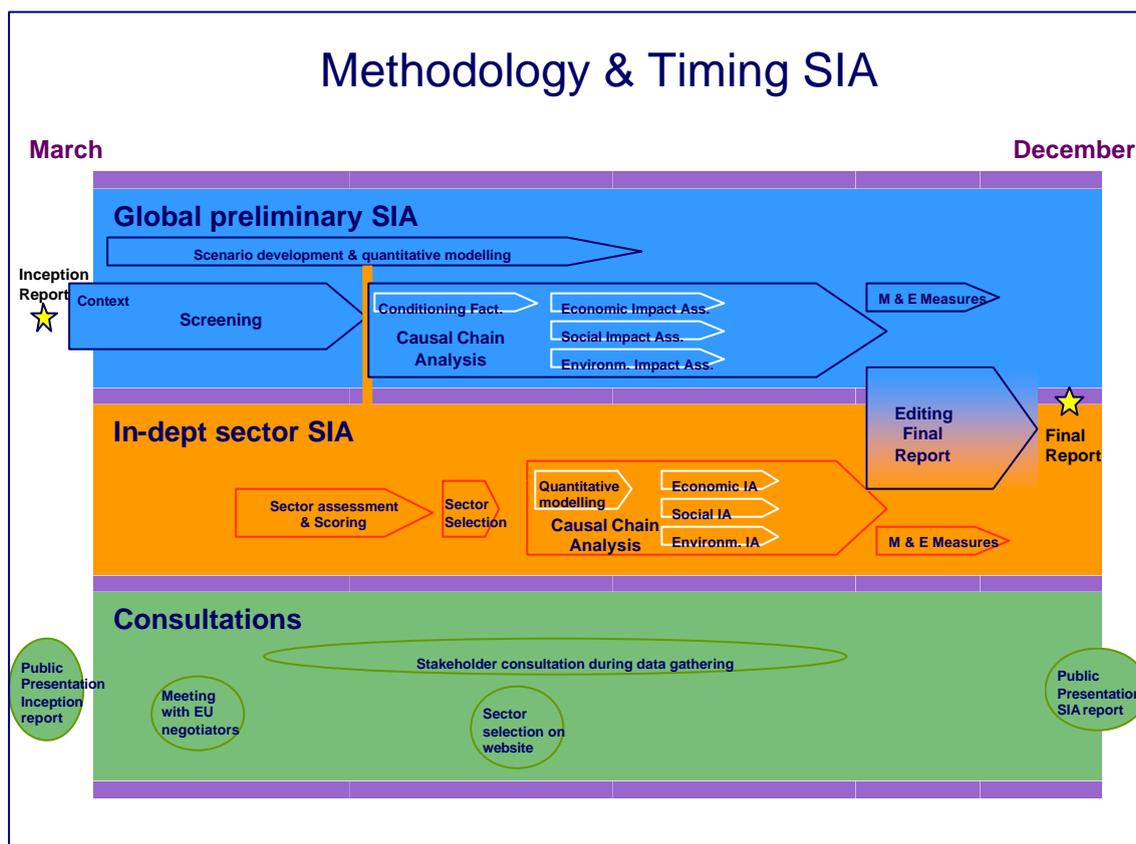


Figure 5: Methodology and Timing SIA

IV.A.1 Context

The SIA starts with a description of the contextual issues for the different regions involved in the free trade negotiations. It is included in an effort to develop the general setting by giving baseline information and background on such items as geography, politics, economy, environment, social and cultural issues, among others. It focuses mainly on the GCC, a region where there has been little experience in undertaking SIAs and to a lesser extent the EU and its candidate countries. This context serves as a frame of reference to underpin the analysis of the study. The major part of the work on the context for the SIA was already presented in the inception report.

⁴ See Kirkpatrick, Colin and Norman Lee. 2002. Final Report to the European Union on Further Development of the Methodology for a Sustainability Impact Assessment of Proposed WTO Negotiations. IDPM. University of Manchester. 5 April.

The project team has also identified three crucial conditioning factors that might influence the direction and the nature of the analysis, i.e. the type of governance, cultural differences and security issues. The conditioning factors flow from the contextual factors. However, their interpretation is more subjective. When trying to describe the nature of the conditioning factors, one tries to get an insight on how different attitudes and circumstances can influence the perspective of both parties on the FTA negotiations and the eventual impact of an FTA agreement within the parties.

IV.A.2 Screening

The Manchester methodology starts with a screening process. The screening process involves identifying specifically trade-related issues that should be taken into consideration in an SIA. The screening process singles out those issues in the FTA negotiations that are likely to have a significant impact on sustainability and therefore should be included in an SIA. It also gives insight in relevant data and indicators associated with economic, environmental and social sustainability that can be used in an SIA.

In the methodology paper presented on 03 July 2003 it was proposed also to have a scoping exercise. This scoping exercise was meant to entail the selection and data collection of indicators linked to the FTA related issues that are prioritised in the screening process. These indicators should have given information on the impact of these FTA related issues on economic, environmental and social sustainability.

But as said before, data concerning the GCC countries are not easily and fully available for all the necessary sustainability indicators. A comprehensive exercise, where one would have the option to select or 'scope' out of a large set those indicators most relevant for each FTA related issue that come forward out of the screening process, was simply not attainable.

Most of the relevant indicators that could be used in the SIA to analyse the sustainability impact of the FTA have been inserted in the report.

IV.A.3 Global SIA and sector specific SIA assessments

The final objective of a SIA is to determine the direct impact of a FTA and subsequently to unearth direct and indirect linkages stemming from these trade-related impacts with other components crucial for sustainable development. These components can be split up in economic, environmental, social aspects whereby the influence from the regulatory context should not be overlooked.

This stage of the SIA, where the detailed assessment is undertaken, involves a number of steps. First, the methodology applied in the analysis has evolved in the EU's work on SIA to give priority a Causal Chain Analysis (CCA). Developed by among others the University of Manchester, this methodology suggests the use of a number of quantitative and qualitative tools, including case studies. It should begin with a consideration of the economic and regulatory impacts induced by changes in trade flows and trade rules under different scenarios (see chapter VI), and traces these changes through to sustainability impacts on the environment (see chapter VII) and social issues (see chapter VIII) through issues such as production, consumption, transportation, infrastructure, policy, structure and others.

Where possible, in the analysis applied in chapters VII and VIII, the quantitative data from the economic impact assessment was factored in when assessing the environmental and social impact. But this environmental and social analysis relies primarily on qualitative analysis, given the difficulty of modeling linkages between economic change and environmental, social

or institutional change, and taking into account the specific nature of the GCC region under investigation where data, and particularly good time-series data, are not readily available.

Furthermore, for this SIA two 2 specific sector SIA were carried out. Whereas the Global SIA looks at economy wide, cross sector impacts, the aim of these in-depth sector SIAs is to look at the specific implications of the FTA for specific sectors that seem to have a potential impact on the sustainable development of the countries within the GCC and/or the EU. These in-depth sector SIAs allow trade negotiators to acquire better insights in the complex interactions between trade regulations and economic, social and environmental policies for those sectors of particular importance to the countries involved. These additional insights should help them and other policy makers in defining sustainable trade regulations and other related policies, not only for the sectors within the in-depth sector SIA but also the other sectors covered by the Global preliminary SIA.

IV.A.4 Defining mitigation measures

Because trade agreements can have wide ranging effects on the economy, social development and the environment, and these impacts can be positive and negative for sustainability, SIAs typically include mitigation and enhancement measures. M&E measures can include trade-related measures or non-trade related measures to accompany negotiations and/or trade agreements to help ensure that the outcomes of negotiations and the impact of the agreements contribute to sustainability.

V. Context for the SIA

This chapter describes contextual issues for the SIA as they relate to the GCC and the EU. It is included in an effort to develop the general setting by giving baseline information and background on geographical, political, economic, environmental, social and cultural issues, among others. The context assures that the SIA takes into account common elements within the regions, as well as distinctive features unique to specific countries. Relevant issues as they relate to both the EU and the GCC will be addressed in more detail throughout the course of this SIA.

V.A Introduction to the GCC and the EU

In 1957 the treaty of Rome was signed. This created the European Economic Community and formed the foundation of the present European Union (EU). At present the EU has 15 member states: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden and the United Kingdom. In addition, by 1st May 2004 ten countries will have acceded to the EU: Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia. This will bring the total number of members to 25 by then. The EU is not only a Customs Union but also a currency union and a political partnership among its member states. Not only is there free movement of goods and services but also of people and capital within the EU.

On 25th of May 1981 the United Arab Emirates, Bahrain, Saudi Arabia, Oman, Qatar and Kuwait reached a cooperative framework, i.e. the Cooperation Council for the Arab States of the Gulf (GCC). The GCC states its objectives to effect coordination, integration and inter-connection between Member States in all fields. One of the major economic achievements of the GCC is the introduction of a Customs Union.

V.B GEOGRAPHIC/CLIMACTIC CONTEXT

V.B.1 The GCC countries

The geographical range of the six GCC Climactic countries is enormous: from the small island of Bahrain to the vast expanse of Saudi Arabia⁵. The GCC covers roughly 2.6 million square kilometres. To give an idea, the whole EU land-surface is around 3.2 million square kilometres, a bit more than 20 % larger than the GCC, with a total population 13 times larger than the population of the GCC (see chapter V.F.1). Saudi Arabia is by far the largest country with around 2.2 million square kilometres. On the other hand Bahrain is by far the smallest nation in the GCC. It is an archipelago made up of 33 separate islands in the Arabian Gulf covering only 710 km² in surface area.

The topographies of the countries share many common elements. They tend to include important coastlines and often incorporate small islands in their territory. On the mainland, deserts, sometimes interspersed with oases, rocky plateaus and in some areas, higher mountain ranges, characterize the geography. The countries of the GCC experience typical desert climates with hot dry summers characterised by extreme temperatures and virtually no rainfall. During the winter months, between October and April, temperatures drop and there is a minimal degree of rainfall. In general, the climate is hot and humid along the coast and dryer in the interior although there are significant variations in temperature among the coastal regions, the deserts in the interior and the mountainous areas. Typical natural hazards in the region include drought, dust and sand storms.



Figure 6: Map of the GCC

V.B.2 The EU

The EU covers a slightly larger area than the GCC and with the inclusion of its ten new Member States it will cover roughly 3.9 million square kilometres. France is the largest country with around half a million square kilometres closely followed by Spain. Its new Member State Malta will be by far the smallest covering only 316 square kilometres in surface area. The topography and climate of the EU is very diverse. It includes several large peninsulas, a relatively large number of islands, continental and coastal plains, several mountainous regions and a varied coastline including the Arctic Ocean in the north, the Mediterranean Sea in the south and the Atlantic Ocean in the west.

Europe's particular distribution of land and sea is a determining factor for the climate in the EU, which includes a polar climate in the north, a temperate climate in Central, and Western Europe, and a relatively warm and dry climate with almost all rainfall in winter in the south.

⁵ Saudi Arabia, for example, is ten times the size of the UK, though with only 40% of the population. Indeed the six GCC countries only have just over half the UK population.

Typical natural hazards in the EU therefore are as diverse as heat waves and drought, seasonal storms and flooding both inland and in coastal areas.



Figure 7: Map of the EU and its candidate countries

V.C ECONOMIC CONTEXT

In the following a short introduction will be given on the economic situation in the EU and the GCC with specific attention to the GCC economies' dependency on oil . Specifically for the services sector in the GCC more information can be found in chapter V.I where the trade in services is discussed.

V.C.1 The GCC countries

V.C.1.1 Introduction to the GCC economy and the potential of an FTA

Generally speaking, the GCC countries have managed their hydrocarbon wealth reasonably in recent decades amid volatile oil prices. The proceeds from oil have been used to modernise infrastructure, provide employment, improve social conditions, and accumulate official reserves but at the same time not enough of the oil proceeds have been invested efficiently to increase long-term welfare (see also chapter V.C.1.4). External debt has remained relatively low in most GCC countries, inflation has been kept under control, and exchange rate policy has been used effectively. However, in both economic and political terms, the GCC states have recently faced a number of economic challenges.

In macroeconomic terms growth rates during the last decade were modest and the economies are now widely viewed as performing below their potential. There is a general agreement that reduced vulnerability to oil price fluctuations and an accelerating non-oil growth are required to generate employment for a young and rapidly growing domestic labour force. Trade policy can play a role in assisting the region face these structural challenges, as well as facilitating the diplomatic agenda as the GCC states manoeuvre in the confines of a post-Iraq geopolitical landscape.

In this respect, it is clear that the decision to advance the launch date for the GCC Custom's Union (GCC-CU) to January 2003 (from 2005 as originally planned) has been of the utmost significance for the region. Tariff barriers to the free movement of national goods, labour, and capital across the GCC countries have been eliminated, and individuals and corporations in the region have been granted national treatment for tax purposes in each country.

The five per cent common external tariff (CET) that has been adopted accords with the recommendations of various studies undertaken by the World Bank at the request of the Secretary General of the GCC designed to keep the region's growth potential in step with the fast pace of multilateral and regional tariff elimination - especially vis-à-vis EU preferential agreements.

The EU is currently involved in trade liberalisation negotiations with several partners at the regional level. Among these regional negotiations, are those for a Free Trade Agreement

(FTA) between the European Union and the Cooperation Council for the Arab States of the Gulf (GCC) which date back to 1988 but have been re-invigorated since 1999 when the GCC issued its own negotiating mandate and announced a commitment to establish a customs union.

Recently, the EU has advanced a new negotiating mandate, adapted to current WTO developments by including services and other areas included in more recent FTAs.

Certainly, the GCC-CU will unlock some extra intra-GCC trade. To deliver the full benefits of a modern 'oil plus' economy, however, the GCC region will need to shift into higher value-added activities across a number of sectors. Unlocking potential wealth-generation from new sectors, and closing down inefficient ones, should enable the region to use its rapidly growing labour force, indigenous skills and innovation capabilities more effectively - enabling a new generation of highly trained personnel to realise its full potential.

The issues for the GCC states are the following: firstly, how much will they gain from the establishment of the customs union? Secondly, how much can they gain from any EU FTA over and above the Generalised System of Preferences from which they currently benefit? Finally, how much could the region as a whole gain from Saudi Arabia's accession to the WTO – an outcome that now looks almost certain to follow as a (partial) by-product of the ongoing EU-GCC trade negotiation process? In the following chapter V.C.1.2 we look in brief at some economic parameters on which the FTA can have an impact such as foreign investments, trade and the GCC's dependency on oil. In chapter V.C.1.3 and chapter V.C.1.4 look at the GCC's trade performance and its dependence on oil in greater detail.

V.C.1.2 Economics of GCC countries

In 2001 the GCC region had a combined GDP of over €368 billion, as outlined in Table 1 below. Individual GDP figures for the six states range from €2 billion, in the case of Bahrain, to €208 billion in the case of Saudi Arabia. Average GDP per capita is €16,645 – but this also conceals a range of numbers from a low of €8,562 for Oman to €31,158 for Qatar – with Saudi returning a surprisingly low GDP per capita figure of just over nine thousand euros.

	GDP (bn euro)	GDP Growth (%)	GDP/Capita (euro)	Imports (mn euro)	Exports (mn euro)	EX/GDP Ratio
Bahrain	8.2	5.3	11,946	3,882	8,777	106%
Kuwait	37	-1	16,793	6,096	13,902	38%
Oman	22	3**	8,562	6,472	12,702	57%
Qatar	18	7.2	31,158	4,463	14,467	78%
Saudi	208	1.2	9,766	42,171	76,493	37%
UAE	75	5.1	21,644	45,926	44,643	59%
Totals	368		16,645	109,010	170,984	

(Source: Eurostat 2002)

The latest statistics also show a significant decline in EU investments in the Gulf region. EU accumulated investments have halved from 3 billion euro in 1999 to 1.5 billion in 2000. At the same time the GCC investments in the EU increased by more than 15% from about 4 billion euro in 1999 to about 4.6 billion in 2000. The Commission and the GCC secretariat are working on a common approach to change this overall negative trend.

Turning to the trade data, the GCC is currently the EU's sixth largest export market. In 2001, EU exports to the GCC were over €34 billion, whereas EU imports from the GCC amounted to just under €20 billion. The bulk of EU exports to GCC are machinery and transport materials (47%). Chemical products and food make up 11% and 9% percent of total exports respectively, leaving the remaining exports to a wide variety of products, such as medicines and medical equipment.

	Impts (I) to EU)	Share of EU Total Imports	% of each in Total (I/Ex)	Energy	Energy as % of (I)	Exports (X) (from EU)	Share of all EU (X)
Bahrain	434	0.04%	5%	230	53.0%	895	0.1%
Kuwait	2,380	0.2%	17%	2184	91.7%	2,747	0.3%
Oman	284	0.03%	2%	115	40.4%	1,441	0.1%
Qatar	669	0.1%	5%	115	17.2%	1,937	0.2%
Saudi	13,085	1.3%	17%	10756	82.2%	13,230	1.3%
UAE	2813	0.3%	6%	813	28.9%	13,781	1.4%
Totals	19,665	1.97%		14213	72.3%	34,031	3.4%

(Source: Eurostat 2002)

Due to the large quantity of fuels (73% of total EU imports from the GCC countries) shipped from the Gulf, the GCC is the tenth largest source of imports for the EU. Less important imports from GCC are items of machinery and chemical products, each representing about 5% of total imports, transport materials and textiles being of lesser importance.

At a total of 19,665 million euros, GCC exports to the EU represent 12% of total GCC exports – but just under 2% of total EU imports. This can be compared to the total figure of 101,004 million euros for total EU imports from the EU-10 candidate countries in 2001 – which amounts to almost 10% of total EU imports. In other words the EU-10 candidate countries exported five times more than GCC, despite the fact that the EU-10 candidate countries have a GDP per capita lower than one third of the GCC average (16,645 euros per capita as can be seen in Table 3) and a significantly lower export to GDP ratio (35%) than the GCC states (46%).

	GDP* bn euro	GDP/Cap Euro	Imports (Im) Billion €	Exports (Ex) Billion €	EX/GDP Ratio
EU-15	7,894	22,520	1,021	978	11.4
GCC	368.2	16,645	109	171	46%
Can_10	407	5432	195	142	34.9%

Candidates-10: Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, Slovenia, (Source: Eurostat)

The economic interpretation of this performance is that the present industrial structure of the GCC is not fully developed. Despite the bespoke nature of the Gulf economies, it is probably not the case that export intensity (or the preponderance of oil within it) is too high, but rather the small scale of domestic output - relative to export output - which is holding back overall economic performance. In other words, domestic activity is not thriving sufficiently - on the back of the oil revenues generated. In some respects this reflects a classic 'Dutch disease' phenomenon, whereby oil resources displace investment from other potentially profitable

sectors. A related explanation is that non-oil activity is being restrained due to sparse or inefficient provision of domestic services.

As suggested in Table 4 below, the oil sector in the Gulf economies still contributes on average to about one-third of GDP and accounts for three-quarters of the annual government revenue and export receipts, making these countries vulnerable to oil price fluctuations. In addition, growth of non-oil GDP has been slow in some of these countries, while strains in the employment market for nationals have emerged, with the GCC labour markets remaining segmented between nationals and expatriates. The GCC governments are aware that an adequate response to these challenges will call for structural reforms, aimed at improving the allocation of resources and promoting private sector-led growth.

	Bahrain	Kuwait	Oman	Qatar	Saudi	UAE
Oil	17.8%	43%	42.7%	58.4%	28.4%	28%
Industry	12%	6.5%	8.3%	5.8%	14.9%	13.9%
Construction	4%	2.3%	2%	3.4%	6%	7%
Retail	12.8%	6%	11.4%	8%	13%	9.2%
Finance	19%	6%	-	3.4%	2%	7%

For a more comprehensive break down of GDP per sector see annex XII.B, Table 44.

While the Gulf States have managed their economies fairly skilfully over the last decades, the recent growth resurgence has come after a poor growth performance during the 1990s when oil prices were generally low. While the Gulf region will probably remain at the hub of both the world's oil reserves and oil supply for some years to come, both the physical limits of geology and increasingly 'smart' extraction techniques will enable rival sources of supply to begin to limit this advantage in the coming decades.

Another interpretation of the data is that the current industrial structure of the GCC economies is probably failing to support expansion. The pattern is typically one of exporting, which may indicate that potentially productive elements of the domestic economy remain under exploited, for example when compared to EU-15 or EU candidate country profiles (see Table 5).

	Bulgaria	CR	Estonia	Hungary	Latvia
Exp to EU (% of total)	51.2	68.6	76.5	75.1	64.6
Share of industry (% of GDP)	25.1	36.0	14.6	26.9	16.3
Share of agriculture	14.5	3.9	6.3	4.8	4.5
	Lith'nia	Poland	Romania	Slovakia	Slovenia
Exp to EU (% of total)	47.9	69.9	63.8	59.1	63.8
Share of Industry (% of GDP)	22.8	29.0	27.6	25.8	27.7
Share of Agriculture	7.6	3.3	12.6	4.5	3.2

Source: Eurostat 2002

In fact, GCC countries are currently at various stages of implementing structural and institutional reforms, including lifting impediments to foreign direct investment, streamlining business regulations, expanding private investment opportunities in key sectors, and improving corporate governance. In summary, the GCC states almost certainly need to embrace change, to expand their economic activity to fit their endowment of human and intellectual resource capital rather than rely simply on their natural resource endowment.

With regard to GCC performance in trade in services, few reliable statistics are yet available, but in general the commitments made by WTO members of GCC are low with the exception of Oman. Sectors such as distribution, finance and telecommunications remain relatively closed.

Total EU imports from the GCC, at 19,665 million euros, represent fewer than 2% of total EU imports. This can be compared to the share of goods in EU exports to the Mediterranean countries, which was 78% in 2000, while the share of services in EU exports represented only 13% of the total. EU imports from the Mediterranean countries of 78,768 million euros in 2000, amounted to approximately 8% of the EU total. In other words the Mediterranean countries - an under-performing region - export services to the EU approximately four times as much as the oil-rich states in the Gulf.

We may then conclude that the GCC states are much likely to benefit from the liberalisation of services that is being negotiated, both in terms of greater economic efficiency and potentially higher growth rates.

There is also little doubt that an improved performance in services would contribute to an improvement in regional competitiveness (Hoekman and Messerlin (2002a)). For example, Hoekman and Konan (2000) use a simulation model to come to the conclusion that an EU-Egypt free trade agreement limited to goods (but with substantial progress on removing regulatory barriers affecting goods sectors) could raise welfare in Egypt by around 4 per cent whilst an agreement which reduced barriers on services in Egypt could raise economic welfare by over 13 per cent.

V.C.1.3 Structure and direction of GCC trade

Of the GCC countries, Bahrain and the UAE are the most dependent on international trade, with a trade to GDP ratio of respectively 65 and 64 percent in 2001. Data for other GCC members reveal ratios around 40 percent. In absolute terms, Saudi Arabia has the largest economy and is the largest trader, exporting around \$79 billion in year 2000, followed by the UAE with \$43 billion (Table 6).

(US\$ million)	Bahrain	Kuwait	Oman	Qatar	Saudi	UAE	GCC
Total Imports	4,453	7,619	5,375	3,5252	30,299	39,584	90,582
Other GCC	1,185	271	1,737	260	1,114	2,916	7,483
Other Arab	165	794	305	281	1,651	420	3,616
Other Islamic	150	461	233	109	1,219	3,218	5,390
EU	1,416	2,137	1,044	1,419	8,936	11,582	26,534
US	488	936	345	195	5,738	3,372	11,074
Japan	182	975	816	284	2,786	3,186	8,229
ROW	867	2,044	895	703	8,856	14,890	28,255
Total Exports	5,700	19,574	11,319	11,527	78,756	43,294	170,170
Other GCC	518	44	1,029	530	2,903	2,829	7,853
Other Arab	99	331	288	198	3,581	518	5,015
Other Islamic	301	1,566	490	239	3,932	1,895	8,423
EU	316	2,226	175	364	12,082	2,107	17,270
US	296	2,248	135	422	12,353	827	16,281
Japan	246	4,436	2,567	4,995	11,872	9,979	34,095
ROW	3,924	8,723	6,635	4,778	32,031	25,140	81,231

Source: Eurostat 2002 (ROW being the Rest of the World)

As most GCC members are major oil, gas and petrochemical producers, most exports are directed towards non-GCC markets. With the exception of Bahrain and Oman, less than 9

percent of GCC member exports go to GCC partner countries (Table 7). Imports follow the same pattern. Intra-GCC sourcing is large only for Bahrain and Oman (Table 7). In the case of Bahrain, much of these flows comprise crude oil, which is imported from Saudi Arabia, refined, and exported to non-GCC buyers. Some countries such as the UAE are major trans-shipment hubs - a substantial share of imports of merchandise of some GCC countries from non-GCC sources flows through the UAE. This is the case in particular for Oman and Kuwait. This is registered as re-exports if the products concerned have not been transformed sufficiently for the origin of the goods to change to the UAE.

Given the similarity of the natural resource endowments of many GCC countries and their small size, it is not surprising that they tend to trade relatively little with each other. Imports from the rest of the world account for 90 percent or more of total imports for most GCC states. Most imports comprise food, machinery and equipment and other manufactures, which together account for about 78 percent of the total. These goods are imported predominantly from non-GCC, non-Arab sources (Table 7).

	Bahrain	Kuwait	Oman	Qatar	Saudi	UAE	GCC
Total Imports	100	100	100	100	100	100	100
Food & Live Animals	12.4	15.2	12.0	10.2	15.9	7.0	11.4
Beverages & Tobacco	1.0	1.0	8.6	1.0	1.1	0.9	1.2
Crude Materials	2.2	2.0	2.9	2.6	1.8	5.0	2.9
Mineral Fuels Lubricants	40.7	0.6	1.6	0.4	0.2	1.1	3.1
Animal/Veg Oils & Fat	1.2	0.6	0.7	0.4	0.7	0.8	1.7
Chemicals	4.7	9.7	7.2	6.4	9.7	4.2	6.6
Manufacturing Goods	16.9	20.3	13.8	20.8	22.4	24.8	26.4
Machinery & Transport Equip	15.9	28.3	43.3	44.8	39.2	43.2	34.6
Misc. Manufactured Goods	5.0	12.3	6.1	13.1	5.2	10.8	10.0
Unclassified	0.0	0.9	3.7	0.1	3.9	2.2	2.6

Source: Arab Monetary Fund (2001).

With the formation of GCC CU and plans for a possible monetary union, the argument can be made that the Gulf region's (comparative) advantage needs to shift from one of pure natural resource management to what might be termed an 'oil plus' economic structure. The challenge will be to do this by maintaining an edge as an advanced oil-technology economy, but *also* exploiting the natural and cultural advantages that GCC states enjoy in a period of shifting geopolitical advantage for the region. These advantages are essentially twofold: vis-à-vis the EU as a peripheral geographical actor and as a hub and exemplar to Islamic States worldwide.

Meeting this challenge must involve keeping ahead economically, and this must involve the well know transition - common to all advanced industrial economies - of mixing industrial products with increasingly sophisticated services provision. An example of this sort of interplay, in the financial services sector, is the dramatic growth of Bahrain and Dubai as financial centres. There are likely to be many more examples both in finance, construction, and engineering (to name but a few) where the comparative advantage may be less obvious until increased exposure to service sector practice occurs.

The key implication of such changes will be an inexorable shift in macro-economic stance away from dollar-denominated assets, as well as gradual but more subtle shifts within portfolio and direct investment profiles. The common denominator in all these developments will be the need to enhance and develop indigenous skills and resources in the management of service activities.

Thus a subtle realignment of thinking (FTA negotiations suggest this is already occurring) should guide the approach to both multilateral and regional negotiations on trade in both goods and services. Rather than show an undue concern to protect the current pattern of oil exports and imports of goods and services – where dominance in oil exports is probably secure in the medium term - a proactive approach to enhancing this conventional trade pattern with a subtle overlay of service expertise should act as a guide to policy formulation.

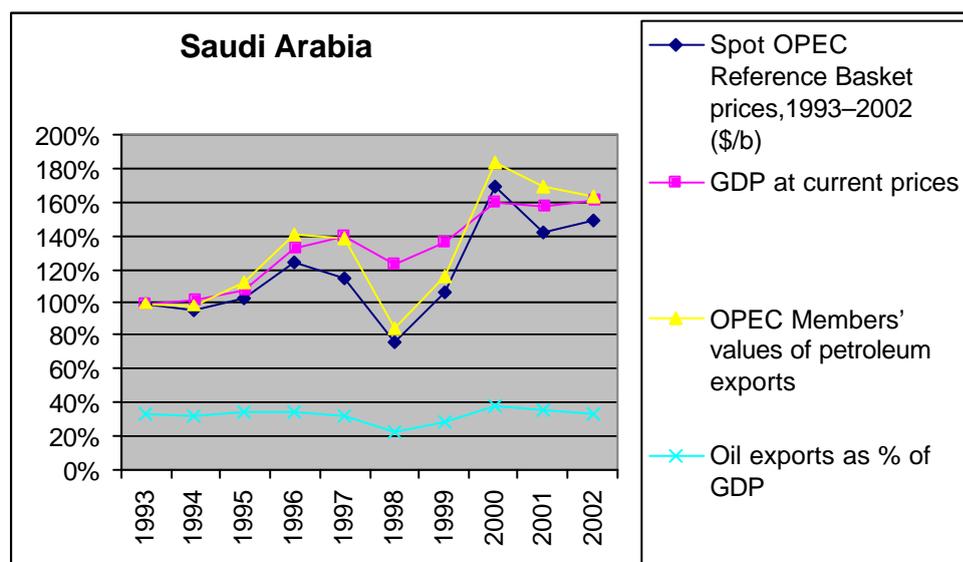
This is because international trade in services - although often a more potent source of growth and prosperity than goods trade - is at its core very different to the conventional 'laissez-faire' economics of trade and direct investment as harbingers of 'globalisation'.

V.C.1.4 Economic dependence of the GCC on oil

As indicated above, the GCC is not a poor area. It is markedly richer than the new Member States that will join the EU in 2004. But whereas these last ones have experienced an economic revival during the 2^d half of the last decennium, the GCC itself has seen its economic fortunes prosper and decline with the swing in the price of oil.

For instance, when we look at the economic data for the largest economy in the GCC, Saudi Arabia we can see that it is highly dependent on its oil exports both for its total GDP as for the growth of this GDP (see annex XII.C for data on other GCC members of OPEC, i.e. UAE, Kuwait and Qatar). When oil prices go up, oil export value goes up and GDP increases and vice versa.

Figure 8: Evolution GDP, Oil Exports and oil prices, Saudi Arabia



Source: OPEC, Annual Statistical Bulletin 2002.

For all of the countries, with the exception of Bahrain, the oil sector dominates contribution to GDP. According to the data of OPEC, the value of oil exports is roughly 30 to 40 % of total GDP in the four OPEC members in the GCC and its share in the GDP is also well above 30% on average (see annex XII.B, Table 44). The economic spill over effects of such dependency can be grave⁶. Oil abundance is, often, accompanied by booms and busts as the prices of oil fluctuate on the world markets. The resulting fluctuations in export earnings can trigger exchange rate volatility, perhaps no less so under fixed exchange rates than under floating rates. Unstable exchange rates create uncertainty that can be harmful to exports and other trade, including foreign and domestic investment in the non-oil export sectors. Due to the

⁶ Source: Thorvaldur Gylfason (2001).

very large export volumes compared to GDP from the oil sector in the GCC, oil export countries could be confronted to an overvalued currency that reduces the export potential of other sectors. This particular impact of natural resource abundance came to light for the first time in the Netherlands in the late 1950s and early 1960s with the discovery of natural gas. Therefore it is called the *Dutch disease*. Another aspect of the Dutch disease is that the natural-resource-based industries may be able to pay higher wages and also higher interest rates than other export and import-competing industries, thus making it difficult for the latter to remain competitive at world market prices.

Therefore the Dutch disease tends to reduce the level of total exports or bias the composition of exports away from those kinds of manufacturing and service exports that may be particularly good for growth over time. Exports of capital – i.e., inward foreign direct investment – may also suffer in the same way. The mechanism is essentially the same. In other words, natural capital tends to crowd out foreign capital.

Thorvaldur Gylfason (2001) assembled empirical evidence that suggests that the phenomenon of the Dutch disease may apply to the Gulf region. He compared export data for two groups of Arab countries, a group of six non-oil producing countries (Egypt, Jordan, Morocco, Sudan, Syria, and Tunisia) and a group of six oil-producing countries (Algeria, Iran, Kuwait, Libya, Saudi-Arabia, and United Arab Emirates). The non-oil producing countries have achieved, on average, a significant increase in their total exports relative to GDP since 1960. Meanwhile, the total exports of the oil-producing countries have declined as a proportion of GDP. The share of manufacturing exports in total exports in the non-oil producing Arab countries increased from about 10 percent in the 1960s to 40 percent in the 1990s. While the same ratio has hovered around 10 percent in the oil-producing Arab countries without showing a strong tendency to rise over time.

These trends are important because exports and foreign investment are seen to be good for growth. Openness to trade and investment stimulates imports of goods and services, capital, technology, ideas and know-how. Furthermore, too much primary-export dependence and too little manufacturing and services may hurt economic growth over the long run. The core argument is that the Dutch disease is a matter of concern mainly because of its potentially damaging consequences for economic growth.

By extracting oil and gas, the GCC countries are consuming their non-renewable resources. By consuming them now, the GCC countries forfeit any future consumption. If GCC governments are concerned about sustainability then they should ensure that the present depletion of these non-renewable resources not only increases short-term welfare through consumption but also long-term welfare. Therefore it is crucial to invest the rents from the production of non-renewable resources such long-term welfare increasing investments as for instance capital investments, infrastructure and education, and refrain from the mere consumption of these rents in the short term. On this issue, the GCC countries have a less than perfect track record. Not all rents from its natural resources are invested, a large share is simply consumed which increases short-term welfare but does not increase the long-term welfare. The World Bank assesses this by measuring so called genuine savings. Countries with positive genuine savings have positive savings ratings taking into account also the depletion of natural resources. See Appendix 1 for a more detailed explanation. It is striking that all major GCC economies have negative genuine savings whereas the EU and to a lesser extent its new member states have positive genuine savings.

V.C.2 The EU and its new Member States

In 2001, the countries of the EU had a combined GDP of €7894 billion, or close to eight trillion Euro. The EU's GDP dwarfs that of the GCC, 21 to 1. The EU's *per capita* GDP at €22,520 is substantially higher than that of the GCC. This stands in sharp contrast with the new Member States. With a population of 75 million they produced a GDP in 2001 equal only

to €407 billion. The average per capita GDP in the candidate countries in 2001 was €5,432, which is a lot lower than that of the GCC.

	GDP 2001	GDP per Capita 2001
	Billion €	€
GCC	368	16,645
EU 15	7,894	22,520
New Member States	407	5,432

Source: Eurostat 2002

V.D POLITICAL/REGULATORY CONTEXT

The political structures of the GCC countries have a great deal in common. In general, monarchs head the countries. In some cases a Prime Minister exists, and in all cases a cabinet level Council of Ministers exists that is appointed either by the monarch alone or in consultation with the Prime Minister and includes many royal family members. Where legislative bodies are elected, as in Kuwait, the electorate is limited to men, and in some cases a small pool of men with longstanding ancestry in the country. In all countries, families and tribes still play an important social and political role. The *Shariah* (Islamic law) is the principal source of legislation governing family and personal matters.

Since the foundation of the GCC in 1981 the objective has been to improve the coordination, integration and inter-connection between Member States in fields such as foreign policy and military Cooperation, legal, economic, industrial and monetary Cooperation, Cooperation in the field of oil, gas, electricity and water, Cooperation in the field of health, education and the environment, etc.

Within the GCC the Supreme Council is the highest authority. It is formed by the Heads of Member States. The Ministerial Council, composed of the Ministers of Foreign Affairs or other ministers acting on their behalf, proposes policies and refers them for approval to the Supreme Council. Resolutions on substantive matters are issued by unanimous approval in the Supreme Council, while a majority is enough to approve those of procedures matters. A Secretariat General is in charge of the administrative support of the GCC.

Also the political structures of the EU countries have a great deal in common. All Member States of the EU are stable democracies (republics or constitutional monarchies) that respect human rights, the rule of law, and guarantee protection of minorities. They all have a functioning market economy and have adopted the common rules, standards and policies that make up the body of EU law. The Union and its Member States clearly divide a number of competencies among one another. For instance, the EU has exclusive competence in important political areas such as external trade in goods and some services, agriculture and fisheries, customs and monetary policies for those countries member of the EURO area. Most other competencies are shared between the EU and the Member States, e.g. environmental policy, consumer protection, development aid, transport policy, asylum and immigration.

In the European Union decisions and procedures are derived from the basic treaties ratified by the Member States. The decision making process is dominated by three institutions, each of them playing a specific role:

- *The Council of the European Union* (composed of the governments of the Member States, i.e. referred to as the European Council when it refers to the heads of state);
- *European Parliament* (elected by the peoples of the Member States);
- *European Commission* (driving force and executive body);

The Commission has a legislation initiative competence, but it is the Council of the European Union together with the European Parliament that adopt legislation. The Council and Parliament adopt regulations, directives, decisions, recommendations and opinions jointly. On some specific but important issues the Council does not need approval by the Parliament such as budget-related matters and the Common Agricultural Policy. The European Commission oversees the enforcement of EU laws. As such the European Commission has three distinct functions: initiator of proposals for legislation; guardian of the Treaties of the EU and manager and executor of EU policies and of international trade relations.

Answering the question to which extent the regulatory framework in the EU is strong enough to ensure the absence of negative impacts on the environment, whenever there would be a change in patterns of production due to the FTA (in terms of trade in goods) is a question which deserves specific attention.

There are several criteria which will influence the answer to that question.

We will only limit us to look into the policy issue.

Environmental policy making in the EU is shared between the EU member States and the EU. Both are fully competent to develop environmental policies within their context.

In the event that the EU develops environmental policy, the EU Commission shall, in most cases, use the instrument of Directives, which are then to be implemented in a given period of time by the Member States. In the event the Directive is not implemented in a given Member State, this might create a zone of less environmental protection and is such create externalities. The Member State will be encouraged to implement it and in case of non compliance be brought before the European Court of Justice and see itself convicted for non implementation.

As put forward, each Member State is free to develop its own domestic environmental policies. As such, it is possible that some Member States have environmental policies in place, which do not exist in other Member States. Even if there are EU rules applicable, Member States do have the right to go beyond the rules being developed by the EU (which always sets minimal standards). In those cases, a change in production patterns could have a positive impact on the environment, or a less positive impact depending on the direction of the move of the pattern. Next to the (non-)existence of domestic and EU policies, enforcement of those policies is key to the protection and mitigation of any environmental externality at the end of the day (from a public authority point of view). This is primarily a domestic issue: hence, it will depend on the focus and internal policy of the member states to which extent they reach the needed level of protection as to mitigate environmental externalities.

As such a change in production patterns might influence the environmental impact in three ways from a purely policy perspective: positively, neutral or negatively.

The strength of the EU policy is that it has mechanisms and power to get member states harmonising the outcome of environmental policy in specific domains and to put pressure on Member States that do not comply with those rules of the game.

V.E ENVIRONMENTAL CONTEXT

Due to the specific nature of the environmental challenges for the 21st century identified by the Council of Arab Ministers Responsible for the Environment (CAMRE), i.e. the intensive demographic growth and the limitation and deterioration of most natural resources in the Arab countries, and due to the limited size of the GCC economy in comparison with the EU, trade related impacts can have a more profound impact on the environment in the GCC than in the EU. Therefore this chapter deals mainly with the environmental issues that the member states

of the GCC are confronted to. More specifically it focuses on the five priority areas defined by the Council of Arab Ministers Responsible for the Environment (CAMRE, see **Box 1**). Where necessary in the SIA itself, the relevant indicators for the environment in the EU are included.

Box 1: Abu Dhabi Declaration on the Future of the Arab Environment Programme

The environmental problems of priority faced by the Arab countries at the beginning in the Twenty First Century include:

- The severe shortage of water resources both in quantity and quality;
- Deterioration of coastal and marine areas.
- The limitation of available lands and deterioration of land resources;
- The unsustainable consumption of natural resources;
- The rapid rates of urbanisation and associated problems;

CAMRE, 3 February 2001, Source: www.unep.org/bh/abudhabi

V.E.1 Freshwater Quantity and Quality

Limited *access to freshwater resources* is a challenge facing all the countries of the GCC. Generally, given the desert landscape and lack of rainfall, water resources are very limited. Countries rely almost entirely on underground aquifers, and desalination facilities to provide their water needs and ensure a steady supply of fresh water for their populations as well as necessary inputs into industry and agriculture.

The lack of fresh water resources is to be considered as one of the most serious environmental problems that the region faces. The GCC countries have extremely low levels of surface and groundwater resources (see Table 9) and consumption of both surface freshwater and groundwater dramatically exceeds the natural recharge rates. In all cases renewable water supplies are well below the 1,000 m³ per capita, value typically used by the UN in indicating chronic water shortage.

In all countries of the GCC agriculture is by far the largest consumer of water. This is followed by domestic consumption and then by industrial consumption although both are extremely low in comparison to agricultural withdrawals. Due to the specific irrigation requirements for agriculture in hot dry environments, water withdrawals per capita in the GCC are similar to those in the southern countries of the EU but higher than those in the north of the EU.

Withdrawal rates are far from sustainable in the GCC. Productive aquifers in the coastal plains are exploited intensively for irrigation and domestic supply. The quality of fresh water in many of the exploited coastal aquifers is endangered by salt water intrusion, which is, to some part directly related to encroachment of sea water, but can also be caused by a variety of sources such as impact of irrigation return flows, ascending deeper brackish or saline water or evaporative enrichment of salts in coastal sabkhas⁷ (ESCWA 1999 c). These potential negative consequences have already materialised in several areas in the GCC

⁷ A sabkha is also called pan, flat, or dry lake, flat-bottom depression found in interior desert basins and adjacent to coasts within arid and semiarid regions, periodically covered by water that slowly filtrates into the ground water system or evaporates into the atmosphere, causing the deposition of salt.

Box 2: Impact of groundwater withdrawal in the Arabian Peninsula⁸

- Groundwater extraction in Qatar is, at present, around 125 million m³/year and exceeds recharge from rainfall and irrigation return flow by around 70 million m³/year. The range of water salinity in domestic supply wells increased from Total Dissolved Solids (TDS) 300-1800 mg/l in the 1970s to 750-2200 mg/l TDS in 1991 (ESCWA 1999 c);
- In Saudi Arabia water levels have declined by more than 70 metres in the Umm Er Radhuma aquifer during 1978- 84. This decline was accompanied by a salinity increase of more than 1000 mg/litre TDS (Al-Mahmood, 1987);
- The *Batinah* coastal plain of Oman has been completely lost due to salinization. It is estimated that the saline interface between the sea and groundwater in Bahrain advances at an annual rate of 75-130 metres;
- The water used in wheat farming in Saudi Arabia during 1980-95 was about 254 km³ (Al-Qunaibet, 1997), equivalent to 13 % of the country's total fossil groundwater reserves of 1919 km³ (Al Alawi and Razzak, 1994);

In Kuwait the Damman aquifer level has declined in some places by as much as 60 metres, the aquifer salinity increased from about 5000 mg/l TDS in 1961 to more than 10000 mg/l TDS in 1990. (ESCWA 1999 c). A rapidly increasing population will increase the pressure on scarce water supplies⁹. The GCC faces additional challenges of increasing efficiency in water use, developing methods to reuse water, effectively managing water distribution and sanitation networks and maintenance activities in water and waste water plants, applying waste water treatment, and increasing the quality of drinking water. In the GCC countries, only about 400 million m³ of the annual 918 million m³ of treated waste water are tertiary-treated and used for irrigating non-edible and fodder crops and landscaped areas.

Table 9: Freshwater Resources

See also annex XII.D for more information on the Terminology used in this table

	Renewable Water Resources				Withdrawals				Sectoral Shares		
	Surface Water	Ground-water Recharge	Total ^a	Per capita	Total	Of which Desalinated	Per Capita	As % of Renew. Resources	Agriculture	Domestic	Industry
	km ³			m ³ /person	km ³		m ³ /person	%	%		
Saudi Ar.	2.2	2.2	2	111	17.0	0.71	1,056	955%	90%	9%	1%
Kuwait	0	0	0.02	10	0.5	0.23	306	3097%	60%	37%	2%
Oman	0.9	1	1	364	1.2	0.03	658	181%	94%	5%	2%
UAE	0.2	0.1	0	56	2.1	0.39	896	1614%	67%	24%	9%
Bahrain	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Qatar	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Austria	55	6	78	9629	2.4	0	303	3%	9%	33%	58%
Belgium	12	0.9	18	1781	NA	0	NA	NA	NA	NA	NA
Denmark	3.7	4.3	6	1123	1.2	0	233	21%	43%	30%	27%
Finland	107	2.2	110	21223	2.2	0	439	2%	3%	12%	85%
France	177	100	204	3414	32.3	0	547	16%	10%	18%	72%
Germany	106	46	154	1878	46.2	0	570	24%	20%	11%	69%

⁸ UNEP GEO2000 & 2002, For a more detailed discussion on this issue, see ESCWA 1999 c.

⁹ The population of the GCC is expected to grow by 40% over the period 2001 – 2015, from 32 million to 45 million. Source: UNDP Human Development Report 2003.

Greece	56	10	74	6984	8.7	0	826	12%	87%	10%	3%
Ireland	48	11	52	13408	0.8	0	232	2%	10%	16%	74%
Italy	171	43	191	3330	42.0	0	730	22%	48%	19%	34%
Netherl.	11	4.5	91	5691	7.8	0	519	9%	34%	5%	61%
Portugal	38	4	69	6837	7.3	0	736	11%	48%	15%	37%
Spain	110	30	112	2793	35.2	0	884	32%	68%	13%	19%
Sweden	170	20	174	19721	2.9	0	340	2%	9%	36%	55%
UK	144	9.8	147	2464	11.8	0	204	8%	3%	20%	77%
Czech	13	1.4	13	1283	2.7	0	266	21%	2%	41%	57%
Estonia	12	4	13	9413	0.2	0	106	1%	5%	56%	39%
Hungary	6	6	104	10541	6.8	0	659	6%	36%	9%	55%
Latvia	17	2.2	35	14820	0.3	0	112	1%	13%	55%	32%
Lithuania	15	1.2	25	6763	0.3	0	68	1%	3%	81%	16%
Poland	53	13	62	1598	12.3	0	321	20%	11%	13%	76%
Slovakia	13	1.7	50	9265	1.8	0	337	4%	NA	NA	NA
Slovenia	19	14	32	16070	1.3	0	642	4%	1%	20%	80%

Source: WRI. Earth Trends 2003. Marine and Coastal Areas

All countries of the GCC have important coastlines, often including islands, and have access to the seas and gulfs in the region. Increasingly marine pollution is becoming an issue. In Bahrain, Kuwait and Qatar, 100 per cent of the populations live within 100 km of the coast (**Table 10**). In Bahrain, Kuwait, United Arab Emirates and Western Saudi Arabia, all sewage is treated prior to discharge and some is recycled. About 60 per cent of the partially-treated waste water is discharged to sea or low-lying land.¹⁰ Desalinization plants cause the discharge of brine, chlorine and heat with detrimental effects on the local environment. This will increase in the future if the GCC becomes more dependent on desalinization as a fresh water resource

Bahrain	Kuwait	Oman	Qatar	Saudi A.	U.A.E.
100	100	88.5	100	30.3	84.9

Source: WRI. Earth Trends 2001.

The most severe threat to the marine environment is oil pollution from the refineries, petrochemical industries, oil terminals, oil spills from ships, pipeline accidents, disposal at sea of oil contaminated ballast water. Some 1.2 million barrels of oil are spilled into the Persian Gulf annually (UNEP 1999). While representing only 0.7 percent of the sea surface, the Persian Gulf accounts for 17 percent of marina oil pollution worldwide (ESCWA 1991).

The West Asian region as a whole contains around 8 per cent of the world's mapped coral reefs. Almost two-thirds of those in the Persian Gulf are classified as at risk¹¹. In addition, red tides and associated fish kills have increased in distribution and frequency in many coastal areas, and increasing extent of coastal areas is becoming unsuitable for recreation and food production, countries are experiencing a loss remaining mangroves, and the existing fish stock could be threatened with collapse.¹²

The fisheries sector is not a major contributor to the economies of the countries of the GCC. In recent years per capita fish catches have fallen. However, a range of policy measures, including the introduction of fishing licences, gear and area restrictions, closed seasons and

¹⁰ UNEP GEO 2000 & 2002

¹¹ Bryant et al. 1998

¹² UNEP/ROWE.

the banning of certain fisheries, have recently been implemented in the GCC countries¹³. Within the region, only two countries are net exporters of fish, Oman and Bahrain. Of these two Oman has the only sizable exports. In 2001 it exported US\$ 52 million of which €20,6 million went to the EU. The other GCC members are net fish importers of which Saudi Arabia is by far the largest with US\$ 127,3 million but with only a limited amount coming from the EU (€7,9 million) (**Table 11**) Besides being the production and export leader in the region, Oman also has the highest percentage of domestic consumption at 9.8 percent of total protein being obtained by fish products in 1997. The other countries of the GCC all were below 4 per cent of total protein obtained by fish products in 1997, with the exception of the U.A.E. with 7.2 per cent.

	Total export 2001	Total import 2001	Total export to the EU 2001	Total import from the EU 2001
	<i>US\$ million</i>	<i>US\$ million</i>	<i>€ million</i>	<i>€ million</i>
Oman	52.7	7.9	20.6	0.8
Qatar	1.9	6.2	0.1	0.2
Bahrain	9.9	6.5	0.0	0.6
Kuwait	7.3a	22.1a	0.0	1.0
UAE	NA	NA	0.3	5.8
Saudi Arabia	10.3	127.3	0.4	7.9

Source: Statistical Office of the European Communities, 2003, United Nations Statistics Division (UNSD), 2003.

It can only be stressed that sustainable management of the marine area and its resources are key to the management of food stocks.

The reduction of sources of pollution in fresh water and the atmosphere have a direct or indirect impact on the quality of the marine environment. Developing common rules for protecting aquatic environments and preventing pollution are key. These rules can follow two approaches:

- an approach based on minimum water quality objectives in order that their state and use should not be detrimental to the environment or for human health;
- an approach based on permitting maximum emissions of pollutants originating from a particular source into the aquatic environment.

It can only be stressed that sustainable management of the marine area and its resources are as well key to

1. the management of food stocks in the region and,
2. the management of other economic activities (e.g. tourism).

The EU, for its part, is committed to a policy that promotes sustainable fisheries and integrates environmental considerations into a Common Fisheries Policy (CFP).

Hence, we believe that joint cooperation in this field is important, as well in terms of economic, social and environmental perspectives (see further in Chapter X.F)

V.E.2 Deterioration of land resources

A lack of water and the desert landscape bring the threat of drought and dust storms. These natural phenomena, combined with human activity often cause damage to infrastructure and have contributed to serious issues related to *desertification*, another environmental challenge

¹³ UNEP GEO 2002

that is common to all the countries in the region. Levels of soil contamination are also an environmental challenge common to the countries of the GCC (**Box 3**).

Levels of soil pollution are the consequence of oil and gas production. Other contributors include an increase in the salinity in the soil and contamination that occurs as a result of the extensive application of agro-chemicals such as pesticides and fertilisers. Agricultural practices in both Qatar and Saudi Arabia rely on high levels of agrochemical inputs into production.

Box 3: Land degradation

Most land in the region is either desertified or vulnerable to desertification. The percentage of desertified land is nearly 100 per cent in Bahrain, Kuwait, Qatar and the U.A.E.

Programmes to attain food self-sufficiency have resulted in large increases of irrigated lands. Saudi Arabia experienced the largest increase, from 0.437 million ha in 1980 to 1.6 million ha in 1993. Due to the unsustainable dependency of groundwater for irrigation, salinization became a serious problem. The percentage of irrigated land that is salinized by irrigation is estimated at 33.6 in Bahrain, 85.5 in Kuwait and about covers an area of 2 million ha in Saudi Arabia (see also Box 2.).

The increase in food production has not been able to compensate the increases in population; therefore the aim of attaining food self-sufficiency has not been reached.

Source: FAO 1997, UNEP GEO 2000 & 2002

V.E.3 The unsustainable consumption of natural resources and the impact on biodiversity

There are two types of natural resources, renewable and non-renewable. Typical renewable resources are all flora and fauna and hydro and wind energy. On the other hand there are non-renewable resources, which once consumed cannot be regenerated, not even recycled. Typical examples are fossil fuels, i.e. coal, oil and gas. The GCC is heavily dependent on two specific non-renewable natural resources, i.e. oil and gas. This makes it as much an economic and social issue as it is an environmental one. For a detailed discussion on the (non)-sustainability of GCC consumption of its non-renewable resources see chapter V.C.1.4.

Our biodiversity is a natural resource that provides us with a lot of goods and services that sustain our lives. At the 1992 Earth Summit in Rio de Janeiro, world leaders agreed that the world's biological diversity should be conserved in order to ensure that we can meet our own needs and that we leave a healthy and viable world for future generations.

Biodiversity is generally taken to include wildlife habitats as well as wild species, including species of flora and fauna. In this case, it is important also to include marine biodiversity in a SIA of the EU-GCC FTA, given the importance of the coastal waters surrounding the GCC countries. According to the IUCN, the single greatest source of biodiversity loss is linked to the loss of habitats and ecosystems. This can be caused by the fragmentation and degradation of land, through economic activity. The relationship between changes in land use and changes in biodiversity is not necessarily proportional and significant effects can arise from small changes, particularly in fragile and vulnerable ecosystems such as those that exist in desert conditions. Impacts on habitat threaten to deplete marine species of fish, as well as land-based species.

Countries can create national protected areas and marine protected areas in order to preserve habitats for biodiversity. Some countries of the GCC have taken such measures (Table 12). Relative to its small size, Oman has taken impressive steps in this regard, protecting over 16 per cent of its land area. Only Oman is over the global average of 6.4 per cent. Oman also has the highest number of marine protected areas of all GCC countries, at five.

Table 12: National protected areas in GCC countries (2000-2001)

	Protected Areas (IUCN Categories I-IV)					Number of Marine Protected Areas (IUCN Categories I-IV)		
	Number	Area (000 ha)	% of land area	No. of Areas at least:		Total	Littoral	Marine
				100,000 ha in size	1 million ha in size			
Bahrain ^a	3	1	1.2	0	0	1	NA	NA
Kuwait	5	27	1.5	0	0	4	2	2
Oman	3	3,428	16.1	1	0	5	2	3
Qatar ^a	4	2	0.1	0	0	4	NA	NA
Saudi Ar.	71	4,973	2.3	8	2	4	NA	NA
U.A.E.	2	NA	NA	0	0	4	3	1
World	28,442	851,511	6.4	1,250	154	3,636	2,852	1,685

Source: World Resources Institute 2000-2001 (World Conservation Monitoring Centre). Notes: ^a Figures for 1999 from WRI Earth Trends 2001.

The numbers of land dwelling species in the GCC countries are relatively low compared to biodiversity levels in other parts of the world. Nevertheless, of the mammal species that exist, up to 20 %, are currently considered threatened in some GCC countries (see Annex XII.E for details on biodiversity data). Likewise, populations of birds and reptiles are relatively sparse, with few endemic species native to the region. The countries of the GCC are home to a significant number of coral species with key marine biodiversity. This emphasizes the importance of steps to preserve the marine ecosystems in the surrounding waters. Most of the countries in the GCC have signed (although some have not yet ratified) major multilateral environmental agreements developed over the past couple of decades. These include, *inter alia*, the UN agreements that were negotiated in Rio in 1992 (see Annex XII.F for details).

In addition to threats caused by the destruction of natural habitats and human economic activity, in some countries of the GCC there have been particular threats to wildlife as a result of unregulated activity including poaching. For example, the Arabian Oryx (a breed of antelope), which was virtually extinct in the early 1970s, was reintroduced into Oman by the 1980s and by the late 1990s it was again on the verge of extinction because of poaching. There is now an increasing recognition of the need to protect this endemic species and efforts exist throughout the GCC to this end.¹⁴

V.E.4 Urbanisation and associated issues

Associated with rapid industrialisation come issues related to *urbanisation*. Urbanisation has occurred relatively rapidly in the GCC countries in the past four decades as GDP and revenues from oil increased. By 2000 all GCC countries had an urbanisation rate of well over 80 % with the exception of Oman at 76 %. By 2015, UNDP predicts that also Oman's urban population will be over 80 % (see Annex XII.G, Table 50).

In many of the GCC countries the vast majority of the population lives along the coastlines, due in part to the inhospitable nature of the desert interiors. In some cases, this has resulted in rapid urbanisation along the coastlines, supported by *insufficient infrastructure*. Sewage is often discharged into the surrounding waters, as is industrial and irrigation drainage (see also chapter 0 Marine and Coastal Areas)

¹⁴ The ERWDA in Abu Dhabi includes an Arabian Oryx Conservation Committee with the main objective of facilitating and encouraging conservation efforts for the Arabian Oryx within their natural existing habitat. The Committee is chaired by U.A.E. and includes all GCC countries with the exception of Kuwait. Information efforts include launching a website on the oryx at: www.whiteoryx.org.

Urban waste. In the GCC countries, urban waste generation ranges from 430 kg per capita per year in Qatar to 750 kg in Dubai.¹⁵ In some GCC countries, waste collection and disposal are highly efficient and sanitary landfills are widely used. Some composting plants have even been opened producing organic manure and soil conditioners.¹⁶ Other issues typically associated with urbanisation include congestion, urban air quality, and noise pollution.

V.E.5 Air Quality and GHG Emissions

General issues associated with deteriorating air quality are also common to the countries of the GCC. High levels of sulphur, sulphur dioxide, nitrogen oxides and carbon monoxide from industrial processing and heavy metal industry cause air pollution. These substances contribute to the general air pollution including smog and acid rain as well as ground level ozone. Along with inhalable particulates, they can also impact human health.

Just as other countries in the world, the GCC countries contribute to global warming through the emission of greenhouse gases (GHG), in particular carbon dioxide and methane. **Table 13** indicates emissions of fossil fuels in the countries of the GCC and the EU. The principal emissions come from the combustion of fossil fuels. In all the countries of the GCC, with the exception of Oman, *per capita* emissions and the CO₂ intensity of GDP is well above those of most EU member states. These data indicate that the economies in the GCC have a high focus on the energy sectors, the production of crude oil other petroleum products, resulting in a less diversified economy than in the EU and high overall emissions from these energy sectors.

Table 13: Share per sector in the total CO ₂ emissions (1999)					CO ₂ intensity (1998)	
	Energy sectors	Manufacturing and construction	Electricity	All other sectors	CO ₂ Emissions per Capita (thousand tons of CO ₂)	CO ₂ intensity GDP (tons of CO ₂ per million \$ GDP)
Qatar	32%	32%	27%	8%	80.8	n.a.
UAE	15%	30%	30%	25%	37.5	1,943
Bahrain	27%	27%	33%	13%	31.4	3,138
Kuwait	5%	45%	42%	8%	27.1	n.a.
Saudi Arabia	20%	23%	33%	23%	14	2,094
Oman	31%	22%	30%	17%	8.5	n.a.
Greece	5%	22%	22%	51%	8	672
Portugal	6%	16%	24%	54%	5.5	469
UK	3%	8%	43%	45%	9.2	454
Ireland	4%	22%	17%	57%	10.4	441
Spain	0%	25%	0%	75%	6.2	401
Luxembourg	8%	15%	33%	44%	18.2	386
Netherlands	5%	21%	41%	33%	10.4	371
Finland	3%	24%	36%	37%	10.3	369
Italy	5%	19%	34%	41%	7.2	368
Belgium	3%	10%	43%	44%	10	345
Germany	4%	18%	29%	48%	10.1	323
Denmark	5%	20%	10%	65%	10.1	269
Austria	4%	24%	18%	55%	7.8	256
France	0%	12%	37%	51%	6.3	225
Sweden	3%	15%	37%	45%	5.5	198

Source: adapted from WRI. Earth Trends 2001

¹⁵ UNEP. GEO 2000. For comparison, in Toronto the figure is 511 kg per capita/year. (Habitat 1997).

¹⁶ UNEP. GEO 2000.

Indirectly the oil and gas that is exported from the GCC to other regions also contributes to global greenhouse gas emissions when they are combusted. This indirect impact on global climate is even larger than the direct impact from emission within the GCC. For instance, CO₂ emissions from fuel combustion represent roughly 80 % of global greenhouse gas emissions regulated under the Kyoto Protocol¹⁷. 42 % of global CO₂ emissions from fuel combustion came from the combustion of oil¹⁸. Crude oil production in the GCC's members of OPEC represented 19 % of the world's production in 2001¹⁹. Therefore indirect emissions through the combustion of oil produced and exported by the GCC's members of OPEC stood for roughly 6,5 % of all global greenhouse gas emissions in 2001. If climate change policies under Kyoto Protocol reduce the amount of consumption of fossil fuels globally²⁰ then the GCC could experience a negative impact on its fossil fuel exports.

V.F SOCIAL CONTEXT

V.F.1 Demographic Profiles

V.F.1.1 The GCC

The demographic profiles of the GCC countries vary considerably although they share similar characteristics including a large expatriate work force and a large amount of young people (see annex XII.G for more details on Demographic Profiles). Until the 1960s, most of the population was nomadic or semi-nomadic. However, as a result of economic and urban growth, more than 90 per cent of the population is now settled, most in urban areas. Saudi Arabia has by far the largest population among the GCC countries with around 20 million inhabitants in 2000, 27 per cent of whom are not nationals. Because much of the desert terrain is uninhabited, the population is concentrated in the coastal regions and around the interior oases. The population of all other GCC members states is much smaller, from a bit more than a half million in Bahrain and Qatar up to just over two and a half million in the UAE and Oman.

The percentage of young people under the age of 15 in the population is high in all the countries of the GCC, ranging from a low of 26 per cent in the U.A.E. to a high of around 44 per cent in Oman. (In the EU the highest number is 22% in Ireland.) On the other hand, the population of elderly, above the age of 65 is relatively low, averaging at less than 3 per cent across the GCC.

The influx of expatriate work force has a dramatic impact on the demographic profile of the GCC countries. Well over 30 % of the population within the GCC are non-citizens with a low of 27 % in Saudi Arabia and a high of 80 % in Qatar and the U.A.E. (see annex XII.J, Table 54). These expatriates typically dominate the workforce in the private sector. For a more detailed discussion on impact of the large expatriate workforce in the GCC see chapter VIII on the Social Impact Assessment of the EU-GCC FTA.

The striking fact about the population structure is that in the six countries, the male proportion of those between the age of 15 and the age of 64 ranges from about 40% higher than the females in Bahrain and Saudi Arabia, to over a 100% in Qatar and the UAE (see annex XII.G, Table 51). Presumably expatriates account for the excess proportion.

¹⁷ The Kyoto Protocol would require the industrialised countries to achieve absolute reductions of its greenhouse gas emissions, in the period 2008-2012 compared to the year 1990. In order for the Kyoto Protocol to enter into force only Russia or the United States still need to ratify it.

¹⁸ Source: IEA, Key World Energy Statistics 2003

¹⁹ Source: OPEC, Annual Statistical Bulletin 2002

²⁰ In the short run greenhouse gas reduction policies could increase the consumption of natural gas due to its smaller carbon intensity than crude oil.

V.F.1.2 The EU

The total population of the EU was 375.7 million in 2000. This is expected to rise slowly to 376.7 million by 2015 in the 15 current member states of the EU. However, in 2004 when the Candidate countries join the EU, the population will rise by around 75 million up to over 450 million. Projections for populations in the candidate countries, taken together, for 2015 are close to 73 million, which is lower than 2000 levels, reflecting declining growth rates. The total population of the enlarged EU will decrease slightly.

In contrast with the countries of the GCC, in all countries of the EU, with the exception of Ireland, the population under 15 years of age is lower than 20 per cent and decreasing. Instead, the population over 65 years old is high, at an average of 16 % and will increase to 19 % by 2015, even including the new Member States. Urbanisation levels are increasing but remain lower than those in the GCC. Due to the more moderate climate and terrain and the historic distribution of the population it is easier in the EU to provide sanitation coverage and other utilities in rural areas than in the GCC.

V.F.2 Education

Literacy rates in the countries of the GCC tend to be relatively high-over 70 per cent of the population in all GCC countries and as high as 87.6 per cent in Bahrain. In all GCC countries public primary education is available for both boys and girls. In most countries the public primary (and secondary) education is compulsory for children until to the age of 12 or 14. Education is considered a key element in promoting the necessary skills for social and economic development and to prepare young nationals in such a way that they can contribute to economic diversification.

Nevertheless enrolment in secondary levels is markedly lower than in the EU and its new Member States. In Saudi Arabia and Kuwait it is around 50 %. Only Bahrain is an exception with a secondary enrolment rate of 92 %, even higher than the EU and its new Member states. This low secondary enrolment rates do suggest that even though primary education is widely spread in the GCC, improvement on the secondary levels is still possible. This could be a necessity if the GCC would like to create a competitive and growing private sector that could employ the growing numbers of young people that will join the job market in the coming years.

In some instances public education in the region is linked to religious traditions. For example, in Saudi Arabia, segregation by gender is required at all levels in education and female students remain excluded from almost all engineering courses. However, the increasing number of female graduates, along with rapid economic and technological development and a desire to decrease the number of foreign workers, has led to plans to develop a general education system that encourages higher education enrolment and thereby the practical participation of GCC nationals in the workforce.

V.F.3 Health and welfare

For more detailed data, see Annex XII.I. In general in the countries of the GCC life expectancy is high with an average of just over 72 years of age, almost the same as that of the new EU Member States at 73 years. But both are still well below that of the EU itself at 78 years. Infant and under five mortality rates have decreased significantly in the past 30 years, but remain more than double the rates in the EU. The availability of physicians to population is well below that of the EU and its new Member States. On average, across the GCC there were just over 160 physicians per 100,000 people between 1990 and 1999 whereas this number was respectively over 340 and 280 per 100,000 in the EU and its new Member States.

Nevertheless, most of the countries of the GCC, including Bahrain, Kuwait and Qatar, have comprehensive well-developed publicly accessible health care systems that cover a range of

services including, *inter alia*, general medical care, dental, maternity and psychiatric care, and are available free of charge to their citizens.²¹ In the U.A.E., the government estimates that 90 per cent of the population has access to health services.²² Similar near-universal access to health care now also exists in Oman.²³ This includes the introduction, in the late 1990s of privately run health care clinics and hospitals. In Saudi Arabia the government seeks to improve services and to provide free medical care for all citizens. Advanced medical research and some of the most modern medical care centres are located in cities such as Riyadh. However, medical care in rural areas is limited and remains a challenge.

A number of countries in the GCC have relatively well developed social safety nets. In Bahrain, a social security system was established in 1976. It provides state pensions and workers' compensation. Kuwait also has a strong social service system offering its citizens guaranteed state employment and subsidized services including water and electricity. There is some concern that the benefits of the social services system are less evenly distributed among the population than is the case in the long established social welfare systems in the EU, in particular with respect to non-citizens.

V.F.4 Labour/Employment

The countries of the GCC share a number of common characteristics in terms of their labour and employment markets. Typically this includes historically low rates of unemployment that are now growing, very high numbers of expatriate workers (see annex XII.J, Table 54), a large number of natives employed in government jobs, and a prohibition on labour unions. GCC citizens filled 26 per cent of all jobs in the region in 1995, down from 33 per cent in 1985 and 61 per cent in 1975. Only six per cent of Kuwait's own citizens' work force is employed in the private sector. This figure is close to nine per cent for the UAE and ten per cent for other GCC countries.

Historically, population density in the GCC region was very low. The rapid economic and social development characterizing the 1970s and 1980s was only possible by the large recruitment of a migrant labour force. An influx of migrant workers was required to exploit the natural resources and build a regional infrastructure. The local economies became heavily dependent on migrant workers to fulfil labour requirements. From sweeper/cleaner to managing director, in both skilled and unskilled sectors, it is the migrant worker who drives local economies in the Gulf States. The population of migrant workers vastly outnumbers local citizens employed in the economy. For example, in the UAE and Qatar, only 10% of the workforce, are national citizens. Currently, there are about 7,5 million expatriates working in the GCC region.²⁴

High economic growth and high oil prices in the 1970s and early 1980s, allowed the governments to control the employment of citizens through the provision of jobs in the public sector, most of them relatively well paid. Governments had a more 'laissez-faire' approach to the private sector, where the percentage of migrated workers is very high. Expatriate workers were and are primarily employed in the private and not in the public sector.

²¹ In a number of countries, particularly Qatar and Kuwait, the health care system relies heavily on foreigners for staffing.

²² UNDP, Human Development Report, 2000, Oxford Press, Oxford

²³ Oman has seen a remarkable expansion in health services over the last 25 years. Starting with two hospitals in 1970, at the end of 1998 there were 54 government hospitals across the country and 110 health centres with 5,075 hospital beds. Health services' share of total government expenditure amounted to 5.9 percent in 1998.

²⁴ Maurice Girgis 2002.

Due to decreases in oil revenue in the late 1980s and again in the second half of the 1990s, the oil based economic model has been under an increasing strain. Drastic reductions in oil export revenues resulted in a reduction of economic growth and even net negative per capita growth rates. This put a strain on the demand for labour during a period that saw increasing numbers of graduates from national secondary schools and universities joining the labour market. Many of these did not have the skills required for work in the private sector. This created the unprecedented phenomenon of unemployment among GCC nationals since the discovery and exploitation of the oil reserves, while substantial numbers of foreign workers continued to be employed in the private sector²⁵. This open unemployment compounded a long-recognized disguised unemployment problem among nationals employed in the government sector that drains the government resources.²⁶

More alarming, it also indicates that the GCC countries have an education system that pumps out more and more graduates from primary, secondary and tertiary schools and universities that do not have the skills required for working in the private sector. Structural unemployment in the GCC reflects the fact that the supply of labour does not reflect the changes in the structure of the economy. Other more contentious arguments are given in order to explain the low participation of citizens in the private sector²⁷:

- The first argument is simply the labour cost. The influx of cheap foreign labour during the past three decades has resulted in the private sector being reliant on cheap manual labour, deployed in labour intensive occupations.
- Secondly, most of the jobs in the private sector are manual jobs, which are viewed in a particularly negative light by local citizens.
- The third factor is control over the process of production. It is generally held that expatriates are easier to control and more disciplined than local workers.
- The fourth, and perhaps the most important, factor is the lack of social integration in multi-cultural work environments, despite workforce diversity. There is considerable evidence to suggest that a large component of indigenous workers are reluctant to fully integrate into multi-cultural work environment for fear that it might degrade their existing status.

Data on unemployment in the GCC are not readily available. However, the current structural unemployment has been estimated at around 500,000 national workers in the GCC as a whole.²⁸ This represents a sizable 15 per cent of the total national labour force in the GCC countries. Prolonged high unemployment could have a negative impact on social cohesion within the GCC countries. The political unrest in the 1990s in Bahrain has been blamed among others on high youth unemployment.

In Saudi Arabia²⁹, the largest of the GCC economies, the economy has been growing at very low rates, hovering between 0 and 2 % since the early 1990s, whereas population growth has been closer to 4% per annum. It is estimated that the economy should grow by 6% annually to generate enough jobs for young male Saudis entering the labour market. This disparity in

²⁵ Wood G. and Mellahi K. 2002

²⁶ Maurice Girgis 2002.

²⁷ With respect to these contentious assumptions Wood G. and Mellahi K. (2002) refer to Atiyah (1994), Atiyah, (1996), Lumsden, (1993), Mellahi and Al-Hinai (2000), Parry (1997) and Baxter (1998).

²⁸ Maurice Girgis 2002.

²⁹ Source Wood G. and Mellahi K. 2002

economic growth and population growth has pushed the issue of unemployment to the forefront as baby boomers from the '70ies oil baby boom' are now entering the labour market. Unemployment is not officially measured in Saudi Arabia. However, using demographic data and private sector employment, Saudi American Bank (2000) estimated unemployment of male Saudis in the 20-29 age group, to be around 15-20%. The financial times³⁰ mentions articles in the Saudi popular media that describe unemployment to be "high and persistent" and that this is straining the very fabric of society and could lead to social unrest. Given that birth rates are estimated to decrease only slightly to around 3% per annum in Saudi Arabia, with more than half of the national population under the age of 15 years, job creation for locals is expected to become crucial in the future.

The same can be said for the other GCC countries. The central challenge will be to absorb the rapid labour supply growth due to the rapid population growth. The number of new nationals entering the labour market in Kuwait is estimated at about 6,500 annually.³¹ In Saudi Arabia, the comparable figure is about 74,000 and in Bahrain the number is estimated at around 8,000. It is crucial that growth in labour demand of the private sector accommodates this increase in local supply in labour because the government cannot be counted upon to create them as they did in the past. This should not be a too big problem if citizens would attain a greater share in the overall labour markets within the GCC. For instance, in the UAE the private sector succeeded in creating more than 100,000 jobs yearly in the second half of the 90ies (see also annex XII.J, Table 55), more than enough to compensate for the new nationals entering the labour market but the new job creation concerns mainly low- or semi-skilled positions and thus low paid jobs. Together with relatively generous systems of unemployment compensation this could lead to a disincentive for nationals to enter the private labour market and thus increased unemployment rates.

Unemployment among nationals in the GCC concerns often the less educated that need to compete against cheap expatriates with similar skills. Unemployed women are typically secondary school graduates while unemployed men are generally primary school graduates or lower. Therefore a number of policies to improve labour markets and avoid future unemployment of nationals have been adopted in the GCC countries during the last decade. These have included better defined educational and training programmes geared to the private sector, a ban on, or a reduction in, foreign work permits³², a reduction in the length of the working week and systems of required preferential hiring of nationals³³.

These last policies directed at the Saudization, Omanisation, Bahrainisation, etc. of the workforce are controversial. See Box 4 for an example of the kind of measures in the Omanisation program in Oman. Many of the measures taken are geared at forcing the private sector to hire more citizens. This could be detrimental to long-term growth if these citizens have lower productivity per unit at higher wages than expatriates. Therefore it will be crucial to improve productivity per unit of wage paid within the own citizens workforce in order stimulate the private sector to hire citizens without putting a brake on economic development.

Box 4: Omanisation³⁴

³⁰ "More and More Saudis Find Fewer and Fewer Jobs", *Financial Times*, June 23, 2000.

³¹ Based on published data about the size of the national labour force during the last six years.

³² Note that this could lead to increased private sector wages because cheap foreign labour cannot be imported and thus to a decrease in competitiveness of GCC economies.

³³ For instance in the U.A.E. there exist quotas for the hiring nationals in the banking sector do exist (IMF 2003).

³⁴ Minister of Information, Oman Information, February 2003, Omanisation Programme and Policy, <http://www.omaninfo.com/cgi-bin/journal/DocView.asp?DocumentID=22>

In Oman, the Omanisation programme has been in operation since 1988, working toward replacing expatriates with trained Omani Personnel. By the end of 1999, the number of Omanis in government services exceeded the set target of 72%. In 2000, this number increased to 76%. The Ministry has also stipulated fixed Omanisation targets in six areas of the private sector. Most companies have registered Omanisation plans. Since April 1998 a 'green card' has been awarded to companies that meet their Omanisation targets and comply with the eligibility criteria for labour relations. The names of these companies are published in the local press and they receive preferential treatment in their dealings with the Ministry. The Ministry has stipulated a fixed Omanisation ratio in six areas of the private sector. Transport, storage and communications are to have 60% Omanisation. Finance; insurance and real estate 45%; industry 35%; hotels and restaurants 30%; wholesale or retail trading 20% and contracting 15%.

V.F.5 Poverty

According to the results of Ali and Elbadawi (2000)³⁵, about 22 per cent of the total regional Arab population were living below a real poverty line in 2000, measured in terms of purchasing power parity prices (PPP). That implies that almost a quarter of the people in the Arab Region cannot afford 56\$ per person a month to provide themselves with the bare necessities. Within the GCC, incomes on PPP basis are very high compared to the other countries in the Arab world (see annex XII.O, Table 61). Therefore one cannot extrapolate that in the GCC poverty is as menacing as in the rest of the Arab Region. Nevertheless substantial wage differences exist between GCC citizens and expatriates. Disparity in wages can be as much as 100 up to 250 % (See chapter VIII.B.5). But not much other data is known on the poverty status of expatriates within the GCC. It is reasonable to assume that a larger part of the expatriates is living below the poverty line than GCC citizens but putting a number on this is not possible.

V.F.6 Civil and Political Freedoms

Throughout the GCC there are important challenges that exist related to the exercise of basic civil and political freedoms—among the most important individual freedoms. This lack of basic freedoms is reflected in a range of measures including a prohibition on opposition political parties and censorship.

Out of seven world regions, the Arab countries had the lowest “freedom score” in the late 1990s, according to UNDP. The low level of freedom in the Arab region is confirmed by a set of indicators of “voice and accountability” derived from another international database.³⁶ This set includes indicators measuring various aspects of the political process, civil liberties, political rights and independence of the media. The Arab region comes out lowest in this set of indicators³⁷ (see also annex XII.L, Table 58)

Gender equality is a critical aspect of human freedom and is linked to economic development³⁸. The countries of the GCC typically incur relatively low scores based on international indicators on the status of women, applied by multilateral organisations.

Nevertheless, the countries of the GCC have scored important successes in girls' education. Combined primary, secondary and tertiary gross enrolment ratios for females range from 83 per cent in Bahrain to a low of 56 in Oman. This compares favourably with male ratios, which

³⁵ Ali, A.A.G. and I. Elbadawi, 2000.

³⁶ Kaufman et al, 1999.

³⁷ UNDP. Arab Human Development Report, 2002.

³⁸ UNDP. Arab Human Development Report. 2002.

range from 77 per cent in Bahrain to 59 per cent in Oman (see annex XII.H, Table 52). The growing number of women passing through the education system in the countries of the GCC is putting pressure on governments to expand the areas where women might work. In Saudi Arabia, where only seven per cent of the work force is currently made up of women there are a growing number of female university graduates seeking employment.

Despite these achievements, GCC countries rank poorly in terms of gender equality, based on international indicators. Comparing the Gender Empowerment Measure (GEM)³⁹ with other regions, it becomes clear that there is a glaring deficit within the Arab region, ranking second lowest after sub-Saharan Africa. For instance comparisons between the estimated earned income between female and males in the GCC countries in 2000 indicates that females earn around one-quarter of men in terms of PPP US\$ (see annex XII.O for the gender related indicators within the GCC, the EU and its new member states). According to the UN, the main reason for the low gender empowerment measure (GEM) values of Arab countries is the limited participation of women in political organisations.⁴⁰ There are almost no women holding seats in parliaments, if any, in the GCC countries. In the U.A.E, in 1999 eight per cent of total senior officials and managers and 25 per cent of professional and technical workers were women. The U.A.E. is the only GCC country for which any data of gender related economic activity were identified

V.F.7 The Human Development Index

These overall results of the social context are confirmed by the results of UNDP's Human Development Index (HDI)⁴¹. As is well known the HDI is a composite indicator based on longevity (as measured by life expectancy at birth), educational attainment (as measured by a combination of the adult literacy rate and the combined gross primary; secondary and tertiary enrolment ratios), and the standard of living (as measured by GDP per capita in purchasing power parity). As such it gives in one number an overview on most of the issues discussed in this chapter on social context. HDI ranges from unity (for highest human development achievement) to zero (for the lowest human development achievement).

All EU countries and its new member states have according to the UNDP a high human development. Most GCC also have a high human development but Saudi Arabia and Oman only attain medium human development. (See annex XII.Q, Table 63). All EU countries clearly outperform those in the GCC, but the GCC countries themselves outperform the rest of the Arab Region.

The GCC countries are ranked according to the HDI from Bahrain with the highest HDI score (0,839), Qatar (0,826), Kuwait (0,820), UAE (0,816) to Saudi Arabia and Oman with HDI indexes lower than 0,8. The HDI index 2001 of the EU15 is on average 0,924 with the lowest for Greece at 0,892. The difference with the GCC remains significant⁴².

V.G CONDITIONING FACTORS FOR THE SIA

Before starting the SIA it is important to identify a series of conditioning factors that might influence the direction and the nature of the possible impact of an EU-GCC FTA and

³⁹ The GEM measures the participation of women in economic, professional and political activities using the indicators of income per capita (PPP\$), women's percentage share of professional and technical positions, and women's percentage share of parliamentary seats, respectively. Source: UNDP. Arab Human Development Report, 2002.

⁴⁰ UNDP. Arab Human Development Report. 2002.

⁴¹ UNDP, Human Development Report, 2003

⁴² Ali Abdel Gadir Ali 2001

therefore also our analysis. The conditioning factors flow from the contextual factors but their interpretation is more subjective. When trying to describe the nature of the conditioning factors, one tries to get an insight on how different attitudes and circumstances can influence the eventual impact of an FTA agreement within the parties and thus also the perspective of both parties on the FTA negotiations. The following is meant to be a brief overview of some striking differences in conditioning factors between the two regions, i.e. the way they are governed, their cultural background and the security situation.

V.G.1 Governance

Probably the most important conditioning factor in which attitudes and circumstances can influence the perspective of both parties is the type of governance. Within the EU democratic representation and accountability of those in the public office are key elements of the governing institutions. Historically the governing institutions have evolved in a separation of powers, i.e. the legislative, the executive and the judiciary. As such within the EU there has been a strong movement against any discrimination based on grounds such as gender, race, ethnic or social origin, language, religion or belief, ideology, disability, age or sexual orientation. Freedom of speech but also the right of information are crucial features of the European society. There has been a long tradition of freedom of assembly and of association that has resulted in wide spread system of representative organizations for workers and employers.

Within the GCC countries, the government is mostly headed by monarchs or their direct representatives. Segregation of power is less marked and accountability of the legislative and executive branches is frequently deficient. The *Shariah* (Islamic law) is the principal source of legislation governing family and personal matters. Only Kuwait has ratified International Convention on Civil and Political Rights (see also annex XII.K, Table 58). Consequently, the governance structure of the GCC countries is seen as less democratic and accountable than that in the EU. Separation of powers is less clear, freedom of speech less guaranteed (see for instance the low ranking of the GCC countries in the Word Press Freedom ranking, annex XII.M) and human rights abuses are more frequent (see for instance the reporting on human rights violations in the GCC, the EU and the EU's new member states by Amnesty International, annex XII.N).

These differences in governance structures can influence the outcome of the FTA because it can influence the attitude of potential exporters and investors in the GCC region. A level of public accountability and a good working legal system could help to diminish some of the concerns of these potential exporters and investors, thereby enhancing the chance of a successful outcome on the ground of a FTA between the EU and the GCC.

V.G.2 Culture

Cultural differences between the two regions are important. Attitude towards contentious issues such as religion, gender, race and sexual orientation can differ substantially between the two regions. The Islam is the predominant religion in the GCC countries, whereas in the EU Christian is the principal religion. In some GCC countries gender can have a profound impact on employment opportunities. In the EU gender related restrictions on job access are forbidden by law. Many other differences could be summed up with regard to cultural differences. Together with the differences in language, this can create serious barriers between the two regions.

Cultural differences can have direct implications on the issues discussed during the FTA negotiations. For instance, the GCC may very well oppose trade liberalisation of products like alcoholic beverages, products elaborated with pork meat, gambling machines, etc. Industries such as tourism could also be harmed because of the presence of persistent cultural issues. But more important is the indirect impact of these cultural differences on the effectiveness of

the FTA. It is crucial that potential exporters and investors in both regions overcome the perception of unbridgeable cultural barriers between the two regions. Security

The EU has experienced the last decade some serious conflicts at its fringes such as the civil war in former Yugoslavia. However, internally the EU has not experienced any major upheavals during the last decades with the exception of serious conflicts in Northern Ireland and in the Basque country. On the other hand, the GCC is situated in a very hostile region. This can have serious implications in the inland security of the GCC countries. In this regard, the political problems in Israel and its occupied territories extremely important. The far stretching implications of the first and the more recent second gulf war, the remaining tensions related to potential nuclear weapons in Iran and the problems with terrorist activities within some of the GCC countries.

The consequences of the discussion with regard to the security in the GCC region for the FTA with the EU are straightforward. The guarantee of stability and security in the GCC region will attract foreign investors and trade partners and put the liberalisation into practice.

Screening of trade issues A negotiating mandate for the EU-GCC FTA, from the Council of the European Union, was adopted in July 2001. This document has been used as a guideline to identify issues on the negotiation table between the EU and the GCC that might be of most importance in the context of a prospective FTA. As part of the screening process the Project Team has stated to prioritise these issues to focus the analysis in the SIA on those issues most likely to be important for economic, environmental and social sustainability for the countries involved. The following selection criteria are used:

- the issue is likely to be the subject of the FTA negotiations between the EU and GCC and;
- one might expect, *a priori*, that there may be important economic, environmental and/or social impacts (positive or negative) as a result of the mentioned issue.

V.H TRADE IN GOODS: MARKET ACCESS FOR INDUSTRIAL PRODUCTS

Industrial products comprise a substantial and growing part of the economies of the GCC countries. All the governments of the GCC have made efforts over the past years to diversify their economies, traditionally almost completely reliant on oil and gas. Saudi Arabia and the UAE have produced roughly 20 % of their non-oil GDP in manufacturing industries. Likewise, manufacturing industries are critical sectors in the other GCC countries with contributions to the non-oil GDP of 10 % and higher (see Table 45 in annex XII.B). Policies in support of diversification and the development of industrial products are often accompanied by policies to encourage investment, through privatisation and encouraging foreign direct investment by allowing, albeit to a limited extent, foreign ownership. A number of industries in the non-oil sector are firmly established. These range from chemical and petrochemical production, manufacturing, steel, aluminium and others. Typically it is expanding now to include “light” industry such as clothing, furniture and consumer goods.

Tariffs have a direct impact on the trade flows in goods between the GCC and the EU. They are one of the prime topics of negotiation in the ongoing FTA discussions. As we will see in chapter VI the EU’s tariffs are typically a lot lower than those of the GCC (see also Table 14 underneath). Tariff reductions will have a direct impact on the trade flow between the two regions. Chapter VI looks in more detail at the possible consequences of these tariff reductions.

Table 14: Average MFN Import Tariff Rates over all goods (Percent)

Bahrain	Kuwait	Oman	Qatar	S. Arabia	UAE	EU15
16.3 %	3.4 %	9.6 %	4.4 %	11.5 %	14.3 %	3.8 %

NOTE: Application of Shari'ah and Forward Sales and Manufacturing Contracts: Salam And Istisna⁴³

Introduction

It is one of the basic conditions for the validity of sale in Shari'ah that the commodity intended to be sold must be in the physical or constructive possession of the seller. This condition has three implications:

- First, the commodity must exist: a commodity that does not exist at the time of sale cannot be sold.
- Second, the seller should have acquired the ownership of that commodity. If the commodity exists but the seller does not own it, he cannot sell it to anybody.
- Third, mere ownership is not enough. It should have come in the possession of the seller, either physically or constructively. If the seller owns a commodity, but he has not acquired its delivery by himself or through an agent, he cannot sell it.

There are only two exceptions to this general principle in Shari'ah. One is Salam and the other is Istisna. Both are sales of a special nature, and by the present article I want to explain the concept of these two kinds of sale and the extent to which they can be used for the purpose of financing.

Meaning of Salam

Salam is a sale whereby the seller undertakes to supply some specific goods to the buyer at a future date in exchange for an advanced price fully paid on the spot.

Here the price is paid in cash, but the supply of the purchased goods is deferred. The buyer is called "rabb-us-Salam", the seller is "Muslam ilaih", the cash price is "ra's-ul-mal", and the purchased commodity is termed as "muslam fih", but for the purpose of simplicity, I shall use the English synonyms of these terms.

The Holy Prophet, Sall-Allahu alayhi wa sallam, allowed Salam subject to certain conditions. The basic purpose of this sale was to meet the needs of the small farmers who needed money to grow their crops and to feed their family up to the time of their harvest. After the prohibition of riba they could not take usurious loans. Therefore, it was allowed for them to sell the agricultural products in advance.

Similarly, the traders of Arabia used to export goods to other places and to import other goods to their homeland. They needed money to undertake this type of business. They could not

⁴³ *Mufti Taqi Usmani*, Forward Sales and Manufacturing Contracts: Salam And Istisna, *Source: Al-Balagh Webzine*, <http://www.islamic-finance.net/research/taqi4.html>

borrow from the usurers after the prohibition of riba. It was, therefore, allowed for them that they sell the goods in advance. After receiving their cash price, they could easily undertake the aforesaid business.

Salam was beneficial to the seller, because he received the price in advance, and it was beneficial to the buyer also, because normally, the price in Salam used to be lower than price in spot sales.

The permissibility of Salam was an exception to the general rule that prohibits the forward sales. Therefore it was subjected to some strict conditions. These conditions are summarized below:

Conditions of Salam

First of all, it is necessary for the validity of Salam that the buyer pays the price in full to the seller at the time of effecting the sale. It is necessary because in the absence of full payment by the buyer, it will be tantamount to a sale of debt against debt, which is expressly prohibited by the Holy Prophet, Sall-Allahu alayhi wa sallam. Moreover, the basic wisdom behind the permissibility of Salam is to fulfill the instant needs of the seller. If the price is not paid to him in full, the basic purpose of the transaction will be defeated. Therefore, all the Muslim jurists are unanimous on the point that the full payment of the price is necessary in Salam. However, Imam Malik is of the view that the seller may give a concession of two or three days to the buyers, but this concession should not form part of their agreement.

Salam can be effected in those commodities only whose quality and quantity can be specified exactly. The things whose quality or quantity is not determined by the specification cannot be sold through the contract of Salam. For example, the precious stones cannot be sold on the basis of Salam, because every piece of precious stones is normally different from the other either in its quality or in its size or weight and their exact specification is not generally possible. Salam cannot be effected on a particular commodity or on a product of a particular field or farm. For example, if the seller undertakes to supply wheat of a particular field, or the fruit of a particular tree, the Salam will not be valid, because there is a possibility that of that particular field or the fruit of that tree is destroyed before the delivery, and in the presence of this possibility the delivery remains uncertain. The same rule is applicable to every commodity whose supply is not certain. It is necessary that the quality of the commodity (intended to be purchased through Salam) be fully specified leaving no ambiguity that may lead to dispute. All the possible details in this respect must be expressly mentioned.

It is also necessary that the quantity of the commodity be agreed upon in unequivocal terms. If the commodity is quantified in weights according to the usage of its traders, its weight must be determined, and if it's quantified through measures, its exact measure should be known. What is normally weighed cannot be specified in measures and vice versa.

The exact date and place of delivery must be specified in the contract.

Salam cannot be effected in respect of those things that must be delivered at the spot. For example, if gold is purchased in exchange of silver, it is necessary, according to Shari'ah, that the delivery of both be simultaneous. Here, Salam cannot work. Similarly, if wheat is bartered for barley, the simultaneous delivery of both is necessary for the validity of sale, therefore, the contract of Salam in this case is not allowed. All the Muslim jurists are unanimous on the principle that Salam will not be valid unless all these conditions are fully observed, because they are based on the express ahadith of the Holy Prophet, Sall-Allahu alayhi wa sallam. The most famous hadith in this context is the one in which the Holy Prophet, Sall-Allahu alayhi wa sallam has said: *"Whoever wishes to enter into a contract of Salam, he must effect the Salam according to the specified measure and the specified weight and the specified date of delivery."*

However, there are certain other conditions, which have been a point of difference between the different schools of the Islamic jurisprudence. Some of these conditions are discussed below.

It is necessary, according to the Hanafi school, that the commodity (for which Salam is effected) remains available in the market right from the day of contract up to the date of delivery. Therefore, if a commodity is not available in the market at the time of the contract, Salam cannot be effected in respect of that commodity, even though it is expected it will be available in the markets at the date of the delivery. However, all the other three schools of Fiqh (i.e. Shafi'i, Maliki, and Hanbali) are of the view that the availability of the commodity at the time of the contract is not a condition for the validity of Salam. What is necessary, according to them, is that it should be available at the time of delivery, only. This latter view can be acted upon in the present circumstances.

It is necessary, according to the Hanafi and Hanbali schools that the time of delivery is, at least, one month from the date of agreement. If the time of delivery is fixed earlier than one month, Salam is not valid. Their argument is that Salam has been allowed for the needs of small farmers and traders, therefore, they should be given enough opportunity to acquire the commodity, and they may not be able to supply the commodity before one month. Moreover, the price in Salam is normally lower than the price of spot sales. This concession in the price may be justified only when the commodities are delivered after a period that has a reasonable bearing on the prices. A period of less than one month does not normally effect the prices. Therefore, the minimum time of delivery should not be less than one month. Imam Malik supports the view that there should be a minimum period for the contract of Salam. However, he is of the opinion that it should not be less than fifteen days, because the rates of the market may change within a fortnight.

The view is, however, opposed by some other jurists, like Imam Shafi'i and some Hanafi jurists also. They say that the Holy Prophet Sall-Allahu alayhi wa sallam has not specified a minimum for the validity of Salam. The only condition, according to hadith, is that the time of delivery must be clearly defined. Therefore, no minimum period can be prescribed. The parties may fix any date for delivery with mutual consent. This view seems to be preferable in the present circumstances, because the Holy Prophet Sall-Allahu alayhi wa sallam has not prescribed a minimum period. The jurists have prescribed different periods that range between one day to one month. It is obvious that they have done so according to the expediency and keeping in view the interest of the poor sellers. But the expediency may differ from time to time and place to place. Likewise, sometimes it is more in the interest of the seller to fix an earlier date. As far as the price is concerned, it is not a necessary condition of Salam that the price is always lower than the market price on that day. The seller himself is the best judge of his interest, and if he accepts an earlier date of delivery with his free will and consent, there is no reason why he should be forbidden from doing so. Certain contemporary jurists have adopted this view considering it more suitable for the modern transactions.

Salam as a Mode of Financing

It is evident from the foregoing discussion that Shari'ah allowed Salam to fulfill the needs of farmers and traders, therefore, it is basically a mode of financing for small farmers and traders. Modern banks and financial institution, especially to finance the agricultural sector, can use the mode of financing. As pointed out earlier, the price in Salam may be fixed at a lower rate than the price of those commodities delivered at the spot. In this way, the difference between the two prices may be a valid profit for the banks or financial institutions. In order to ensure that the seller shall deliver the commodity on the agreed date, they also can ask him to furnish a security, which may be in the form of a guarantee or in the form of mortgage or hypothecation. In case of default in delivery, the guarantor may be asked to

deliver the same commodity by purchasing it from the market, or to recover the price advanced by him.

The only problem in Salam that may agitate the modern banks and financial institutions today is that they will receive certain commodities from their clients, and will not receive money. Being conversant with dealing in money only, it seems to be cumbersome for them to receive different commodities from different client and to sell them in the market. They cannot sell those commodities before they are actually delivered to them, because it is prohibited in Shari'ah.

But whenever we talk about the Islamic modes of financing, one basic point should never be ignored. The point is that the concept of the financial institutions dealing in money only is foreign to Islamic Shari'ah. If these institutions want to earn a halal profit, they shall have to deal in commodities in one way or the other, because no profit is allowed in Shari'ah on advancing loans only. Therefore, the establishment of an Islamic economy requires a basic change in the approach and in the outlook of the financial institutions. They shall have to establish a special cell for dealing in commodities. If such a special cell is established, it should not be difficult to purchase commodities through Salam and to sell in spot markets.

However, there are two other ways of benefiting from the contract of Salam.

- First, after purchasing a commodity by way of Salam, the financial institutions may sell them through a parallel contract of Salam for the same date of delivery. The period of Salam in the second (parallel) transaction being shorter, the price may be a little higher than the price of the first transaction, and the difference between the two prices shall be the profit earned by the institution. The shorter the period of Salam, the higher the price, and the greater the profit. In this way the institutions may manage their short term financing portfolios.
- Second, if a parallel contract of Salam is not feasible for one reason or another, they can enter into a promise to sell the commodity to a third party on the date of the delivery. Being merely a promise, and not the actual sale, their buyers will not have to pay the price in advance. Therefore, a higher price may be fixed and as soon as the commodity is received by the institution, it will be sold to the third party on a pre-agreed price, according to the terms of the promise.
- A third option is sometimes proposed that at the date of the delivery, the commodity be sold back to the seller on a higher price. But this suggestion is not in line with the dictates of Shari'ah. It is never permitted by the Shari'ah that the purchased commodity be sold back to the seller before taking its delivery, and if it is done on a higher price it will tantamount to riba which is totally prohibited. Therefore, this proposal is not acceptable at all.

Istisna

Istisna is the second kind of sale where a commodity is transacted before it comes into existence. It means to order a manufacturer to manufacture a specific commodity for the purchaser. If the manufacture undertakes to manufacture the goods for him, the transaction of Istisna comes into existence. But it is necessary for the validity of Istisna that the price is fixed with the consent of the parties and that necessary specification of the commodity (intended to be manufactured) is fully settled between them.

The contract of Istisna creates a moral obligation on the manufacturer to manufacture the goods, but before he starts the work, any one of the parties may cancel the contract after giving a notice to the other. But after the manufacturer has started the work, the contract cannot be cancelled unilaterally.

Difference between Istisna and Salam

Keeping in view this nature of Istisna there are several points of difference between Istisna and Salam which are summarized below:

The subject of Istisna is always a thing that needs manufacturing, while Salam can be effected on anything, no matter whether it needs manufacturing or not.

It is necessary for Salam that the price is paid in advance, while it is not necessary in Istisna.

The contract of Salam, once effected, cannot be cancelled unilaterally, while the contract of Istisna can be cancelled before the manufacturer starts the work.

The time of delivery is an essential part of the sale in Salam while it is not necessary in Istisna that the time of the delivery is fixed.

Difference Between Istisna and Ijarah

It should also be kept in mind that the manufacturer, in Istisna, undertakes to make the required goods with his own material. Therefore, this transaction implies that the manufacturer shall obtain the material, if it is not already with him, and shall undertake the work required for making the ordered goods with it. If the customer provides the material, and the manufacturer is required to use his labor and skill only, the transaction is not Istisna. In this case it will be a transaction of Ijarah whereby the services of a person are retained for a specified fee paid to him.

When the seller has manufactured the required goods, he should present them to the purchaser. But there is a difference of opinion among the Muslim jurists whether or not the purchaser has a right to reject the goods at this stage. Imam Abu Hanifah is of the view that he can exercise his "option of seeing" (Khiyar-ur-ru'yah) after seeing the goods, because Istisna is a sale and if somebody purchases a thing which is not seen by him, he has the option to cancel the sale after seeing it. The same principle is applicable to Istisna. However, Imam Abu Yousuf says that if the commodity conforms to the specification agreed upon between the parties at the time of the contract, the purchaser is bound to accept the goods and he cannot exercise the option of seeing.

This view has been preferred by the jurists of the Ottoman Empire, and the Hanafi law has been codified according to this view, because it is damaging in the context of modern trade and industry, that the manufacturer exerts all his resources to prepare the required goods, and the purchaser cancels the sale without assigning any reason, even though the goods are in full conformity with the required specifications.

Time of Delivery

As pointed out earlier, it is not necessary in Istisna that the time of delivery is fixed. However, the purchaser may fix a maximum time for delivery that means that if the manufacturer delays the delivery after the appointed time, he will not be bound to accept the goods and pay the price.

In order to ensure that the goods will be delivered within the specified period, some modern agreements of this nature contain a penal clause to the effect that in case the manufacturer delays the delivery after the appointed time, he shall be liable to a penalty which shall be calculated on a daily basis. Can such a penal clause be inserted in a contract of Istisna according to Shari'ah? Although the classical jurists seem to be silent about this question while they discuss the contract of Istisna, yet they have allowed a similar condition in the case of Ijarah. They say, if a person hires the service of a tailor to tailor his clothes, the fee may be variable according to the time of delivery. The hirer may say that he will pay Rs. 100/- in case the tailor prepares the clothes within one day and Rs. 80/- in case he prepares it after two days. On the same analogy, the price in Istisna may be tied with the time of delivery, and it will be permissible if it is agreed between the parties that in case of delay in delivery, the price shall be reduced by a specified amount per day.

Istisna as a Mode of Financing

Istisna can be used for providing the facility of financing in certain transactions, especially in the sector of house financing. If the client has his own land and he seeks financing for the construction of a house, the financier may undertake to construct the house on that open land, on the basis of Istisna, and if the client has no land and he wants to purchase the land also, the financier may undertake to provide him a constructed house on the specified piece of land.

Since it is not necessary in Istisna that the price is paid in advance, nor is it necessary that it is paid at the time of the delivery, rather, it may be deferred to any time according to the agreement of the parties, therefore, the time of payment may be fixed in whatever manner they wish. The payment may also be in instalments. On the other hand, it is not necessary that the financier himself construct the house. He can enter into a parallel contract of Istisna with a third party, or may hire the services of a contractor (other than the client). In both cases, he can calculate his cost and fix the price of Istisna with his client in a manner that may give him a reasonable profit over his cost. The payment of instalments by the client may start, in this case, right from the day when the contract of Istisna is signed by the parties, and may continue during the construction of the house and after it is handed over to the client. In order to secure the payments of instalments, the financier as a security may keep the title deeds of the house or land, or any other property, until the client pays the last instalment.

The financier, in this case, will be responsible for the construction of the house in full conformity with the specifications detailed in the agreement. In case of discrepancy, the financier will undertake such alternation on his own cost as may be necessary for bringing it in harmony with the terms of the contract.

The instrument of Istisna may also be used for project financing on similar lines. If a client wants to install a machinery plant in his factory, and the plant needs to be manufactured, the financier may undertake to prepare the plant through the contract of Istisna according to the aforesaid procedure. The same principles will be fully applicable to the construction of a building for the industry.

V.I TRADE IN SERVICES

V.I.1 Services and structural change

In the process of modernisation of the GCC economies,, the service sector needs to be considered as a crucial factor of economic progress, and its exclusion from any trade liberalisation agreement is likely to constrain the benefits that are available from the integration of other sectors such as manufacturing.

Inefficient domestic production of services behind trade and investment barriers acts as a tax on the production of goods. The protection of services raises their price in the domestic economy and hence the costs of industries which rely on them. Indeed, the liberalisation of services may be necessary for industrial sectors to fully benefit from the opportunities that are made available by the removal of trade barriers. Effective modern trade agreements covering services and standards have been integral to the EU-Chile FTA process and would be likely to be integral elements of any forthcoming EU agreements.

There is also an emerging consensus that links services to economic growth. Just as with trade in goods, liberalisation of trade in services can lead to technology transfer and technology spillovers. These can arise both through cross-border provisions of services and through foreign direct investment to establish commercial presence. Such technology transfer will be the source of additional growth prospects for the GCC region.

However, there are also important differences between opening up to services and freeing trade in goods, in terms of their impact on growth. Services liberalisation often implies a larger scale of activity in the domestic economy, providing greater scope for the growth-enhancing characteristics present in many service sectors. Learning by doing and knowledge generation can increase raise product variety and product quality (Mattoo et al, 2001). The larger scale of activity comes about because the simultaneity of production and consumption in many service activities requires a local presence to supply the market. This means factors of production must move to the consuming country. Similarly, any barriers to entry in service sectors will constrain entry to the market, not just to foreign entrants but also to new domestic providers.

Hence, the liberalisation of service sectors can result in greater competition from both foreign and new domestic firms, which in turn implies a larger scale of activity. It is also worthwhile noting that since services are often labour intensive this greater scale of activity can play an important role in absorbing workers released as trade protection of import-competing goods is reduced and in attacking general unemployment.

V.I.2 Importance of services in the GCC

Services should be an extremely important and fast-growing component of the economies of the GCC. Unfortunately, our interpretation of Table 4 and Table 5 (see V.C.1.2) is that the domestic size of the services sectors in the GCC economies is smaller, by share of GDP, than in comparable countries (e.g. Egypt), and smaller than in the EU-10 candidate countries. This is likely to be because, by and large, the services sector in the GCC states is not significantly open to trade. The UAE was the only country of which detailed employment data could be found in the services sector in 2002 representing just over 60% of total employment⁴⁴ while accounting for 35% of GDP. For detailed information on the split up of the services sectors see annex XII.B. However, we should note here that numbers of people employed in services is not an indication of efficiency. Instead within the EU services are well developed and are responsible for the majority of its GDP. The EU is a good performer in trade in Services being the world's largest importer and exporter of services, with 24% of the world's trade in services compared with only 19% of the world's trade in goods.⁴⁵

Using GDP as a base (excluding the oil portion of GDP), within the GCC, the relative contribution of services sub-sectors breaks down roughly as follows:

- Financial services were the largest in most countries, except in Saudi Arabia, to the GDP in the GCC countries in 2001. This ranged from the highest contribution in Bahrain, or 23,1 %, to the lowest in Saudi Arabia, with 2,8 %.
- Wholesale/retail services contributed 11,3% to the economies of the GCC, lowest in Kuwait at 5.8% and highest in Saudi Arabia at 13%.⁴⁶
- Transportation/storage and communication services contributed an average of 7,1% across the whole economy of the GCC countries.⁴⁷ The contribution was most important for Bahrain (7.9%) and least important in Kuwait (4.9%).

⁴⁴ See annex XII.J, Table 56.

⁴⁵ European Commission. WTO Members' Requests to the EC and its Member States for Improved Market Access for Services.

⁴⁶ This does not include Qatar where no comparable data were available.

⁴⁷ This does not include Oman or Qatar where no comparable data were available.

- Real estate and other business services were responsible for 5,5% of GDP in the whole GCC region in 2001.⁴⁸ It was most important for Bahrain (8.9%) and least important for Qatar (3.4%).
- The construction sector contributed 5,4 % to the GDP across the GCC countries in 2001. This ranged from a low in Oman of 2.2% to a high in the U.A.E. of 7%.
- Finally recreational, cultural and social services (community and social services) contributed an average of 4 % across the whole economies of the GCC in 2001.⁴⁹ This average may be somewhat skewed by the disproportionately high importance of this sector in Kuwait, where it contributed 23.6% of the GDP in 2001. It was least important in Saudi Arabia, with a 1.4% contribution.

V.I.3 How Services Add Value

Economic gains from increased trade in services are not confined to conventional industry (enhancing producer surplus). Additional value added from the exploitation of services in an economy is in part created by the process of recycling domestic assets, generating further commercial opportunities and allowing a greater deal of consumer choice (enhancing consumer surplus). There are a number of areas where services liberalisation could have direct impacts on economic, social and environmental indicators of sustainability as for example consumer protection standards, consumer security and safety, pricing levels, inflation, professional training and education, environmental standards, consumer relevant quality, diversity of choices and cultural diversity.

The 'laissez-faire' economics of trade in goods is relatively well understood, visually prominent, tactile and frequently emotive (The 'McDonalds effect' or foreign cars). Trade in services, by contrast, is essentially concerned with harnessing the international legal framework - that evolved to facilitate trade in goods - to the *fresh* challenge of providing services across borders. Trade in services has at its core the need to lock states into binding legal commitments by way of international treaties. Only such (virtually) irreversible legal commitments can serve to underpin the complex and risky investment decisions required by firms in serving overseas markets. Here, the legal aspects dominate the logistical aspects.

Within the WTO the General Agreement on Trade in Services (GATS) deals with the liberalisation of trade in services. All members of the EU and of the GCC (with the exception of Saudi Arabia) are members of the WTO and subject to what is agreed under the WTO's General Agreement on Trade in Services (GATS). However, in crafting the legal commitments enshrined in the GATS and bilateral treaties, states in fact have considerably more flexibility to shape and manipulate any commitments to domestic norms, tastes and cultural diversity than is often realised. The GATS is set of multilateral rules and commitments relating to the provision of services. It consists of two parts: the framework agreement containing the rules and general obligations; and the national schedules of commitments in which each member specifies the degree of access it is prepared to guarantee for foreign service providers.

The most important general obligation is the MFN (most favoured nation) rule, which is applicable to all services, whether scheduled or not. However, Governments may take exemptions from the MFN principle in order to provide more favourable treatment to certain trading partners – in particular countries, which are members of regional groupings.

The GATS grants considerable flexibility to Governments, allowing them to vary the level of obligation they will assume in a particular service sector or sub-sector. The EU for example

⁴⁸ This does not include Oman where no comparable data were available.

⁴⁹ This does not include Oman or Qatar where no comparable data were available.

shows some sensitivity towards commitments in areas, for example health and audio-visual services, which are protected within the European legislation.⁵⁰ For those services, which are committed, Governments may set limitations, specifying the level of market access and the degree of national treatment they are prepared to guarantee.

Finally, Governments are able to limit commitments to one or more of the four recognised modes of supply through which services can be delivered. The four modes of service delivery are defined as:

1. Cross-border: Trade takes place from the territory of one country into that of another. For example, telephone calls from one country to another or cargo transportation;
2. Consumption abroad: Consumers or firms make use of services while in another country, for example, tourism, education;
3. Commercial presence: A firm from one country establishes itself in another in order to supply services. A particularly common mode of supply in telecommunications;
4. Presence of natural persons: Natural persons from one country stay in another for a limited period in order to supply services. Includes the self-employed and employees of services providers, for example, construction and professional services.

Because it is a basic principle of the GATS that developing countries are expected to liberalise fewer sectors and types of transaction, in line with their development situation, the commitments of developing countries are in general less extensive than those of the more industrialised countries – and this very flexibility in the scheduling has enabled services to build on progress made, under the current Doha Development Round of WTO.

For instance if we look at the GCC and the EU we see that GCC countries have made commitments under the GATS with respect to services sectors, including in particular, financial, tourism and travel related services, construction and related engineering services and environmental services (Table 15). But the European Union has made more commitments, in all of services sub-sectors, across all modes of supply.

	Bahrain	Kuwait	Oman	Qatar	Saudi Ar	U.A.E.	EU
Business Services	--	Yes	--	Yes	--	Yes	Yes
Communication Services	--	--	--	Yes	--	Yes	Yes
Construction and related engineering Service	--	Yes	--	Yes	--	Yes	Yes
Distribution Services	--	Yes	--	--	--	--	Yes
Educational Services	--	--	--	--	--	--	Yes
Environmental Services	--	Yes	--	Yes	--	Yes	Yes
Financial Services	Yes	Yes	--	Yes	--	Yes	Yes
Health related and social Services	--	Yes	--	--	--	--	Yes
Tourism and travel related	--	Yes	--	Yes	--	Yes	Yes
Recreational, cultural and sporting services	--	Yes	--	--	--	--	Yes
Transport Services	--	--	--	--	--	--	Yes
Other Services not included elsewhere	--	--	--	--	--	--	--

Source: WTO Services Database, <http://tsdb.wto.org>

⁵⁰ For example the Local Content Directive – mandates 50% local programme content in TV broadcasts. Look also for instance at the recent GATS Initial Offer by the European Community in annex XII.R.

The key policy point to be derived from this discussion is that domestic – and especially regional – jurisdictions derive much more power and scope for bespoke limitations under the GATS than they do under the GATT. Article I.3 of the GATS excludes services from the scope of the agreement if they are ‘supplied in the exercise of governmental authority’, in the sense of any service which is supplied ‘neither on a commercial basis nor in competition with one or more service suppliers’. In addition, air transport services are also excluded from the scope of the GATS. Moreover, the GATS apply to all services, but the level of actual liberalisation of individual services varies among WTO members. For example, a monopoly supplier, whether public or private, can be maintained and limitations can be imposed on foreign suppliers if that is deemed necessary to safeguard a public service. Furthermore, progress can be made in non-contentious areas while little is required in key areas of sensitivity such as health services or audio-visual services, where the EU itself for example has made no GATS commitments and will therefore not seek them in its regional negotiations.

Thus the GATS is about establishing legal benchmarks and levels of consistency – albeit in some cases at fairly restricted breadth of coverage and levels of ambition (requiring neither wide nor deep commitments – just commitments). In essence, the two key principles of MFN and NT (national treatment) govern consistency of treatment in two vital areas: in trade relations between two foreign countries and in trade relations between a foreign country and a national (or regional member) country.

Once these key parameters are established, the level of WTO compatible ambition need not be excessively broad (many sectors) or deep (number of sub-sectors). However, in region-region FTA negotiations, and especially at the bilateral level (US-Jordan for example), the level of ambition will always be ‘WTO plus’. Thus the key to EU-GCC negotiations is to make the correct country comparison, in order to assess the level of ambition, as a guide to the potential gains from any agreement. For instance, the FTA between the EU and Chile clearly has commitments for most service sectors that are ‘WTO Plus’ with the exception of the Education and Health sectors.

Of course, in any specific case the gains available will depend on an assessment of the competitive position and strategic fit between the two actors in the negotiations. For the current EU-GCC negotiations, we would suggest that the correct comparison would be with the EU-Chile agreement, rather than with the levels of ambition envisaged in, for example, the EU-Mercosur negotiations or the Barcelona process negotiations, since both regard less developed regions than the Gulf States.

The reasons for this thinking are twofold: the first axiomatic and legal, the second strategic and economic. First, it is important to avoid any disincentives to the multilateral standard agreement. Hence, the level of ambition in regional agreements must always exceed the multilateral benchmark as set out in the GATS - as is consistent with our discussion of the MFN and NT concepts outlined above.

Secondly, the GCC macro-policy and growth rate discussion above suggests that both the GCC CU and the EU-GCC FTA are not substitutes but complements. The two agreements taken together should also allow the EU the opportunity to extend its regional and political agenda on the Barcelona process.

Linking Services & FDI

Due to the reduction in traditional trade barriers, the world economy has become more integrated. This has been reflected in rising volumes of trade and investment flows and increasing international interdependencies between firms. The activities of multinational firms are now much more important and this is altering the political economy which envelops trade policymaking. A large proportion of trade is now intra-firm trade, that is trade, which

takes place within multinational enterprises. More generally, there has been an increase in the extent to which firms outsource parts of the production process to overseas suppliers leading to a 'sequential, vertical trading chain stretching across many countries' (Hummels et al, 1999).

FDI and trade in services are also closely related, as the international provisions of many services often require some form of local presence. Further, access to efficiently provided services is often an important factor in determining the location decisions of multinational firms. In some sectors an efficient services sector is a pre-requisite for substantial inflows of FDI. Particularly the GCC has not been able to attract substantial amounts of FDI (see chapter V.J.1). The large differences in terms of FDI suggest a substantial potential for the GCC region to attract further FDI. An important element in achieving this is likely to be the effective liberalisation of services sectors in the GCC.

V.I.4 Potential impacts of an EU-GCC FTA on Trade in Services

Given the importance of services to the economies in the GCC regions, coupled with liberalisation occurring at the WTO, and the relative protection in the services sector in the GCC (particularly in Bahrain, Oman and Saudi Arabia), it is likely that there is some prospect for further liberalisation under an EU-GCC FTA.⁵¹ In a number of sectors, such as telecommunications and finance, this will entail increased imports and FDI from EU countries whose service suppliers are relatively efficient.

However, it is also very important that there be reciprocal opening of service markets in the EU for sectors where the GCC countries are relatively efficient. It is crucial that the EU provides a strong lead by liberalising its own services markets and contribute to an environment, which stimulates reform and liberalisation in the GCC.

The main question with respect to the evolution of the private service sector, and thus of commercial services trade, will be the way in which governments in the GCC countries withdraw from the direct provision of some services and the ownership of services organisations. Their future government procurement programmes and privatisation plans will have an important role in this evolution.

Although the negotiations are not complete, they are most likely to impact the following services sectors in terms of seeking removal of equity caps, nationality and residency requirements, any prohibition on the purchase of land and buildings⁵²: *Business services, Communication services, construction and related engineering services, distribution services, environmental services, financial services, and transport services*. This could be important for the EU express carriers, which have a global capacity, and will already be in the GCC markets. Any Economic Needs Tests (ENTs) should be scheduled in accordance with the Scheduling Guidelines adopted in March 2001 in order not to become artificial entry barriers. Contractual service suppliers should also be allowed to supply services.

Business Services. Professional and business services form an essential part of the intermediate services provision for both government and private organisations. They can provide much

⁵¹ Of the four GCC States on which the WTO reports commercial services trade data, only Bahrain shows a surplus, but presumably Qatar and the UAE also show deficits. Disaggregated data are not available, but deficits are probably due to the levels in the three main categories of imports (e.g., transport, travel and other services, see also Table 64 in annex XII.S).

⁵² Please see "The GATS Initial Offer by the European Community" in Annex XII.R for examples of specific types of liberalisation that might be contemplated.

added value, job growth and better-paid work. Unless they are world class the manufacturing sector will be adversely affected by cheaper production in China, for example, and in the service sector by outsourcing to India and the Caribbean. If education levels are low, or there are insufficient tertiary graduates, which the figures suggest may be the case (see for instance Table 52 in annex XII.H), and if proficiency in English is lacking, then it will be difficult to attract outsourcing work from the US and some other OECD.

The professional and business services sector provides excellent opportunities for female employment. For the highly regulated professions the FTA will have to address the recognition of qualifications, standards and licences, but this looks to be on a very long time scale, as the negotiation of mutual recognition agreement is very time and resource consuming.

Communication Services. Although the six countries appear to be well connected with wireless and optic fibre cables for telecommunications, their readiness for the modern ICT world of work is low. Communication indicators (such as fixed line telephones per 1000 inhabitants) are low compared to European standards, and mobile penetration even lower (see Table 64 in annex XII.S). With regard to PC penetration, the highest levels in the GCC countries are still lower than half the European levels, and Internet Service Providers (ISPs) and secure servers barely exist, with the exception of Saudi Arabia, which has about three quarters of the ISPs and secure computer servers in the GCC. This does not bode well for the immediate future of electronic commerce among the GCC States.

Construction and related engineering Services. The construction sector is of great significance to both EU and GCC firms, and is relatively large in the GCC States, accounting for between 4 and 10% of non-oil GDP, except in Kuwait (see Table 45 in annex XII.B). This is largely a male-dominated sector.

Distribution Services. The impact of the FTA on the distribution sector in the GCC States is likely to be important, because employment is larger than in construction and female employment is often the greater proportion. In Oman and the Saudi Arabia the proportion of non-oil GDP in distribution at 20 % and 18% respectively is the highest, but is 10% in Kuwait which has the lowest figure. If the highly efficient European global-leader retail firms enter these concentrated urban GCC markets the impact on local retail store jobs could be both extensive and rapid, needing careful handling by governments. Other issues of importance to the distribution sector, such as smuggling and counterfeiting, are more goods related, while town planning zoning laws and property ownership laws, of crucial importance to this sector, fall outside the FTA coverage.

Environmental Services. There is an important market in the GCC for services related to the energy sector and for environmental services. These are likely to be dominated by Western firms, and provision by national firms in the GCC in future is conditioned by the same factors as for professional and business services.

Financial Services. Insurance for the export of goods in transit is an important service, and it could be that it is either expensive or absent for much of the trade. Despite the relatively high income per head in the UAE non-life insurance is low, and life cover almost non-existent, as it is in the other five countries (see Table 64 in annex XII.S for selected indicators for the services sectors in the GCC). This low penetration of insurance could be due to a mixture of social and commercial causes. It will be an adverse factor for Small and Medium size Enterprises (SMEs) which wish to expand by borrowing from banks. With regard to life insurances, the lack of long-term savings through contributions to pension and life insurance products reduces the amount of money that can be invested by this intermediary sector, which also in effect holds back these economies.

Given the highly developed banking sector in the region, finance for trade is probably available, though it might be expensive for smaller firms or even difficult to obtain in some of the six countries, should insurance cover not be available either. Interest rates could be high if

the extensive public sector funding is crowding out private borrowing. Furthermore, the State does not provide export credit facilities for goods or services suppliers, an inhibiting factor that probably will not be dealt with in the EU-GCC FTA negotiations.

The relatively high 'Other services' component of the non-oil GDP in Bahrain and Kuwait could reflect the more developed financial services sector, whereas in Oman it more likely reflects the relatively low government proportion in the GDP.

The standard of financial services supervision will be a key issue, and the communication and Cooperation between the various supervisory authorities will loom ever larger, and the EU will be pressing for observance of international standards and participation by the GCC authorities in the activities of the Basel Committee of Banking Supervisors, International Organisation of Securities Commissions and International Association of Insurance Supervisors.

The inward stock of FDI, which is not high, is presumably mostly oil-related, and the proportion in the service sector is not separated out in the data. It could be concentrated perhaps in the banking and securities sectors. Global trends of private investment show that for some years the highest proportion goes into the service sector, driven in many cases by the privatisation of State-owned utilities, transport, telecoms and financial services. This is necessary when the State has insufficient funds to modernise the service infrastructure, and does not have the technology and management know-how. The competitiveness of the entire economy, not just exports and imports, relies on this 'soft' infrastructure.

Transport Services. Only three of the countries have merchant fleets of more than 40 ships, and the other three under 40 between them (see Table 64 in annex XII.S). Out of the total fleet of 204 Saudi Arabia and the UAE own 132, or 65%. Most of the ships in the overall fleet are specialised, especially for oil, gas and petrochemicals, and the remainder (27% by tonnage) available for general cargo and the container trade, are probably not competitive with the world's major fleets.

The ports of Oman saw double-digit growth in 1999 and 2000.⁵³ The capacity of the non-oil related ports of the GCC to take deep draft ships, and the efficiency of their equipment and management are of key importance to general merchandise trade. An important example of FDI inflow in this sector is the recently opened container terminal at Salalah in Oman.

Inland freight movement relies entirely on road transport, except in Saudi Arabia, which has a modest rail network. The key factors are the state of the roads, their links with the ports, the age of the goods trucks, the size of the trucking fleets and the efficiency of their management.

Air transport will be largely left off the negotiating table due to the bilateral agreements, but there remains interest in the provision of auxiliary services at the major airports, and also for associated shopping malls, including for duty free items.

NOTE: How Islamic principles affect services activities and trade liberalisation⁵⁴

⁵³ 'Port development', Chapter 5, "Review of Maritime Transport 2002", UNCTAD, Geneva 2002.

⁵⁴ Julian Arkell, Issues for the Member States of the Islamic Development Bank in the Built-in Services. Negotiations of the General Agreement on Trade in Services (GATS) of the WTO (Synopsis) Prepared under the joint supervision of the Islamic Development Bank and The United Nations Conference on Trade and Development

Whilst Islamic principles outlaw certain forms of activity, including some services (and behaviour considered illegal in other jurisdictions such as fraud and abuse of monopolistic power) the most relevant issue is the ban on offering interest-bearing debt⁵⁵. **Below, we provide you with the excerpt of the conclusions of the text of the part that relates to this issue of the historic judgment on Interest⁵⁶.**

The degree to which the Islamic principles are applied and enforced in the services sector varies from country to country. Strictly applied, the principles impose on the banking and insurance sectors in particular the need to arrange contracts where interest is not charged, nor any pre-determined fixed return computed on the size or duration of loans.

Therefore, an alternative return for risk has to be obtained, as would be possible (although not the norm) in conventional financial services situations. Such contracts usually involve agreement on the party to manage the investment or project to which a loan relates, and how this duty is reimbursed, plus a profit and loss sharing arrangement, which may or may not be capped in either direction, which has characteristics more like a conventional partnership. Under Islamic law no one may invest in entities carrying on certain prohibited activities.

In the WTO context, the Islamic principles appear to be compatible with the liberalizing principles of the GATS.

Any additional amount over the principal in a contract of loan or debt is the *riba* prohibited by the Holy Qur'an in several verses. The Holy Prophet, Sall-Allahu alayhi wa sallam, has also termed the following transactions as *riba*:

(i) A transaction of money for money of the same denomination where the quantity on both sides is not equal, either in a spot transaction or in a transaction based on deferred payment.

(ii) A barter transaction between two weighable or measurable commodities of the same kind, where the quantity on both sides is not equal, or where the delivery from any one side is deferred.

(iii) A barter transaction between two different weighable or measurable commodities where delivery from one side is deferred.

These three categories are termed in the Islamic jurisprudence as *riba*-al-sunnah because their prohibition is established by the Sunnah of the Holy Prophet, Sall-Allahu alayhi wa sallam. Along with the *riba*-al-Qur'an, these are four types of transactions termed as '*riba*' in the literature of Islamic fiqh based on the Holy Qur'an and Sunnah.

Out of these four transactions, the last two ones, mentioned above as (ii) and (iii) have not much relevance to the context of modern business, the barter business being a rare phenomenon in the modern trade. However, the *riba*-al-Qur'an, and transaction of money mentioned above as (i) are more relevant to modern business.

In the light of the detailed discussion above, there is no difference between different types of loan, so far as the prohibition of *riba* is concerned. It also does not make any difference whether the additional amount stipulated over the principal loan or debt is small or large. It is, therefore, held that all the prevailing forms of interest, either in the banking transactions or in private transactions do fall within the definition of "*riba*." Similarly, any interest stipulated in the government borrowings, acquired from domestic or foreign sources, is *riba* and clearly prohibited by the Holy Qur'an.

The present financial system, based on interest, is against the injunctions of Islam as laid down by the Holy Qur'an and Sunnah, and in order to bring it in conformity with Shar'iah, it has to be subjected to radical changes.

A variety of Islamic modes of financing have been developed by Islamic scholars, economists and bankers that may serve as a better alternative to interest. These modes are being practiced by about 200 Islamic financial institutions in different parts of the world. These alternatives being available, the transactions of interest cannot be allowed to continue for ever on the basis of necessity. Many experienced bankers, to name a few such as Dr. Ahmad Muhammad Ali, President Islamic Development Bank, Jeddah, Mr. Adnan al-Bahr, Chief Executive International Investor, Kuwait, Mr. Iqbal Ahmad Khan, Chief executive Islamic unit of the Hong Kong Shanghai

⁵⁵ See further

⁵⁶ Given by the Supreme Court of Pakistan Section Written by [Justice Muhammad Taqi Usmani](http://albalagh.net/Islamic_economics/Top)
http://albalagh.net/Islamic_economics/Top

Banking Corporation (HSBC) based in London from outside Pakistan and Mr. Abdul-Jabbar Khan, the former president of the National Bank of Pakistan, Mr. Shahid Hasan Siddiqui and Mr. Maqbool Ahmad Khan from Pakistan are the bankers who have a long experience of banking in different parts of the world, besides others appeared before us. All of them were unanimous on the point that Islamic modes of financing are not only feasible, but area also more beneficial to bring about a balanced and stable economy, for which they have produced detailed proof based on facts and figures. Some outstanding economists like Dr. Umar Chapra, the economic advisor to Saudi Monetary Agency, Dr. Arshad Zaman, the former Chief economist of the ministry of Finance government of Pakistan, Prof. Khurshid Ahmad, Dr. Nawab Hyder Naqwi, Dr. Waqar Masood Khan, have supported this view in their detailed discourses.

We have also gone through the detailed reports of the council of Islamic Ideology submitted in 1980, the report of the commission for Islamization of Economy constituted in 1991, and the final report of the same commission, reconstituted in 1997 which was submitted in August 1997. We have also perused the report of the Prime Minister's Committee on Self-Reliance, submitted to the Government in April 1991. There is thus ample evidence to prove that quite a substantial ground work has been done to suggest the strategy for the transformation of the existing financial system to the Islamic one, and the present interest based system cannot be retained for an indefinite period on the basis of necessity. However, the transformation may take some time, which can be allowed on that basis. This prohibition constrains banks and insurance companies too.

V.J OTHER ISSUES RELATED TO MARKET ACCESS

Additional measures related to market access typically include issues such as non-tariff barriers, which are measures other than tariffs that restrict imports, such as quantitative restrictions (quotas) and other charges applied to imports that affect trade. Other issues related to market access include standstill, non-discrimination, and rules of origin.⁵⁷

The countries of the GCC typically impose a range of non-tariff barriers to imports. For example, the UAE maintains non-tariff barriers to trade and investment, in the form of restrictive agency, sponsorship, and distributorship requirements. Foreign ownership of import and distribution business remains prohibited in most GCC countries, and Agency Laws provide exclusive distributors with strong rights including the right to compensation and termination. An example of this practice is found in Saudi Arabia, where non-tariff barriers include preferences for national and GCC products in government procurement, a requirement that foreign contractors obtain their imported goods and services exclusively through Saudi agents and reservation of some services for Government-owned companies. In addition a range of regulatory and bureaucratic practices restrict levels of trade in Saudi Arabia.

Non-tariff barriers to trade in the GCC are often related to religious customs and cultural imperatives. For example, in all the countries of the GCC, trade is restricted (in those cases where mega-tariffs are not imposed) on a number of items, which are considered to be politically or religiously sensitive. For example, Kuwait prohibits the importation of gambling machines, pornography, and alcoholic beverages, among other things.

The sustainability impacts of removing non-tariff barriers to trade and other restrictions to market access will vary among the countries of the GCC, depending on the nature of the specific products that are protected by these restrictions. In some instances, such as in the case of cigarettes, a ban on trade for cultural reasons might have the indirect impact of contributing to the health and well-being of the population and reducing health costs. Depending on the products, some could contribute more or less to environmental or social well-being. Priority

⁵⁷ "Rules of origin" are the criteria that goods from a particular country or group of countries must have fulfilled in order to benefit from trade preferences upon importation.

attention on liberalisation of these products, facilitating their rapid dissemination would have positive impacts for sustainability.

V.J.1 Foreign direct investment

Foreign Direct Investment (FDI) entails the acquisition of existing companies by foreign investors or new investments by foreigners in the local economy. Two types of FDI can be distinguished, market seeking FDI and efficiency seeking FDI. Market seeking FDI is directed in gaining direct access to local markets, efficiency seeking FDI is directed at gaining cost-advantages from producing in a foreign location. In developing countries, efficiency seeking FDI has been one of the main engines of trade creation during the past decade. Companies have outsourced parts of their vertical production chain to those parts of the world where that a particular part of the production cycle can be done at lower costs.

Whereas FDI has known an impressive increase in the nineties, it has been reduced substantially with the Asian and Russian financial crises at the end of the decade and the global slowdown of the last few years.

Host region/economy	Average 1989-1994	1995	1996	1997	1998	1999	2000
Developed countries	137124	203462	219688	271378	483165	829818	1005178
EU	76634	113480	109642	127626	261141	467154	617321
Developing countries	59578	113338	152493	187352	188371	222010	240167
Bahrain	237	431	2048	329	180	448	500 ^a
Kuwait	-4	7	347	20	59	72	16
Oman	119	29	60	65	101	21	62 ^a
Qatar	48	94a	339a	418a	347a	144a	303 ^a
Saudi Arabia	502	-1877	-1129	3044	4289	-782	1000 ^a
United A. Em.	90	399	301	232	253	-13a	100 ^a
GCC	992	-917	1966	4108	5229	-110	1981

^a Estimates, source UNCTAD 2001

The GCC countries have not been able to capitalise on this increase of FDI flows. As such it is noteworthy that in the period 1983 - 1985 Saudi Arabia was still the largest recipient of inward FDI in the developing world with 20,4 % of all FDI inflows in the developing world⁵⁸. By the period 1998 - 2000 this was declined to less than 1 % of all FDI inflows in the developing world well below such successful destination for FDI as China, Brazil, Malaysia, Thailand and Chile. The latest report by UNCTAD on FDI⁵⁹ ranks countries on their FDI potential and FDI performance for the periods 1988-1990, 1993-1995, and 1999-2001. It ranks all GCC countries as having a high FDI potential. In almost all periods all GCC countries, except one, had a performance below potential⁶⁰. Only Bahrain performed better

⁵⁸ UNCTAD 2001

⁵⁹ UNCTAD 2003

⁶⁰ Oman had a front-runners performance only in the period 1988-1990. Qatar only in the period 1993-1995.

than its potential in all three periods, not surprisingly the GCC economy that can least depend on fossil fuel reserves. It is clear, that when the economies of the GCC want to diversify their economies over the next decades away from the oil sector, that they will need to be a lot more successful in attracting efficiency seeking FDI.

Table 17: Country rankings and values of the UNCTAD Inward FDI Performance Index and Inward FDI Potential Index

<u>Inward FDI Performance Index</u>				<u>Inward FDI Potential Index</u>			
Rank	Economy	Value		Rank	Economy	Value	
		<u>1988-1990 and 1998-2000</u>				<u>1988-1990 and 1998-2000</u>	
40	Bahrain	1.9	1.3	30	Bahrain	0.324	0.423
132	Kuwait	0.0	0.0	32	Kuwait	0.229	0.425
130	Oman	1.2	0.1	48	Oman	0.306	0.335
92	Qatar	-0.1	0.5	22	Qatar	0.451	0.530
127	Saudi Arabia	0.3	0.1	50	Saudi Arabia	0.222	0.332
137	UAE	0.1	-0.1	26	UAE	0.324	0.488
<i>The Inward FDI Performance Index is the ratio of a country's share in global FDI flows to its share in global GDP</i>				<i>The Inward FDI Potential Index is an unweighted average of the scores of eight normalized economic and social variables</i>			

Source: World Investment Report 2002. UNCTAD, Geneva

It is important to note that foreign ownership is still heavily restricted in many sectors in many GCC countries. For instance foreign ownership of import and distribution businesses remains prohibited in most GCC countries. In order to guarantee that local consumers access to a diverse set of traded goods at lowest market prices it will be crucial to relax any restrictions on foreign ownership within these sectors. Progress has been made in opening up private and foreign investment in restricted areas in all GCC countries. Independent power projects are being enhanced in the UAE and Oman. Foreign ownership of real estate has been opened up in Bahrain and offshore-type real estate liberalization is proceeding well in Dubai⁶¹. Both Dubai and Bahrain are creating strategic investments zones specifically directed at foreign investments. Nevertheless, on average there still are heavy restrictions on foreign ownership and reforms are very limited.

Bahrain

Bahrain permits 100 percent foreign-ownership of new industrial entities and the establishment of representative offices or branches of foreign companies without local sponsors. Wholly foreign owned companies may be set up for regional distribution services and may operate within the domestic market as long as they do not exclusively pursue domestic commercial sales. Protection of foreign investments is strong. Since January 2001⁶², foreign firms and GCC nationals may own land in Bahrain. Non-GCC nationals may now own high-rise commercial and residential properties, as well as property in tourism, banking, financial and health projects, and training centers, in specific geographic areas. Foreign nationals are now entitled to own residential and business buildings several areas specific

⁶¹ World Bank 2003

⁶² Source: <http://www.bahraini.tv>, article posted by: Mahmood Al-Yousif, assistant professor, College of Business Administration, University of Bahrain, on Fri, 29 August 2003

areas of Manama, the capital of Bahrain. Foreigners may now also own property in specific tourist areas of Bahrain. Companies operating in following sectors qualify for full foreign ownership: information technology and telecommunications, tourism projects, medical services, education and vocational training services, manufacturing-related such as re-assembly and packaging products, business-related activities such as consultancy services, and industrial projects, besides specialised scientific laboratories

The Bahrain stock exchange allows GCC firms and persons to own up to 100 percent of listed companies. Non-GCC firms/persons may only own up to 49 percent of listed companies. The Minister of Commerce may increase this percentage at his discretion. There are presently five wholly foreign owned companies (four GCC and one non-GCC) listed on the Bahrain stock exchange. Any new additions to these five companies must be approved on a case-by-case basis. Individuals had been previously restricted to owning only 1.5 percent of a company's stock. Now Bahrainis and GCC nationals may own up to 100 percent as individuals, and non-GCC foreigners may own up to 49 percent. Bahrain is planning to open its stock market completely for all investors by the end of 2004.

Kuwait

Kuwait currently maintains restrictions on direct foreign investment and applies discriminatory taxation policies. In May 2000, Kuwait's National Assembly approved legislation that allows foreign nationals to own stocks listed on Kuwait's stock exchange. This law took effect on August 27, after Kuwait's Cabinet approved implementing regulations that allow foreigners to own up to 100 percent of all listed companies except banks. Foreign-ownership in banks is limited to 49 percent with the additional restriction that any foreign ownership above 5 percent must be approved by Kuwait's Central Bank. In March 2001, the National Assembly passed a direct foreign investment bill that authorizes majority foreign ownership in new investment projects (up to 100 percent foreign-ownership in selected sectors to be determined by Kuwait's Cabinet). The law also authorizes up to 10-year tax-holidays for new investors. As the National Assembly has not addressed implementing rules and regulations, the law has not yet taken effect.

Oman

Oman provides national tax treatment (i.e., a corporate tax rate of 12 percent), for joint venture firms with no more than 70 percent foreign direct investment. Corporate tax rates have dropped from 50 percent to no more than 25 percent for majority foreign-owned investments with a minimum one percent of Omani equity participation. Oman is reviewing and modifying its laws and procedures to help attract increased foreign investment. Majority foreign-owned investments are eligible for tax holidays of up to 10 years, a benefit also enjoyed by Omani firms. The tax-holiday waives corporate income tax, as well as customs duties on goods imported for business purposes. Oman currently permits 100 percent foreign-ownership on a case by case basis as well, with the approval of the Council of Ministers. However, new legislation has been introduced that will delegate this approval to the Minister of Commerce and Industry, expediting the application process.

This opening up to FDI has already some results. For instance FDI contributed significantly to the realisation of the Liquefied Natural Gas terminal at Qalhat in Oman. Similarly and symbolically maybe even more important was the FDI inflow in a new container terminal at Salalah in Oman. This constituted a major foreign investment in a non-energy related project in the GCC. Oman not only wants to encourage attracting FDI it also plans to privatise parts of the power, water, ports, airports and telecommunications.

In Oman, foreigners are permitted to purchase shares on the Muscat Securities Market (MSM). As of year-end 2001, approximately 15 percent of the MSM's total market capitalization was foreign owned.

Qatar

Qatar issued a new Investment Law (Law No. 13 of 2000) that allows foreign investors to own up to 100 percent of projects in the tourism, education, industry, health, and natural resources sectors, subject to prior approval from the government. The law also gives foreign investors the right to lease land for up to 50 years, which is renewable (also subject to government approval). The new law annuls provisions of Law No. 25 (1990) that restricted foreign-ownership of limited liability business concerns to a maximum of 49 percent. Foreign equity is limited to 49 percent in other sectors. However, this restriction can be waived by the issuance of an Emiri Decree.

Qatar allowed foreign nationals to participate directly in the first public offering of shares of the privatized telecommunications company Q-Tel. Foreign nationals may invest in other publicly offered companies indirectly through local investment firms. (e.g. on 20/10/2003, Shell signed an agreement with the government to invest in the construction of the world's largest Gas to Liquids (GTL) plant in Ras Laffan, Qatar).

Saudi Arabia

In April 2000, Saudi Arabia's Council of Ministers approved a new foreign investment code with the goal of facilitating establishment of foreign companies, both joint-ventures and 100 percent foreign-owned, in Saudi Arabia. Under the new law, tax holidays are abolished in favour of sweeping reductions in tax on profits payable by foreign entities, bringing them nearer to levels that apply to local companies. Key provisions allow foreign investors to transfer money freely from their enterprises outside the country, allow joint-venture companies to sponsor their foreign investors as well as their foreign employees, and permit foreign investors to own real property for company activities. The Saudi Arabian General Investment Authority (SAGIA) was set-up to manage investments under the new code under the guidance of the Supreme Economic Council. In theory, SAGIA must decide to grant or refuse a license within 30 days of receiving the application and supporting documentation from the investor. While SAGIA is intended as a one-stop-shop for foreign investors, some companies still experience delays in subsequent steps, for example, in obtaining a commercial registry or purchasing property. Following SAGIA's recommendations, the Supreme Economic Council released a negative list in February 2001 of 22 sectors in which foreign investment is prohibited. SAGIA reportedly approved more than 900 licenses for projects representing more than EUR10 billion in foreign investment by the end of September 2002. However, figures on actual projects initiated or foreign direct investment inflows are not available.

Foreign investment in publicly traded Saudi Arabian companies is possible through mutual funds listed in Saudi Arabia or in the United Kingdom. In 1999, new regulations allowed foreign-ownership of mutual funds managed by Saudi commercial banks.

UAE

Except for companies located in one of the free zones, at least 51 percent of a business establishment must be owned by a UAE national. A business engaged in importing and distributing a product must be either a 100 percent UAE owned agency/distributorship or a 51 percent UAE/49 percent foreign Limited Liability company (LLC). Subsidies for manufacturing firms are only available to those with at least 51 percent local ownership.

The laws and regulations governing foreign investment in the UAE are evolving. There is no national treatment for investors in the UAE. Non-GCC nationals cannot own land. However, in the emirate of Dubai, so-called free hold real estate ownership by non-GCC nationals within certain properties is currently being offered, though the exact legal status is still uncertain. Only one stock is currently open to foreign investors and is capped at 20 percent total foreign ownership, although limited participation by foreigners in a few mutual funds is permitted.

V.J.2 Financial Services

Within the services sector particular attention is often given to financial services due to the role that they play in directing investment funds to the most productive uses and providing for growth of output and incomes. Financial systems also play other important roles, which can affect efficiency and growth (Levine, 1997). These functions include the trading and pooling of risk, the collection and dissemination of information regarding different investment opportunities and the monitoring of managerial performance and hence the means and incentives for improved corporate control, the mobilisation of savings through the provision of innovative financial instruments and the facilitation of trade in goods and services through the provision and maintenance of payment systems. If liberalisation of financial services leads to higher savings and investment and/or the more productive use of capital, then a higher level of per capita income will result. Growth rates will increase during the transition period to this higher level of income but ultimately growth will return to its equilibrium rate. Permanently higher growth rates will arise if financial liberalisation leads to faster innovation in the financial sector or engenders processes such as learning by doing.

A number of academic studies have demonstrated the importance of the depth of financial markets for economic growth (King and Levine, 1993 and Barthelemy and Varoudakis ,1995). More recently, Francois and Schuknecht (1999) postulate a causal link from liberalisation of trade in services to performance in financial sectors and economic growth. Trade liberalisation promotes competition and higher quality financial services through entry. In an empirical exercise they find that moving from closed financial markets to a more open financial system increases the degree of competition in the provision of financial services, which is associated with a higher growth rate. Mattoo et al (2001) find that countries with open financial and telecommunications sectors have tended to grow faster than less open countries by as much as 1.5 percentage points.

V.J.3 Standardisation and Conformity Assessment (including SPS measures)

It is common for free trade agreements to include provisions related to removing differences in standardisation and conformity assessment in an effort to facilitate trade. Under the WTO's Agreements on Sanitary and Phytosanitary Standards, and the Agreement on Technical barriers to trade, countries are permitted to impose standards in order to protect animal, plant, or human health. Therefore, ranges of standards are often put in place to do just that – promote health and safety, and the environment. Sometimes these same standards have the unintended impact of acting as a non-tariff barrier to trade.

For instance CAOBISCO, the Association of Chocolate, Biscuit and Confectionery industries informed us that they face conformity assessments and certification requirements based on health grounds that are assessed by them as a possible non-tariff barriers and that can increase the cost of exporting substantially. As an example they list the typical steps that have to be taken by a EU exporter, in order to get a certificate, necessary to export to Saudi Arabia:

- Establish a certificate with the required contents
- Transfer it to the local veterinary office for an official stamp
- Transfer it to the Chamber of Commerce for an official stamp (a cost)
- Transfer it to the External Affairs Ministry (a cost)
- Transfer it to the administrative authorities (a cost)
- Hand it over to the Embassy in Saudi Arabia with invoice, certificate of origin, etc (a cost)

- Send the document to the client in Saudi Arabia

GCC standards and labeling practices have restricted trade in many of the GCC countries. In particular, shelf-life standards are set at arbitrary levels that restrict imports of a variety of food products of interest to EU suppliers. The situation has deteriorated in recent years, as shelf life durations for a large variety of food products have been shortened to one year, in some cases by half the previous artificially set period. Further, a product's remaining shelf life at time of import must exceed the product's defined shelf life to be allowed entry. Recent developments are more troubling, with port officials detaining imported food products not arriving within three months of production. While detention is short, the penalty effect is steep as the product's marketable life is shortened. To avoid such difficulties, importers are seeking more perishable, short-life products from nearby sources. The removal of GCC shelf life standards could significantly increase EU food exports to the region.

As part of the GCC Customs Union, the member countries are working toward unifying their standards system or developing a single standards organization, in accordance with the desire to harmonise to ensure the effective functioning of the new Customs Union. These standards would apply to all imports entering the six member countries of the GCC. Presumably they will include common procedures to speed up the clearance of products subject to inspections at the border and, in the case of products that are subject to health and safety standards, should be based on the principle of mutual recognition.

Until then, however, each country currently imposes individual requirements.

Bahrain

Bahraini customs requires commercial invoices in duplicate in Arabic or English, a certificate of origin in Arabic or English (produced by a Chamber of Commerce and endorsed by an Arab Embassy), a copy of the insurance policy where applicable, and four copies of bills of lading (including gross weight and dimensions). For food items, presentation of a manufacturer's certificate stating that the goods do not contain cyclamates is required.

All imported beef and poultry products require a health certificate from the country of origin and a halal slaughter certificate issued by an approved Islamic center in the country of origin.

Bahrain strictly enforces shelf life standards on 58 of 75 food products listed in Gulf Standard 150/1993. Shelf-life standards for the remaining 17 items are less stringently applied. Bahrain requires that pharmaceutical products be imported directly from a manufacturer with a research department and that the products be licensed in at least two other GCC countries, one of which must be Saudi Arabia. Food labels must include product and brand names, production and expiration dates, country of origin, name and address of the manufacturer, weight in metric units, and a list of ingredients and additives in descending order of importance. All fats and oils used as ingredients must be listed in Arabic or Arabic and English. Although stickers providing such information are not legally accepted, the law is not rigorously enforced. Small quantities of products with English-only labels may be approved for import on a case-by-case basis for test marketing purposes.

Kuwait

In Kuwait, the clearing process can be manually intensive, requiring numerous transfers, vast paper work, and an array of duplications. This process is prone to errors and fraud, since human judgment plays a major role in processing the transactions, especially auditing, valuation, and inspection. In most instances, the same task is repeated two or more times at different stages of the process in order to capture customs-related data or to validate documentation.

The Department of Standards and Meteorology has drawn up about 300 Kuwaiti standards that are currently in force. These have been based on a combination of US, British, German and other national standards modified to suit Kuwait's needs. Kuwait maintains restrictive standards that impede the marketing of some exports. Shelf life requirements for processed foods are often far shorter than necessary to preserve freshness and result in U.S. goods being non-competitive with products shipped from countries closer to Kuwait. Meanwhile, standards for medical, telecommunications, and computer equipment tend to lag behind technological developments, with the result that government tenders frequently specify the purchase of obsolete, often more costly items.

In October 2002, Kuwait announced it was considering adopting an import standards program similar to Saudi Arabia's International Conformity Certification Program (ICCP). The Kuwaiti government has said the program, which would apply to between 15 and 45 consumer products (primarily electrical goods and motor vehicle parts), was being implemented because Kuwait lacked laboratory facilities to properly conduct its own inspections. In December 2002, Kuwait submitted a proposal for such an import standards program to the WTO. Kuwait was expected to implement this new program as early as March 2003 depending on comments from WTO Members.

In addition, Kuwait has adopted a number of import regulations to comply with the Gulf Cooperation Council (GCC) standards, such as instruction manuals for imported durable goods to be Arabic; and consumer durable goods appliances to be able to operate without a transformer on Kuwait's 240 volt, 50 hertz power transmission system.

Oman

In 1996, Oman began the process of simplifying customs clearance documentation to expedite the flow of goods and promote its ports and airports. However, only Omani nationals are permitted to submit documents to clear shipments through customs.

In its accession to the WTO, Oman committed to eliminate mandatory shelf-life standards for shelf stable foods from the date of accession and revise its shelf-life requirements program to meet the substantive requirements of relevant WTO Agreements. Oman also agreed to establish regulations and procedures in line with international norms for highly perishable refrigerated food products and gradually replace remaining shelf-life requirements with a science based regulatory framework by December 31, 2000. However, as of November 2002, no public announcement of this new regime has occurred. According to current regulations, any product entering Oman must have at least 50 percent of its shelf life remaining.

Qatar

In Qatar, a letter-of-credit is the most common instrument for controlling exports and imports. When a letter-of-credit is opened, the supplier is required to provide a certificate of origin. The Qatari embassy, consulate, or chamber of commerce should notarize the certificate of origin in the exporting country. To clear goods from customs zones at ports or land boundaries in Qatar, importers must submit a variety of documents, including a bill of lading, certificate of origin, *pro forma* invoice, and import license.

All imported beef and poultry products require a health certificate from the country of origin and a halal slaughter certificate issued by an approved Islamic center in the country of origin. The Qatari embassy, consulate, or chamber of commerce in the country of origin must legalize all shipping documents.

Most Qatari standards are derived from GCC standards. In October 2002, Qatar established a General Authority for Standards and Specification to replace the Standards Office of the Ministry of Economy and Commerce. The Ministry of Health provides input on standards

related to public health issues, and Qatar enforces shelf life standards for about 75 food products. Products must arrive at the destination with at least half the shelf life remaining. Shelf-life validity of all foodstuffs should not be less than six months at the time of entry of the products into Qatar. All foodstuffs are examined at government central laboratories before they reach consumers.

Saudi Arabia

In Saudi Arabia, the Saudi Arabian Standards Organization (SASO) imposes shelf life requirements on food products. In practice, the Saudi government requires imported food products to arrive in port with at least one-half of their shelf life remaining, calculated from the date of production. Over the past few years, SASO has shortened the shelf life duration for baby foods, eggs, stuffed cookies, chilled meats, and some snack foods - all products of interest to EU suppliers. The Saudi Arabian Standards Organization (SASO) has over 1,420 SASO and 976 Gulf promulgated standards, and is actively pursuing the promulgation of hundreds of new standards currently in various drafting stages of development.

The Saudi Ministry of Commerce also requires that poultry meat and further processed poultry products must be derived from birds that have not been fed animal protein, animal fats, or animal by-products. These measures were taken with little to no advance notice, contrary to Saudi statements to follow the provisions of the relevant WTO agreements.

The Ministry of Commerce imposed a mandatory labeling requirement for bioengineered food and agricultural products in late 2000, and a requirement that importers sign a pledge stating that they were aware of the possible health risks of such products. After a period of uncertainty, the Ministry of Commerce announced a positive labeling only requirement (i.e., containing bioengineered ingredients), rather than requiring labels for both the presence and absence of such ingredients, and delayed implementation until December 1, 2001. The Ministry also imposed a ban on imports of bioengineered foods and food ingredients manufactured from animal products. In November 2002, the Ministry of Commerce agreed to the precise language that it would accept on an export certificate to accompany all shipments containing bioengineered goods entering Saudi Arabia. The export certificate must be issued by a government entity from the country of origin, preferably at the federal level, but the state level is acceptable.

In October 1995, Saudi Arabia initiated the International Conformity Certification Program (ICCP), a pre-shipment certification program to monitor and control the quality of certain products imported into the country. The ICCP currently applies to 76 regulated consumer product lines and is managed by a private firm, which inspects and tests on behalf of SASO shipments bound for Saudi Arabia. Problems include the lack of transparency, *ad valorem* fees, and favorable treatment of local products manufactured in the Gulf Region.

UAE

Since July 1998, the UAE has required that the UAE Embassy in the country of origin authenticate documentation for all imported products. There is an established fee schedule for this authentication. Without the validation in the country of origin, customs authorities will apply the fee schedule when the goods arrive in the UAE.

In 2000, the UAE announced its intention to establish a national standards authority under the auspices of the Ministry of Finance and Industry.

Under a liberalisation scenario, the enforcement of health and safety standards requires testing and conformity assessment procedures for products, which should apply equally to domestic and imported goods. But exporters may already be subject to equivalent controls in their home country, so that testing can be duplicative, leading to higher compliance costs for foreign firms. In other cases, the authorities of one country may not trust the customs

procedures of a partner country. The resulting duplication of procedures may be largely resource wasting and redundant. While there is little data available on the actual costs of complying with these standards, it is safe to say that they are significant, particularly with respect to Saudi Arabia, which is not even constrained by the disciplines of the WTO. The prospect of mutual recognition of standards and conformity assessment procedures can lower costs, reduce waste, reduce redundancy, raise economics of scale and increase competition.

There may be a concern on the part of some governments that moving towards more liberal trade and could lead to an erosion of national standards. However, it can also be viewed as an opportunity for the countries in the two regions to move to levels based on applicable international standards (including for certification). And the opportunity exists for the parties to seek convergence in their approaches to standard-setting and mutual recognition, based on the principles of transparency and impartiality. There are clearly opportunities associated with sustainable development in the area of standard-setting related, in particular to SPS measures, and any movement towards convergence, in the context of a FTA which is designed ultimately to increase the flow of goods and services across borders.

V.J.4 Public Procurement

Government procurement is related to government purchases of goods and services. The EU-GCC FTA will strive towards achieving reciprocal and progressive liberalisation of public procurement aimed at ensuring comparable and effective access to their procurement markets on the basis of the principles of non-discrimination and national treatment. This includes transparency in their procurement markets for all levels of government, as well as public entities operating in such sectors as water, energy and transportation.

In spite of the move towards privatisation, the very heavy government ownership and control of the GCC economy make government procurement a core feature of the economy and mean that government expenditures can account for a large proportion of GDP. For example, in Kuwait government dominates the local economy, as 90 per cent of the labour force works for the government or government-owned companies. To support the development of the oil industry, the government assumed control of the production of electricity and installed the most advanced water desalination plants. Indeed, it is the major provider of goods and services deemed to be essential for the development and operation of the economy, including the oil and gas industry, the aluminium and manufacturing industry, healthcare and education and the building and running of infrastructure and water desalination plants.

The accession by the WTO members to the WTO Procurement Agreement (GPA) is not WTO compulsory, thus only some WTO members have acceded to it. The GPA aims to open up government purchases, to international competition.⁶³ The Agreement requires non-discriminatory practices and open procedures in government procurement amongst member states, in respect to central government procurement of goods, and services, including public works, and procurement at the sub-central levels of government (such as states in a federal system) and by public utilities.⁶⁴ It mandates that technical specifications be based on international standards where they exist, and otherwise on recognized national technical regulations (based on recognized standard-setting bodies, such as ISO 14001) or recognized national standards.

A small proportion of the members of the WTO have committed themselves to the Agreement on Government Procurement. This includes the European Communities and its member

⁶³ The Agreement entered into force on 1 January 1996.

⁶⁴ The exact coverage is determined by national schedules of commitments of purchasing entities and of services attached to the Agreement.

states, but not the member states of the GCC.⁶⁵ However, Oman has recently acceded to the WTO and has observer status on the WTO's Committee on Government Procurement.

Most GCC countries maintain preferential buy national policies and/or offset provisions requiring that a portion of major (and usually military) government tenders be subcontracted to local firms. Several GCC states actively support the creation of offset companies in diverse fields as part of defense procurement.

Bahrain

In October 2002, Bahrain implemented a new Government Procurement law that establishes the basic framework for a transparent, rules-based government procurement system. It provides that certain procurements may be conducted as international public tenders open to foreign suppliers. While the new law sets out the basic elements of its procurement system, the implementing regulations, which have not yet been issued, will be key to gaining a full understanding of how the system is intended to operate. Bahrain is not a signatory to the WTO Agreement on Government Procurement.

Kuwait

Kuwait's government procurement policies specify the purchase of local products when available and prescribe a 10 percent price advantage for local firms in government tenders. However, this local firm price advantage is not commonly applied in government tenders. In January 2002, the Kuwaiti government modified its offset program to become the major vehicle for inducing foreign investment in Kuwait. The new offset requirements will impose an offset obligation on civilian contracts with the Kuwaiti Government of 10 million Kuwaiti Dinar (approximately \$33 million) or more and on defense contracts of KD 1 million (approximately \$3.3 million) or more. The obligation will amount to 35 percent of the contract value, which must be invested in an approved offset business venture. A supplier must sign a memorandum of agreement with the Offset Program Division at the Ministry of Finance before the contract is signed. The supplier must also present a bank guarantee totaling 6 percent of the value of the offset obligation. Kuwait is not a signatory to the WTO Agreement on Government Procurement.

Oman

Oman provides a 10 percent price preference to tenders that contain high content of local goods or services, including direct employment of Omanis. The government considers the quality of a product or service and support, as well as cost, in evaluating bids. For most major tenders, Oman typically invites firms either already registered in Oman or preselected by project consultants. To increase transparency in the tendering process, Oman advertises tenders in the local press, international periodicals, and on the tender board's website.

Also, bidders are now requested to be present upon opening of bids, and interested parties may view the process on the tender board website. In the past, bidders' costs have sometimes increased dramatically when award decisions were delayed, sometimes for years, or when bidding was reopened with modified specifications and, typically, short deadlines. Oman is known to have an offset program only with the United Kingdom. Offsets are not standard adjuncts to government contracts and have not been associated with any U.S. defense

⁶⁵ Members include: Austria, Belgium, Canada, Denmark, European Communities, Finland, France, Germany, Greece, Hong Kong China, Iceland, Israel, Italy, Japan, Korea, Liechtenstein, Luxembourg, Netherlands, Aruba (Netherlands) Norway, Portugal, Singapore, Spain, Sweden, Switzerland, United Kingdom, United States. Negotiating Accession: Bulgaria, Estonia, Jordan, Kyrgyz Republic, Latvia, Panama, Chinese Taipei. Observer government: Argentina, Australia, Bulgaria, Cameroon, Czech Republic, Chile, Colombia, Croatia, Estonia, Georgia, Jordan, Kyrgyz Republic, Latvia, Lithuania, Malta, Moldova, Mongolia, Oman, Panama, Poland, Slovak Republic, Slovenia, Turkey.

transactions, whether commercial or foreign military sales. In 2001, Oman became an observer to the WTO Committee on Government Procurement. As part of its accession to the WTO, Oman has also committed to begin negotiations to join the WTO Agreement on Government Procurement.

Qatar

Qatar gives preferential treatment to contractors that include high local content in bids for government tenders. As a rule, bids must be submitted through local Qatari agents, but in practice certain exceptions exist. Qatar gives a 10 percent price preference to local firms and a five percent price preference to GCC firms in all government procurement. Qatar is not a signatory to the WTO Agreement on Government Procurement.

Saudi Arabia

Saudi Arabia's government contracts on project implementation and procurement are regulated by several royal decrees that strongly favor GCC nationals. However, most defense contracts are negotiated outside these regulations. Under a 1983 decree, contractors must subcontract 30 percent of the value of the contract, including support services, to majority-owned Saudi firms. An exemption is granted in instances where no Saudi company can provide goods and services to fulfill the procurement requirement. In addition, Article 1(d) of the tender regulations requires that Saudi individuals and establishments be given preference over all other suppliers in government procurement. The same regulations also accord preference to other suppliers as long as Saudi nationals hold at least 51 percent of such suppliers' capital. Article 1(e) of the tender regulations gives preference to products of Saudi origin that satisfy the requirements of the procurement, even when the product is inferior to that of a foreign counterpart. Saudi Arabia also gives priority in government purchasing programs to GCC products. These items receive up to a 10 percent price preference over non-GCC products in all government procurements in which foreign suppliers participate.

Foreign suppliers involved in government projects are required to establish a training program for Saudi nationals. Foreign companies providing services to the Saudi Arabian government can operate in country without a Saudi service agent and can market their services to various other public entities directly. For large military projects, there is frequently an offset requirement. Furthermore, the Saudi government reportedly has asked for offset in other procurement areas.

UAE

The UAE does not require that a portion of any government tender be subcontracted to local firms, but it imposes a 10 percent price preference for local firms in government procurement. The UAE requires a company to be registered to be invited to receive government tender documents. To be registered, a company must have 51 percent UAE ownership. However, these rules do not apply on major projects or defense contracts where there is no local company able to provide the goods or services required. Established in 1990, the UAE's offset program requires defense contractors that are awarded contracts valued at more than \$10 million to establish joint venture projects that yield profits equivalent to 60 percent of the contract value within a specified period (usually seven years). There are also reports, as well as anecdotal evidence, indicating that defense contractors can sometimes satisfy their offset obligations through an up-front, lump-sum payment directly to the UAE Offsets Group. The projects must be commercially viable joint ventures with local business partners, and are designed to further the UAE objective of diversifying its economy away from oil. To date, more than 30 projects have been launched, including, *inter alia*, a hospital, an imaging and geological information facility, a leasing company, a cooling system manufacturing company, an aquaculture enterprise, Berlitz Abu Dhabi, and a firefighting equipment production facility. The UAE is not a signatory to the WTO Agreement on Government Procurement.

It is likely that, through the existence of the Customs Union, the GCC will look for implementing common domestic policies at the GCC level on procurement

Hence, it is our observation that the EU in the negotiations of FTA should look for commitments of the GCC similar to the ones stated in the WTO Agreement on Government Procurement. For instance they could try to limit preferential treatment of local suppliers. Efforts could be made to harmonise at the highest possible level standards for government procurement from a sustainability perspective. Given the high value of purchasing involved and the important sectors that might be highlighted for priority treatment, including water, energy, transportation and petrochemicals this can all have a substantial impact on sustainability.

V.J.5 Customs Cooperation

Customs Cooperation sometimes falls under the general trade-related rubric of “trade facilitation.” It is designed to do just that. An important component of trade between companies based countries engaged in FTA negotiations is related to the procedures for getting through customs (see also the discussion above, chapter V.J.3). It is likely that the EU-GCC FTA will consider, as a priority issue, customs Cooperation.

The impact of customs Cooperation will be, in effect, to share information (or at least provide easier access to information) and reduce the bureaucracy at the point where goods enter a country, thereby facilitating access. At the WTO this issue was raised at the 1996 Singapore ministerial conference with the objective of simplifying trade procedures.

On 1 January 2003 the GCC adopted a Customs Union, thereby adopting a structure similar to that of the EU, with a common external tariff (CET) and a common external border for customs purposes. The GCC has developed a formula for a CET with a uniform tariff of five per cent. Although it is subject to a range of exceptions, the CET will contribute to a stable and predictable trading environment. In addition to a CET, the Customs Union implies the development, throughout the GCC for application at the common border, of administrative standards and regulatory requirements for imports and exports that are common to the countries of the GCC. This includes the abolition of intra-GCC customs borders, and the erection of one external border surrounding the region, adopted with common procedures to enforce the common external tariff. Non-GCC goods entering the region will be subject to administrative procedures, and the imposition of duty at the external border, and will then be allowed to circulate within the countries of the GCC. Common customs procedures are necessary to facilitate free movement of goods within the GCC. Cooperation mechanisms will need to be put in place as well to address concerns and standards related to security and health (see also the discussion above, chapter V.J.3). These measures hold out the prospect of lower transaction costs, improved customs procedures, faster shipment clearance and less border formalities. Ultimately, institutions and procedures will be developed to direct the Custom Union’s common commercial policy. Any harmonization of customs procedures and regulatory restrictions will facilitate dialogue with the EU on issues of customs Cooperation between the parties to the FTA.

The ultimate goal of customs Cooperation between the EU and the GCC will be to reduce transaction costs for businesses engaged in trade and provide some certainty with respect to the regulatory requirements and procedures involved. As such, it may have the result of increasing trade flows between the two regions, with the subsequent product, scale, and technology effects. The requirements to share information, or facilitate access to information can contribute to the development of a culture that promotes transparency and openness that ultimately has the prospect of positive institutional and governance impacts.

There might be other, more specific, implications, for sustainability. For example, growth and changes in trade flows resulting from the establishment of a customs union will likely

encourage competition among the GCC ports of entry as internal customs borders are abolished leading to free circulation of goods within one GCC member to another (which means that goods can enter at the most efficient points and then be transported freely throughout the region). This could lead to increased economic activity in those areas in close proximity to the most efficient GCC ports. Gains may be brought about by increasing economic growth and employment in these areas but without adequate infrastructure to support increasing populations and potential pressures related to urbanization, negative sustainability impacts might occur including increased degradation of land and water, air pollution, and increased pressure on scarce water resources and increased transportation from points of entry to final markets. It is important to ensure that the areas where this might occur are capable of absorbing such increases from an environmental and a social perspective and if not, policies will need to be put in place to help address any unsustainable concentration in particular geographic locales. The potential impacts of these shifts warrant investigation in this SIA.

V.J.6 Intellectual, Industrial and Commercial Property

An FTA between the EU and GCC could cover issues related to intellectual property rights, with respect to offering effective and adequate protection for, and enforcement of, intellectual and commercial property rights, including protection against piracy and counterfeiting. The extent of protection and enforcement of intellectual property (IP) rights vary throughout the GCC region. However, all members of the GCC that are also members of the WTO are required to meet the provisions in the WTO's Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). Under TRIPS, IP (which includes copyrights and related rights, trademarks, geographical indications, industrial designs, patents, trade secrets, and layout-designs of integrated circuits) is subject to the basic principles of national treatment and most favoured nation treatment. The TRIPS Agreement attempts to strike a balance between technical innovation and the transfer of technology.

The GCC countries are in various stages of acceding to international intellectual property conventions. All are members of the World Intellectual Property Organization (WIPO) and, except Saudi Arabia, are members of the WTO. GCC members have made some progress in recent years in adopting laws and regulations protecting intellectual property rights (IPR). However, some of these laws are apparently not yet consistent with the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement). Saudi Arabia, Kuwait, and Qatar are currently on the Special 301 Watch List because of their failure to adequately protect IPR.

The GCC Secretariat has declared protection of intellectual property to be a priority and is working to strengthen GCC laws in the six member states, particularly for patent protection. In this respect, the GCC has issued a unified patent law with the goal of creating a patent system for all member states – however, the current GCC patent law is not fully consistent with TRIPS Agreement obligations.

The GCC patent office in Riyadh has received by the end of 2002, approximately 2,300 applications since it began accepting patent applications in October 1998, and issued its first patent certificates in late Spring 2001. The GCC patent office plans to complete a review of all applications within two to three years of receipt. According to GCC patent regulations, once a patent is registered with the GCC patent office, all GCC states automatically afford its owner protection.

The GCC has also indicated an interest in creating common trademark and copyright laws and regimes. However, no progress has been made so far in these areas. IPR protection problems continue throughout the region, particularly with enforcement. Pirated videocassettes, computer software, and sound recordings are available to varying degrees. Counterfeit products such as clothing, auto parts, and household products are also widely available.

Bahrain

Bahrain introduced intellectual property rights legislation as early as 1955 (Law on Patents, Designs and Trademarks, revised). It introduced laws on copyrights and trademarks in 1991 and 1993, respectively. Following its accession to the WTO it has ratified other international agreements on IPR and taken together, the Paris and Berne Conventions, along with TRIPS principles, are now integral parts of the national Law of Bahrain. Revised legislation to implement Bahrain's obligations under the TRIPS Agreement is currently under review. Bahrain is also considering joining the WIPO Copyright Treaty and the WIPO Performances and Phonograms Treaty. The government has made dramatic progress in reducing copyright piracy, and there are no reports of significant violations of U.S. patents and trademarks in Bahrain. The government's copyright enforcement campaign – based on inspections, closures, and improved public awareness – began in late 1997 against the video industry, followed by the audio and software industries, with impressive results. The commercial pirated video and audio markets have been virtually eliminated. However, software piracy remains problematic, shifting from retail to end-user violators.

Kuwait

Kuwait has made some moves towards complying with the standards set out in the TRIPS Agreement.⁶⁶ Kuwait does not grant preferential treatment to any country in the area of intellectual property rights. Kuwait is also subject to the GCC Unified Law on Patents.

However, Kuwait's copyright law must be amended to make it consistent with its obligations under the TRIPS Agreement – the government anticipates submitting amendments by mid-2003, which then must be passed into law. Kuwait's revised patent and trademark legislation took effect on January 14, 2001. Although improving, enforcement of these laws remains inadequate to prevent widespread marketing of pirated products. In October 2002, the Government's Ministry of Information launched a joint work team that combines forces with the Ministry of Interior and the Kuwait City Municipality in an effort to enhance investigation and enforcement abilities. Cooperation with owners of intellectual property and raids and seizures against intellectual property violators have increased significantly since then. However, sales of pirated goods remain high in Kuwait, and the use of unauthorized computer software continues in private enterprise. Uncertain and slow judicial action remains a hurdle, and penalties, when imposed, are generally too weak to deter future crimes.

Oman

As part of its WTO accession, Oman adopted the GCC patent law with derogations as needed to comply with its obligations under the TRIPS Agreement. Oman issued a copyright protection law in 1996, and in 1999 enacted decrees banning the local sale of pirated videocassettes, sound recordings, and computer software. Enforcement of the copyright protection decree by the Ministry of Commerce and Industry and the Royal Oman Police has been effective, as once plentiful pirated video and audiotapes and computer software have disappeared from local vendors' shelves. While some under-the-counter sales of unauthorized software continued in 2001, authorities began credible and effective enforcement against business use of unauthorized software. Oman had adopted the GCC Unified Patent System as the patent law of Oman.

Qatar

⁶⁶ Main IPR laws are: the Law on Copyright and Neighbouring Rights (Law No. 64 of 1999) including protection of amongst others computer works including computer programs, databases and alike, derivative works and translated works; the Law on Patents, Designs and Industrial Models and the Trademark Law.

Qatar has shown commitment to amend copyright and trademark laws⁶⁷ to comply with its obligations under the TRIPs Agreement. It is also subject to the GCC's Unified Law on Patents.⁶⁸ It is in the process of preparing a law on layout-designs (topographies) of integrated circuits and protection of undisclosed information and trade secrets, based on a model law reviewed by the World Intellectual Property Organisation (WIPO) and compatible with the TRIPs Agreement. Although Qatar had drafted amendments to these laws, it had not signed and implemented the necessary legislation by the time of the 2002 Annual Special 301 Review and was subsequently placed back on the Watch List. In June 2002, Qatar promulgated revised copyright and trademark laws – Law No. 7 for Copyright and Neighboring Rights and Law No. 9 for Trademarks and Geographical Indicators.

In July 2001, the Emir approved Qatar's accession to the Paris Convention for the Protection of Industrial Property and the Berne Convention for the Protection of Literary and Artistic Works. The Copyright Office of the Ministry of Economy and Commerce continues to prosecute resellers of unlicensed video and software.

Qatar utilizes the GCC patent law with derogations as needed to comply with its obligations under the TRIPs Agreement. It also established a joint committee between the Ministry of Economy and Commerce and the Ministry of Health to coordinate their efforts and ensure that only patented products or authorized copies of pharmaceutical products are registered for sale. Qatar provides protection for trademarks registered with the Office of Commercial Registration.

Saudi Arabia

Saudi Arabia's Copyright Law does not extend protection to works that were first displayed outside of Saudi Arabia. Saudi Arabia has had a Patent Law since 1989 and the Patent Office accepts applications, but the number of patents issued remains limited.⁶⁹ Trademarks are protected under the Trademark Law. Trade secrets are not specifically protected under any area of Saudi law; however, they are often protected by contract.

Saudi Arabia is currently working to revise its intellectual property laws to bring them into conformity with the TRIPs Agreement as part of its efforts to join the WTO. Saudi Arabia has drafted revised legislation that is making its way through the legislative process. However, it is not clear to which extent the legislation has been approved, or when this will take place.

Saudi Arabia has made progress on copyright enforcement over the last year. Throughout 2002, Saudi authorities from the Ministry of Information raided numerous piracy-related centers, including warehouses, shops, production facilities, and apartments.

UAE

The current UAE patent law provides process, not product, patent protection for pharmaceutical products. The Ministry of Finance and Industry is currently in the process of amending the law to make it compliant with the UAE's obligations under the TRIPs Agreement and has forwarded the draft legislation to the President for final approval.

The UAE passed copyright, trademark, and patent legislation in 1992, and amended the copyright law in July 2002 to make it consistent with the UAE's obligations under the TRIPs

⁶⁷ Law No. 7 of 2002 on Protection of Copyright and Related Rights (June 2002); Law No. 9 of 2002 on Trademarks, Geographical Indications and Industrial Design (June 2002)

⁶⁸ Approved by the Council of Ministers on 23 April 2002.

⁶⁹ The term of protection is 15 years. The patent holder may apply for a five-year extension.

Agreement. Although enforcement efforts did not begin in earnest until 1994, the UAE has now largely eliminated pirated sound recordings and films. The government has also undertaken enforcement actions against local companies selling pirated computer software. Efforts to combat computer software and video piracy in the UAE have been successful, and the UAE is recognized as a regional leader in fighting computer software and video piracy.

International Cooperation. Almost all of the countries of the GCC are members of the World Intellectual Property Organisation (WIPO). In addition, a number are signatories to major international agreements on intellectual property (see Table 18). For example, with the exception of Kuwait and Saudi Arabia, all countries of the GCC are parties to the Paris Convention for the Protection of Industrial Property. Three of the six GCC countries (Bahrain, Oman and Qatar) are parties to the Berne Convention for the Protection of Literary and Artistic Works. All countries of the GCC with the exception of Saudi Arabia are parties to the WTO's TRIPS Agreement.

Table 18: Major international agreements on intellectual property rights			
	Paris Convention for the Protection of Industrial Property	Berne Convention for the Protection of Literary and Artistic Works	WTO's Trade Related Aspects of Intellectual Property Rights (TRIPS)
Bahrain	29 October 1997	2 March 1997	1 January 1995
Kuwait			1 January 1995
Oman	14 July 1999	14 July 1999	9 November 2000
Qatar	5 July 2000	5 July 2000	13 January 1996
Saudi Arabia			
UAE	19 September 1996		10 April 1996

The adequate and effective protection of intellectual property rights can impact sustainability. On one hand, these rights, effectively enforced can foster innovation of new technologies such as drugs to cure disease, or technologies for environmental abatement. It is most likely that these technologies will be sold and disseminated widely in markets when there are guarantees that the ideas and inventions will not be pirated.

On the other hand, the twenty-year period of protection for innovators that is provided in the TRIPS Agreement is considered by some to be too long. Some argue that prices will remain high and new, innovative technologies will be unavailable to all but the very rich⁷⁰. Look for instance at the hot topic of AIDS / HIV medication in the developing world.

NOTE: Copyright according to Shari'ah⁷¹

⁷⁰ The TRIPS Agreement contains an exception whereby WTO members are not obliged to grant patents for products or processes where "the prevention within [national] territory of [their] commercial exploitation...is necessary to protect ordre public [law and order] or morality, including to protect human, animal or plant life or health or to avoid serious prejudice to the environment." This has never been implemented.

⁷¹ *Mufti Taqi Usmani*, Copyright according to Shari'ah, *Source: Al-Balagh Webzine* <http://www.islamic-finance.net/research/taqi4.html>

In the following text, we provide you with the interpretation of the principles of Shari'ah, provided by Mufti Taqi Usmani on the Islamic injunctions about "copyright", especially about the copyright on computer software.

The question of "copyright" is related to a wider concept, generally known as the concept of "intellectual property". In previous days the concept of ownership was confined to those tangible commodities only which can be perceived through our five senses. But the speedy progress in the means of communication gave birth to the new concept of "intellectual property" which extended the concept of ownership to some intangible objects also. The theory of "intellectual property" contemplates that whoever applies his mental labor to invent something is the owner of the fruits of his labour.

If a person has invented a certain instrument, he does not own the instrument only, but he also owns the formula he has used for the first time to invent it. Therefore, nobody can use that formula without his permission. Similarly, if a person has written a book, he is the exclusive owner of the right to publish it, and nobody has any right to publish that book without his permission. This right of an author or an inventor is termed as his "intellectual property". It is also implied in this theory that the owner of such rights can sell them to others like any other tangible objects. The law of "copyright" has come into existence in order to secure such rights and to give legal protection to this kind of property.

It is obvious that the concept of intellectual property on which the law of copyright is based is a new phenomenon created by the rapid progress of industry and the means of communication, therefore, this concept is not expressly mentioned in the Holy Qur'an or in the Sunnah of the Holy Prophet, Sall-Allahu alayhi wa sallam.

The acceptability or otherwise of such new concept which are not clearly mentioned in the original resources of Islamic jurisprudence can only be inferred from the general principles laid down by the Shari'ah. As the views of the jurists may differ while applying these principles to the new situations, there is always a wide scope of difference of opinion in such cases. The question of "intellectual property" has also been a subject of discussion among the contemporary Muslim scholars of Shari'ah whose opinions are different about its acceptability in Shari'ah.

A group of contemporary scholars does not approve the concept of "intellectual property". According to them the concept of ownership in Shari'ah is confined to the tangible objects only. They contend that there is no precedent in the Holy Qur'an, in Sunnah or in the juristic views of the Muslim jurists where an intangible object has been subjected to private ownership or to sale and purchase. They further argue that "knowledge" in Islam is not the property of an individual, nor can he prevent others from acquiring knowledge, whereas the concept of "intellectual property" leads to monopoly of some individuals over knowledge, which can never be accepted by Islam.

On the other hand, some contemporary scholars take the concept of "intellectual property" as acceptable in Shari'ah. They say that there is no express provision in the Holy Qur'an or in the Sunnah, which restricts the ownership to the tangible objects only.

There are several intangible rights accepted and maintained by the Shari'ah, and there are several instances where such intangible rights have been transferred to others for some monetary considerations.

They contend that the concept of "intellectual property" does in no way restrict the scope of knowledge, because the law of "copyright" does not prevent a person from reading a book or from availing of a new invention for his individual benefit. On the contrary, the law of "copyright" prevents a person from the wide commercial use of an object on the ground that the person who has invented it by his mental labor is more entitled to its commercial benefits,

and any other person should not be allowed to reap the monetary fruits of the former's labor without his permission. The author of a book who has worked day and night to write a book is obviously the best person who deserves its publication for commercial purposes. If every other person is allowed to publish the book without the author's permission, it will certainly violate the rights of the author, and the law of copyright protects him from such violation of his rights.

Both of these views have their own arguments. I have analyzed the arguments of both sides in my Arabic treatise "Bai-ul-Huqooq" and have preferred the second view over the first, meaning thereby that a book can be registered under the Copyright Act, and the right of its publication can also be transferred to some other person for a monetary consideration.

This is an answer to your question no. (i) and no. (iii). Coming to the question no. (ii), I would like to add that if the law of copyright in a country prevents its citizens from publishing a book without the permission of a copyright holder, all the citizens must abide by this legal restriction. The reasons are manifold.

Firstly, it violates the right of the copyright holder, which is, affirmed by the Shari'ah principles also according to the preferable view, as mentioned earlier.

Secondly, I have mentioned that the views of the contemporary scholars are different on the concept of "intellectual property" and none of them is in clear contravention of the injunctions of Islam as laid down in the Holy Qur'an and Sunnah. In such situations, an Islamic state can prefer one view on the other, and if it does so by a specific legislation, its decision is binding even on those scholars who have opposite view. It is an accepted position in the Islamic jurisprudence that the legislation of an Islamic state resolves the juristic dispute in a manner not expressly mentioned in the Holy Qur'an or in the Sunnah. Therefore, if an Islamic state promulgates a law in favor of the concept of "intellectual property" without violating any provision of the Holy Qur'an and Sunnah, the same will be binding on all its citizens. Those who have an opposite view can express their standpoint as an academic discussion, but they cannot violate the law in their practice.

Thirdly, even if the government is not a pure Islamic government, every citizen enters into an express or a tacit agreement with it to the effect that he will abide by its laws in so far as they do not compel him to anything which is not permissible in Shari'ah. Therefore, if the law requires a citizen to refrain from an act which was otherwise permissible (not mandatory) in Shari'ah he must refrain from it.

Even those scholars who do not accept the concept of "intellectual property" do not hold that is mandatory requirement of Shari'ah to violate the rights recognized by this concept. Their view is that it is permissible for a person to publish a book without its author's permission. Therefore, if the law prevents them from this "permissible" act, they should refrain from it as their agreement of citizenship requires them to do so.

Therefore, it is necessary for every citizen to abide by the law of copyright unless it compels a person to do an impermissible act, or to refrain him from a mandatory act under the Shari'ah.

V.J.7 Competition

Competition policy covers private actions by firms that lead to restrictions on domestic and international trade. These actions may be the result of mergers or restrictive business practices such as cartel agreements, abuse of dominant position in the market (for example, predatory pricing), and exclusive distribution arrangements (for example prohibitions on foreign ownership of import and distribution business). Trade agreements to date have dealt primarily with actions taken by governments that restrict trade. Competition policy is seen to be

complementary to trade policy in achieving greater trade liberalization in the context of internationally contestable markets. In this way, it is closely linked to the liberalization and protection of investment for private companies.

Both GATT (trade in goods) and GATS (trade in services) include rules on monopolies and exclusive service suppliers. The WTO's TRIPS Agreement (on intellectual property) also recognises the governments' right to act against anti-competitive practices, and their rights to work together to limit these practices. These principles have, in recent years, been elaborated with respect to the telecommunications sector in particular.

Competition policy is relevant for the EU-GCC FTA negotiations. There is currently an imbalance between a relatively highly developed regime governing competition in the EU and the lack of domestic legislation covering restrictive business practices or anti-trust matters in the GCC countries. In Europe, the European Commission has jurisdiction over competition policy. The EU policy is rigorous and gives the EC authority to rule on mergers and acquisitions, fight cartels, and rule on the appropriateness of many forms of state aid given by national or regional authorities to firms. The EC also acts on behalf of the member states in the international field. Trade agreements with the EU would require state companies in the countries of the GCC to harmonise with EU competition policies.

Competition policy in the GCC-EU FTA negotiations could raise particular challenges with respect to the GCC in light of the significant public ownership of key elements in the economy, including utilities (see for instance also at the ownership within the industries that were selected for the sector specific SIAs, i.e. petro-chemicals and aluminium, chapters IX.B and **Error! Reference source not found.**). In the GCC, potential EU investors might face restrictions on foreign ownership in the GCC. A number of sectors of the economies of the GCC countries remain effectively controlled by domestic monopolies, despite multilateral efforts to open them to competition.

For example, in the UAE, the Etisalat Telecommunications Company (majority state-owned) has a monopoly in the telecommunication sector in the UAE, despite the pressure to open the sector to competition. This monopoly may be challenged as a result of commitments within the framework of the WTO. Since it became a member of the WTO in 1996, the UAE has been granted a number of concessions and extensions on deadlines for complying with WTO rules on competition. These temporary exemptions are being phased out and by 2005 the UAE will be required to open its telecommunications sector to full competition. A similar situation exists in the UAE with respect to the banking sector. At present this sector is subject to a general requirement of 51 per cent ownership by a local partner (exemptions to this rule are granted in special circumstances). There is increasing pressure from the WTO to open the banking sector up to foreign competition and it is likely to occur by 2005. Likewise, in Qatar, Qatar Telecom has a monopoly over the provision of telecommunications services in the country. Similarly, OmanTel has enjoyed a monopoly over internet service providers in the country since their introduction in 1996.

There is likely to be some degree of influence between increasing competition between and among firms in the EU and the GCC, and issues related to sustainability. This influence is expected to be particularly strong with respect to economic and social elements, and, depending on the industries, products, and scale of the economic activity might also be strongly influenced. Economic impacts are expected to be associated with increasing growth and investment. This might have spin-off effects generating access to a broader range of goods and services for consumers, potentially at lower prices, and encouraging technology transfer and dissemination including access to information technology. This activity can contribute to efficiency and the adoption of modern business practices that include management systems, which put a premium on respect for the environment and high social standards. Growth in areas delivering both goods and services could also increase employment opportunities in the GCC countries. Efforts might need to be made to ensure that

the education and training of GCC citizens are directed in a way that takes advantage of these opportunities.

V.J.8 Current payments and movement of capital

It can be anticipated that the EU-GCC FTA will include provisions, similar to those in other recent free trade agreements between developed market economies and other countries or groups, regarding capital flows, notably current payments and capital movements. It is timely to implement such liberalization in the EU-GCC relationship and moves have already been made in some of the GCC member states in anticipation of such development. For example, Saudi Arabia has recently updated its foreign investment regulations. The new regulations set out investment categories, incentives, concessions and guarantees, arrangements for licensing and dispute settlement provisions. At a time when the global economy is subject to extremely rapid private sector capital flows, ensuing international financial crises, and financial support and conditionality from the IMF and other public sources in response, at least two major issues arise.

First, experience since NAFTA (1994) has shown that a free trade agreement can lead private sector investors suddenly to direct large flows of capital to the newly opened partner. This can occur without long experience or deep knowledge of local conditions. The sudden withdrawal of such capital (which can be triggered by economic or political events elsewhere in the region) can create a crisis of confidence. In some cases, any resulting financial crisis and official support program can come with conditionality that mandates the recipient country to reduce government spending in ways that can have direct environmental or social effects, both negative and positive. Nevertheless, Chile's free trade agreement with Canada, for example, has shown that it is possible to negotiate FTA's with capital movement provisions that allow the potentially vulnerable country to protect itself against rapid capital outflow in the cases of a sudden loss of confidence by global investors.

Second, as the FTA with the EU encourages private sector inflows into GCC economies, and as the GCC proceeds with deregulation, privatisation, and moves toward a more common exchange rate and, potentially, harmonized financial supervision regime, there could be an incentive for GCC states to adopt the latest generation of codes and standards introduced by the IMF and other international bodies in response to recent financial crises. They may even participate more actively on a voluntary basis in the development and application of these and related regimes. This will produce moves among GCC's firms and public entities for greater openness, transparency, and disciplined data development and dissemination in the fields of finance, banking, security, accounting and insurance. Such moves should permit better decision-making in regard to the allocation of capital, improved governance, and the accumulation of social capital and trust.

In the long-term there is even the potential for the emergence of internationally grounded standards relating directly to corporate and public environmental and social responsibility. The adoption of any such standards would bring about attendant environmental and social benefits.

V.J.9 Dispute Settlement

Dispute settlement procedures are common to many trade agreements providing for panel procedures to resolve disputes when no agreement can be reached through consultation. They are designed to complement a rules based trading system by elaborating a clear set of rules and procedures for settling disputes between parties. The EU-GCC FTA will almost certainly specify a regime for the settlement of disputes that might arise.

In many cases bilateral or regional trade agreements will adopt dispute settlement procedures that are consistent with the WTO's Understanding on Rules and Procedures Governing the Settlement of Disputes (DSU), which was negotiated during the Uruguay Round, building on the original dispute settlement system in the GATT. For instance, the EU has included dispute

settlement procedures, based on the WTO model, in their agreements with Mexico, Chile, the Ukraine, Russia and Syria. Next to these, the EU is currently negotiating similar provisions in its agreements with Mercosur. Any dispute settlement procedure adopted in a EU-GCC FTA would most likely mirror or could potentially build on the WTO mechanisms. As such Chapter 19 (Environment) of the US / Chile Agreement⁷² foresees explicitly dispute settlement procedures in the environmental domain.

Interpretations within the WTO Panels of provisions related to the environment and human health are helpful in assessing the potential sustainability impacts of dispute settlement provisions. Article XX is the central element of the DSU at the WTO (and other trade agreements that adopt similar provisions).⁷³ GATT Article XX includes exemptions for measures imposed in order to protect human, animal or plant life and health, as well as those to protect exhaustible natural resources.

Since 1996 there have been at least three cases, where that WTO rulings can be characterized as having important links to sustainability. In a case against the United States, brought by Venezuela and Brazil, the WTO affirmed that the United States had the right to adopt the highest possible standard to protect its air quality so long as it did not discriminate against foreign imports. The United States lost the case because it discriminated (its requirement on domestic producers was less stringent than that imposed on imported gasoline).⁷⁴ In 1998 a case against the United States (brought by India, Malaysia, Pakistan and Thailand) recognized that under WTO rules, governments have every right to protect human, animal or plant life and health and to take measures to conserve exhaustible natural resources. The United States lost this case because it applied the measure in a discriminatory way.⁷⁵ In this case, the WTO panel indicated that it would accept *amicus curiae* (friends of the court) briefs from NGOs or other interested parties. Finally, the WTO Panel and Appellate Body (hereafter referred to as AB) considered a case brought by Canada against the EU challenging an import ban imposed by France on asbestos and asbestos-containing products.⁷⁶ The AB rejected Canada's challenge, thereby reinforcing the view that WTO Agreements support members' ability to protect human health and safety at the level of protection they deem appropriate.

Dispute settlement based on the most progressive procedures implemented fully by the WTO including access to expert opinion, access to *amicus curiae* briefs, immediate and full dissemination of information on panel rulings can continue the trend towards further transparency and accountability, or at least legitimacy. Attention should focus on dispute avoidance and consultations and compliance should be encouraged through capacity building and technical assistance.

There are a number of issues related to dispute settlement that makes it appropriate for inclusion in a SIA. Some are relatively complex, but nevertheless worth pursuing. In particular, a thorough examination of the provisions that were adopted under other trading

⁷² Free Trade Agreement between the Government of the United States of America and the Government of the Republic of Chile, 6 June 2003, Chapter 19, art. 19.6-19.8

⁷³ There are often other dispute resolution mechanisms with respect to specific provisions in the trading agreement such as investment and anti-dumping/countervailing

⁷⁴ United States – Standards for Reformulated and Conventional Gasoline, WTO case Nos. 2 and 4. Ruling adopted on 20 May 1996.

⁷⁵ United States – Import Prohibition of Certain Shrimp and Shrimp Products, WTO case Nos. 58 and 61. Ruling adopted 6 November 1998. Recourse to Article 21.5 of the DSU. Ruling adopted on 21 November 2001.

⁷⁶ European Communities – Measures affecting asbestos and asbestos-containing products. WTO case No. 135. Ruling adopted on 5 April 2001.

regimes that might be based on the WTO rules and procedures could help determine what, if any, provisions might be included in a dispute settlement process for the EU-GCC FTA in order to maximize its beneficial impacts on sustainability and minimize any negative impacts.

As to the question to which extent the Shari'ah Law could have a (social) impact when dealing with disputes (e.g. in the event there would be social or environmental chapters included into the FTA), we have following comments Shari'ah is mainly based on the verses of the Holy *Quran* and the teachings and practices of the Prophet Mohammed (the *Sunna*). The consensus of opinions and interpretations of religious scholars is considered a secondary source of *Shari'ah*.

In territories, where the majority of the population is Muslim (more than 50 countries), there is a notable trend for the applications of Shari'ah in economic life. While most of the laws are based on Shari'ah, specific areas of laws are now increasing adopting important aspects of Shari'ah. Today, Islamic Law is not codified.

Islamic Law is applicable in several economic sectors (or parts of it) inside the GCC, e.g.: the banking and insurance sector. For instance, Islamic Banking could, in theory, be fairly straightforward. In accordance with Shari'ah Muslims can trade and invest in anything that is accepted (called halal) and not prohibited (haram). Prohibited matters broadly include things that are illegal or immoral such as gambling, prostitution, pornography, alcohol, drugs and similar other matters. The main difficulty arises in the classification of interest charged on funds in Shari'ah. While some Islamic jurists and scholars consider all types of interest as usury which is prohibited in Shari'ah, others consider simple interest acceptable and only compounded interest to be prohibited. Although the argument on interest continues, Islamic banking is expanding in the Area where banks and investment funds based on Shari'ah banking are being established.

The GCC Charter does not explicitly refers to the application of Islamic law, but it makes following reference: *“Being fully aware of the ties of special relations, common characteristics and similar systems founded on the creed of Islam which bind them”*. Nor is there any explicit reference to any kind of rules to be applied (content wise) in the chapter dealing with dispute settlement⁷⁷. However, this does not preclude any application of Shari'ah given its specific characteristics.

Application of Shari'ah could have a specific impact in dealing with disputes among Subjects and between EU companies and GCC members, as far as Shari'ah would be applicable to the sector and the “discussed” contract. However, private international law will, in case of absence of any specific clause in the agreement (which is almost not existing in reality), identify the applicable law, as well as the institution having jurisdiction over the litigious contract. As such, there is a possibility that Shari'ah Law might apply, as it is the case that French, German, Belgian (etc...) law might apply as well.

⁷⁷ Charter: Cooperation Council of the Arab states of the Gulf, [art. 10](#), [Commission for the Settlement of Disputes](#)

VI. Economic Impact assessment of the EU-GCC

VI.A QUANTIFYING THE IMPACT OF CU & FTA

To assess the trade and welfare impacts of both the recently adopted GCC customs union and the proposed EU-GCC FTA, a computable trade simulation model has been constructed. The model is used in addition, to consider the impacts of alternative scenarios for comparative purposes. The two additional scenarios are: the GCC countries set their common external tariff at a level lower than the 5 percent level adopted officially;⁷⁸ and the EU and GCC countries extend their free trade agreement to the world at large on an MFN basis, in effect, adopting a policy of "open regionalism" similar to that espoused by economists and some international organisations on normative if not always positive economic grounds.⁷⁹

VI.A.1 Trade liberalisation winners and losers

Poor economic performance is widely believed to be a contributing factor to the political insecurity of the Middle East and the wider Middle East and North African region. Despite substantial petroleum resources, the region has failed to enjoy the same growth levels and increased economic welfare that many 'emerging market' countries in other parts of the world have enjoyed during the past two decades.⁸⁰ Indeed, this failure by the GCC and other poorly-performing Mediterranean countries has become the focus of international concern aimed at improving the region's economic performance as a precursor to establishing peace and security in the region.

The reasons for the poor economic performance in these countries are undoubtedly likely to be numerous and complex, but an important element has undoubtedly been the inward-orientation of the region, with comparatively high rates of trade protection shielding inefficient domestic economic performance, low investment rates (both domestic and foreign), a larger than appropriate government sector along with excessive government planning and regulatory restrictions. Reversing this situation will involve not only lowering protection and encouraging foreign direct investment but also fostering reforms to domestic economic policies and restoring greater private sector initiative to the economy – not to mention those of a social and political character.

Given their status as oil-exporters, the GCC countries are more open to trade than many other countries in the region. Nonetheless, general economic performance in terms of per capita growth has been disappointing in the GCC countries, led in particular by the negative per

⁷⁸ The GCC common external tariff includes exclusions for "essential" goods in a total of 53 HS 6-digit level categories (Roy and Zarrouk, 2002). These exclusions are not accounted for in the present analysis. Also notably, the trade simulation model does not take into account the erstwhile GCC free trade area or other pre-existing free trade agreements between individual countries in the model.

⁷⁹ For discussion, mainly in the context of support for the concept by the Asia Pacific Economic Cooperation (APEC) group, see Bergsten (1997). See also ADB (2000) and Schiff and Winters (2003).

⁸⁰ See Abed (2003), Dasgupta, Keller, and Srinivasan (2002), and Hoekman and Messerlin (2002).

capita growth of Saudi Arabia during the 1990s.⁸¹ Although foreign investment is somewhat higher in the GCC countries than in the rest of the region, it is concentrated mainly in the oil sector, with little consequent benefit to the diversification and expansion of industry or of employment.

Recognizing the potential of further trade liberalization to help improve their economies, the GCC countries converted their former free trade area into a customs union in January 2003 and agreed to accelerate negotiations of a free trade agreement (FTA) with the European Union.⁸² Embracing change of this magnitude, while simply the first step in a longer process of "deeper" liberalization and integration, should have a substantial one-off (or 'static') impact on trade and economic welfare which must be of considerable interest to all stakeholders interested in improving economic performance in the Gulf States and wider Middle East.

Hence, prior to the modelling it is helpful to get a rough idea of the possible economic impact of a potential EU-GCC FTA, and before that of the possible benefits from the current GCC Customs Union, once they have worked through. As the Gulf region is predominantly a natural resource exporter to the EU and an importer (largely) of technical goods and services, chemicals and some metals and minerals, we can – given the relative sizes of the economies and current tariff structures – suggest a set of *a priori* hypotheses as to the possible economic effects. The set of stylised hypotheses (listed below) can be examined more formally by means of the five scenarios to be analysed in the modelling exercise.

Intra-GCC trade might not be expected to increase greatly under the CU as a) such trade should have already been boosted by the pre-existing GCC free trade area and b) the economies are considered by many to be similar in their economic structures, which suggests there may be little current scope for the evolution of domestic comparative advantage.

There **may be little scope for GCC trade creation into the EU under an FTA**, as the average tariff paid on EU imports from the GCC has tended to be low, and non-existent in the case of oil and gas products.

However, **there should be greater scope for expanding EU trade into the GCC** under the FTA⁸³. EU exports to the GCC generally face very high tariffs, in contrast to the very low average tariffs paid in the EU. These range from 3 and 4 per cent in the case of Kuwait and Qatar to 14 and 16 per cent in the case of Saudi Arabia and Bahrain respectively. The average import tariff faced by EU exporters to the GCC block has been just under 10 per cent (see Table 65 and Table 70 in Annex XII.T).

Of course, **these potential EU benefits will be mitigated** across the board by the extent to which intra-GCC trade is boosted in advance by the new GCC customs union, where intra-GCC tariffs have been abolished. Finally, we will wish to examine how the two formerly low-tariff economies – Kuwait and Qatar – would be affected by potential trade diversion to the other GCC states as a result the increase of their low average tariff rates (albeit only slightly) to the new 5 per cent GCC common external tariff.

In the following chapter we set out the method by which we test these *a priori* hypotheses, using a simple, regionally based world trade model, disaggregated by the major sections of

⁸¹ Overviews of GCC trade in services and GCC directions and structure of merchandise trade are presented without discussion in accompanying Table 66 - Table 68 (see Annex XII.T).

⁸² The GCC was established in 1981, though it is not known when the bloc's free trade area came fully into force. See WTO (1995), Roy and Zarrouk (2002), and PricewaterhouseCoopers (2003).

⁸³ Although this potential impact (from the FTA) could be diluted if Saudi Arabian tariffs are unilaterally lowered as a part of its offer to join the WTO given its dominance of the GCC.

the harmonized system (HS) of traded goods and incorporating current information about the tariff structures of the European Union, GCC countries, other specified countries, and the rest of the world.

VI.B METHODOLOGY

The remainder of the report is structured as follows. First, we introduce the five trade-outcome scenarios to be modelled (Chapter VI.B.1); then we describe the modelling methodology (Chapter VI.B.2); how it has been tailored to an assessment of the new GCC customs union and the proposed EU-GCC FTA (Chapter VI.B.3); then the method by which the model computes trade creation, trade diversion and economic welfare (Chapter VI.B.4); before finally presenting the simulation modelling results (Chapter VI.C).

Results are summarised in aggregate terms for all the GCC countries, and for the EU as a whole, and then where possible for the six individual GCC states, and lastly in a disaggregated analysis across the twenty-one covered industrial sectors. Finally, chapter VI.D summarizes the principal findings of the study and relates them to the prospects for a wider, and potentially deeper, trade liberalisation agenda.

VI.B.1 Five Trade Liberalisation Scenarios

In all, five trade liberalisation scenarios are considered (see Annex XII.T, Table 72). For the purposes of the present study it is important to calibrate any gains from intra-GCC trade made available by the completion of the GCC customs union first, before continuing to calculate any additional gains from any prospective EU-GCC agreement.

Hence, scenarios 1 and 3 correspond to the recently adopted GCC customs union and the proposed EU-GCC FTA, assuming a 5 percent GCC CET in both scenarios. In recognition of the fact that a 5 CET will impose economic losses on those GCC countries that previously maintained an average tariff level inferior to 5 percent (mainly, Kuwait and Qatar), Scenarios 2 and 4 consider the impacts of a yet lower GCC CET, namely, one set at the minimum level of GCC tariffs in each goods category (corresponding to an average CET of 3.3 percent). Finally, the open regionalism scenario, Scenario 5, depicts an ideal situation wherein both the EU and GCC jointly pursue free trade on a MFN basis⁸⁴.

In addition, we will wish to identify the internationally competitive sectors for each preferential trade liberalisation scenario. Of course it is to be expected, under the two basic GCC customs union scenarios, that mineral products will be the sole competitive sector and, as imports of mineral products are not highly protected in the GCC countries, any benefits to GCC consumers are likely to be limited. But GCC producers may be more likely to experience significant gains under the new customs union, via increased intra-GCC exports, though the margins will be limited to 5 percent by the CET.

We will be particularly interested to see whether the proposed EU-GCC FTA expands the number of internationally competitive sectors in the GCC to include perhaps several manufactured goods categories, in which trade creation might be expected to occur. At the same time new opportunities could be opened up for expanding exports by GCC producers to the EU as well as neighbouring Gulf countries.

⁸⁴ Given that the trade simulation model does not explicitly incorporate consideration for non-tariff barriers, in each of the five scenarios it is implicitly assumed that the EU and GCC countries simultaneously eliminate non-tariff barriers to imports.

A priori, the analysis of expected gains to EU consumers will be more problematic given the relatively low levels of tariff protection in the European Union.⁸⁵ Some EU exporters, however, might expect significant gains from their margins of preference⁸⁶ in GCC countries in the non-competitive sectors identified in Table 72 (see Annex XII.T.).

VI.B.2 Trade Simulation Model

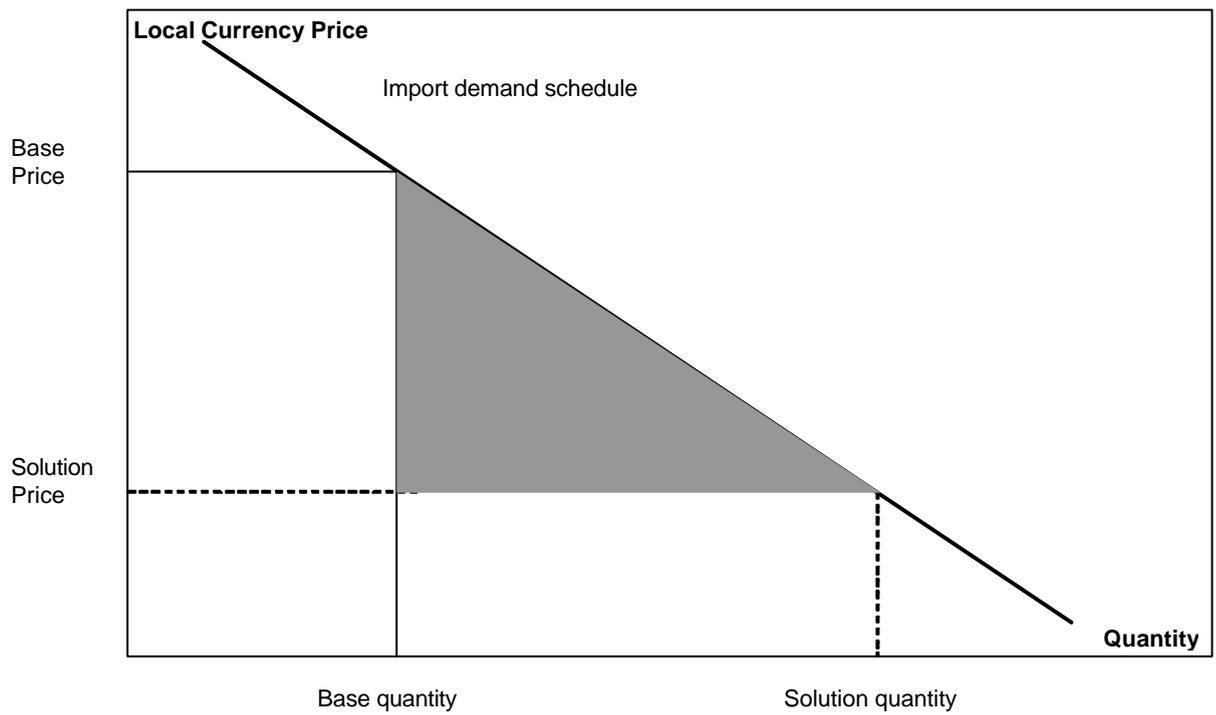
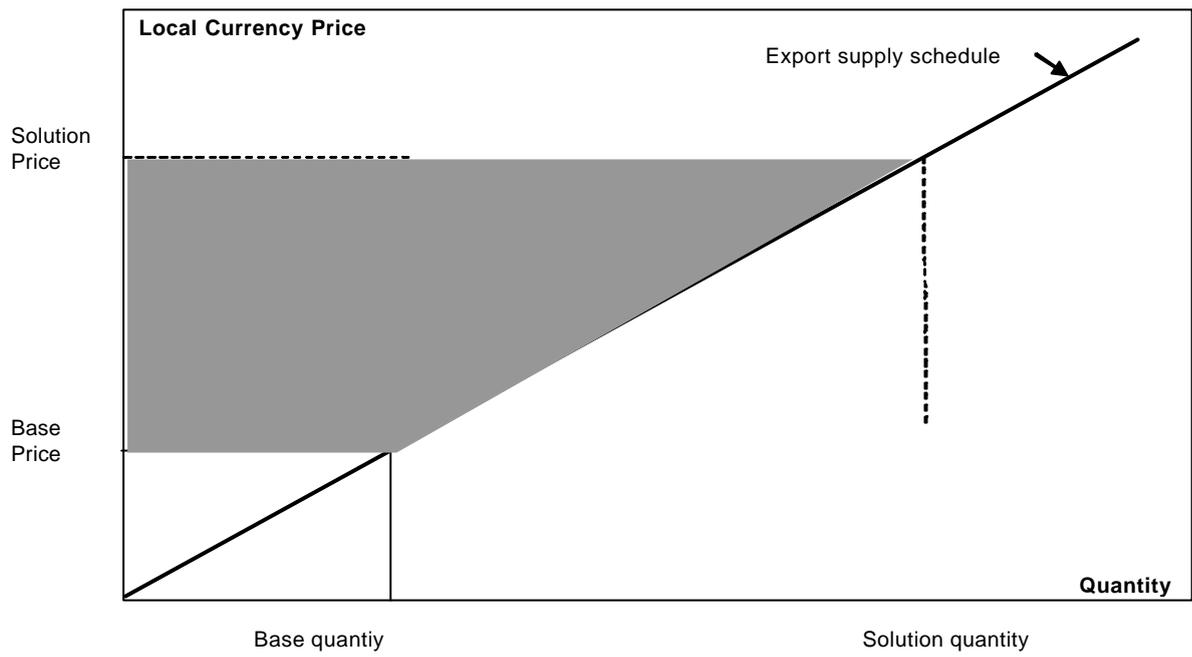
The simulation model used in this study is a partial equilibrium model of world trade developed to quantify the economic impacts of the new GCC customs union and proposed EU-GCC FTA.⁸⁷ In addition to trade of the six individual GCC and other Mediterranean countries, the model includes trade of the European Union (as a block), Japan, the United States, and other industrial countries and developing countries to yield a complete model of world trade in homogeneous goods, disaggregated by the 21 major sections of the harmonized system (see Annex XII.T, Table 69). The ‘small country’ assumption is maintained throughout the model. Under this assumption, each country is assumed to be insufficiently large to affect its international terms of trade through variations in the volume of either its exports or imports

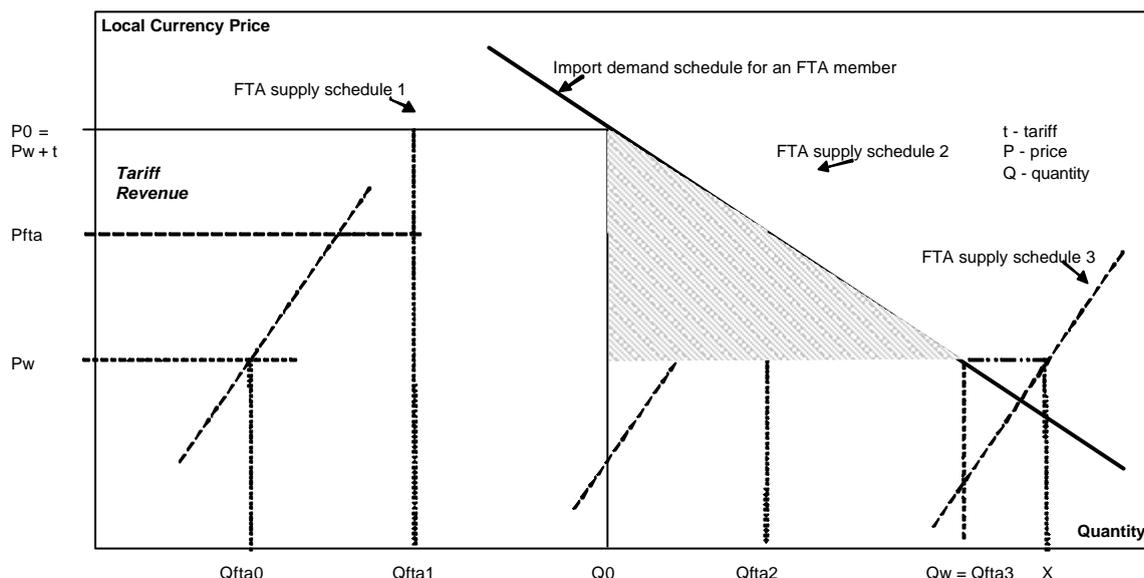
The trade simulation model is described in detail in Appendix 2, the basic model is based on familiar (log-linear) import demand and export supply functions for traded goods and, as seen in annex XII.T, Table 69, it is disaggregated by categories of primary products and manufactures covering all merchandise trade. Market-clearing conditions for each category of traded goods determine international prices, and an equilibrium balance of payments condition determines the (real) exchange rate for each country. In addition to determining changes in trade flows and import tariff revenues, the model computes changes in economic welfare based on familiar notions of consumer surplus and producer surplus (Harberger, 1954, 1971) illustrated in the charts below.

⁸⁵ Notably, under the proposed EU-GCC FTA, EU consumers do not benefit from trade creation in the internationally competitive sectors identified in Table A8 because it is the aggregate export capacity of the EU countries themselves that is responsible for the several sectors identified in the table.

⁸⁶ EU exporters have ‘Margins of preference’ compared to other potential exporters into the GCC due to the fact that they face lower import tariffs into the GCC with a EU -GCC FTA as their competitors from outside the EU-GCC region do.

⁸⁷ Viner (1950). On Vinerian and more general approaches to customs union theory, also see Meade (1955), Lipsey (1970), Lloyd (1982), Robson (1987), Pomfret (1988), and DeRosa (1998).





Original base situation with no FTA
Imports of Q_0 at price of $P_0 = P_w + t$
where other potential FTA suppliers
provide Q_{fta0} imports and the rest
 $(Q_0 - Q_{fta0})$ comes from the outside
world. The country collects the tariff
revenue outlined in the shaded area.

Depending upon the size of the FTA
market and the size of total FTA
supply, given the FTA export premium,
three outcomes are possible.
Outcomes 1 and 2 (to the right) mean
the FTA exporters can supply some or
all of the FTA market at an FTA premium
which is equal to or less than the
country's tariff rate. Outcome 3 occurs
where FTA exporters are already
strong competitors in world markets
and will stay so even under the FTA.

Three possible FTA solutions which depend upon extent FTA members can supply FTA market

1. Members supply only part of FTA market, the rest imported at world price + tariff
Price is still $P_0 = P_w + t$ but FTA exporters pay no duty so they receive the forgone tariff revenue.
premium. Now Q_{fta1} comes from FTA members and $Q_0 - Q_{fta1}$ comes from the outside world.
Consumers see the same price but the government loses tariff revenue. This is an example of
trade diversion ($Q_{fta1} - Q_{fta0}$) of imports from FTA members replaces imports from outside the
FTA. The FTA exporter premium is equal to the tariff rate
2. Members supply all of the FTA market driving down prices below P_0 to P_{fta} (the FTA exporter
premium is now $P_{fta} - P_w$). FTA members now supply the entire FTA market quantity Q_{fta2} at the
price P_{fta} . Although the original tariff revenue is forgone, consumers benefit (CS2) from the
from the lower price.
3. FTA members are a net exporter to the world market even after exports have been diverted
into the FTA (exporting $X - Q_{fta3}$ while the country imports Q_{fta3}). In this case the FTA is
competitive in world markets and notions of trade diversion and forgone revenue become
meaningless. There is a change in the tariff revenues; they are simply a transfer from
government to consumers in the country and FTA exporters get none of it as an export
premium. The sector is now completely competitive in world markets in all FTA members.

The present model does not explicitly account for non-tariff barriers. However, the influence of non-tariff barriers is captured in the model by the fitted values of the import demand intercept terms. In model simulations the implicit assumption is that binding non-tariff barriers are simultaneously eliminated as part of the GCC customs union and EU-GCC FTA scenarios.

Representing a customs union or FTA in the trade simulation model requires some intricacy in dealing with the special considerations of price determination, trade creation, trade diversion, and most importantly changes in economic welfare. These considerations and the method adopted of dealing with them are set out in formal detail in Appendix 3. However, the primary elements in the scenario modelling methodology are set out in the next chapter.

VI.B.3 Representing a Customs Union or FTA

In the basic model, the international price of good k expressed in U.S. dollars, P_k^* , is determined largely independently of the behaviour of consumers and producers in any single country or any small group of countries. Under a customs union or FTA, however, trade of member countries with non-member countries might be largely diverted, and an independent intra-block export price for good k , P_k^{xt} (denominated in U.S. dollars), might be established so long as the intra-block export price falls within acceptable bounds to producers and

consumers who will continue to have recourse to markets for traded goods outside the customs union or FTA.

On the one hand, if member countries as a block are net exporters of the good to the world, as for example would certainly likely be the case for petroleum and other mineral products in any GCC-based trading block, the intra-block price of exports is set equal to the international price of the traded good. In this instance, the customs union or FTA succeeds in lowering the price of imports to consumers in the preferential trading area if member countries impose a tariff on imports of the good.

On the other hand, if member countries as a block are net importers of the good from the world, then the intra-block price of exports P_k^x is set equal to the international price multiplied by one plus a premium t_k^r equal to highest external MFN tariff level of the block member whose import demand just "clears" the block's combined exports of the product. Notably, in the case of a customs union the premium will be equal to common external tariff for the product. Also, in the case of either a customs union or FTA, the preferential trading arrangement will succeed in lowering import prices faced by consumers only in those member countries for which the premium is lower than their initial MFN tariff.

In the trade simulation model, each country's balance of payments is valued at border prices, in U.S. dollars. In summary, the foregoing relationships under a GCC customs union or EU-GCC FTA posit:

(1) lower consumer prices and unchanged border prices for internationally competitive goods produced by block exporters, and;

(2) unchanged consumer prices but higher border prices for non-internationally competitive goods produced by block exporters. The higher border prices for non-internationally competitive goods include (per unit) forgone tariff revenues of importing member countries captured by non-competitive exporters in partner member countries.

In the latter case, the trade simulation model assumes that, while member countries continue to import from non-member countries, member countries divert the entire volume of their exports of non-competitive goods to partner member countries in response to the higher intra-block prices for their exports occasioned by the customs union, thereby maximizing their export revenues.

VI.B.4 Trade Creation, Trade Diversion, and Economic Welfare

The trade simulation model is required to quantify the relative impact of trade creation, trade diversion, and changes in economic welfare in member countries of the customs union. The additional equations required to achieve this – set out in Appendix 3- are solved in a recursive manner, after the basic model is solved for equilibrium levels of trade, prices, and exchange rates.

The most important impact of a customs union (or FTA) will be on economic welfare, this is divided into three components: changes in consumer surplus; changes in producer surplus; and forgone import tariff revenues. Consumer surplus refers to the net benefit that consumers derive from purchases of a good at market prices at less than their marginal benefit from the good. Producer surplus refers to earnings producers enjoy at market prices above their marginal variable costs. Finally, forgone tariff revenues are reduced tariff revenues captured by member country exporters under the customs union or FTA arising from their margins of preference under the preferential trading arrangement.

On a combined basis, changes in consumer surplus and producer surplus (less forgone tariff revenues) equals the change in national economic welfare. The change in consumer surplus corresponds to the change in national welfare, occasioned mainly by trade creation. The change in producer surplus corresponds to the change in national welfare brought about

mainly by trade diversion. While forgone tariff revenues correspond to the change in national welfare owing to forgoing tariff revenue on the duty-free imports that would otherwise have been captured by government and redistributed to domestic consumers in one form or another.⁸⁸

VI.B.5 Database and Parameter Values

Nineteen countries (including the six GCC countries), the European Union, Japan, the United States, a group of other major industrial countries, and a group of other developing countries, and twenty-one broad categories of traded goods are identified individually in the trade simulation model (see Annex XII.T, Table 69). The model's underlying database of international trade statistics, presented in the annex XII.T, is compiled on an average basis for 1999-2001 from the COMTRADE database of the United Nations Statistics Division (UNSD, 2003). Corresponding protection statistics detailing *ad valorem* tariffs applied to imports on an MFN basis, presented in annex XII.T, Table 70, are compiled from the UNCTAD Trade Analysis and Information System (UNCTAD, 2003), for the most recent year available.

The remaining parameters in the trade simulation model consist of own-price elasticities of import demand and export supply (see Annex XII.T, Table 71). Values of these parameters, which are assumed to be identical for all countries in the model, are *a priori* values based on estimates of price elasticities in international trade reported in surveys of econometric studies such as Stern et al. (1976).

VI.C RESULTS

In reading the results, it is not appropriate to match up changes in real exports and net trade creation, since world trade adjustment effects in the simulation model are the key to the results obtained. An intuitive explanation of the way the model works, can be construed briefly as follows. The results tabulations summarize the four analytical blocks in the model, these are:

1. Exchange rate changes and export changes. The exchange rate change is inversely related to the change in the domestic price of exports, so this gives a strong indication of changes in price incentives to export producers;
2. Net TC = TC - TD, and TC is equal to change in real imports. These are popular, Vinerian measures of the welfare impacts of customs unions and FTAs;
3. More formal welfare measurement is given by summation of changes in consumer surplus (net of change in tariff revenue), producer surplus and forgone tariff revenues;
4. Changes in actual tariff revenues: important to LDC governments and policy makers, but of limited importance to national economic welfare in pure theory terms.

When thinking about what's happening in the model, it is often helpful to think about what the initial impacts are on the BOP, then which way the ER must adjust. As an example, the MFN scenario is easiest to understand. Countries reducing protection will have initial BOP deficit (because of increased import demand), which must be eliminated by ER depreciation and expanded exports. The CU and FTA scenarios are variants of the MFN scenario in which the extent of trade liberalization is somewhat inferior (in which moderate to large amounts of TD occur), calling forth smaller ER adjustments, etc.

It is particularly important to grasp the implications of the so-called internationally competitive sectors identified in Annex XII.T, Table 72. Basically, 'non-internationally

⁸⁸ Note that forgone tariff revenues are captured by exporters of non-competitive goods in member countries within preferential trading groups as part of their producer surplus.

competitive' sectors are affected the most by trade diversion. There is nothing particularly counter-intuitive in the internationally competitive sectors identified in annex XII.T, Table 72, except that as we proceed up the hierarchy of trade liberalization more and more previously uncompetitive sectors are able to compete in world markets – in effect, for the GCC countries at least, an unwinding of the symptoms of Dutch disease.

Thus, the CU scenarios result in a lot of trade diversion in the GCC countries, but the FTA scenarios counteract this, because the EU's export capacity is so large, somewhat as if the GCC were liberalizing trade with the world.

However, a caveat: the results on exports of a particular industrial sector (e.g. Agriculture) exports by the EU to (Agricultural) imports by GCC, will not necessarily match because the exports and imports are with the world. However, other important magnitudes will match up more precisely. These include significantly, world demand and supply for each commodity, and the (dollar) valuation of the balance of payments (BOP = 0). These conditions drive determination of world prices and exchange rates for each country.

Finally, with regards to industry-specific effects among domestic producers, the model merely associates 'winners' with export expanding sectors, and 'losers' with import expanding sectors. As per the detailed simulation results in Table 83 and Table 84 (see Annex XII.T). That is, where exports expand appreciably domestic producers might be assumed to be expanding output, and where imports expand appreciably domestic producers might be assumed to be facing stiffer competition (and reducing their output).

VI.C.1 Detailed Results

Table 72 (annex XII.T) indicates the internationally competitive sectors identified by the trade simulation model for each preferential trade liberalisation scenario (Scenarios 1-4). As expected, under the basic GCC customs union scenarios, mineral products is the sole competitive sector. Given that imports of mineral products are not highly protected in the GCC countries, the benefit to GCC consumers is likely to be limited. On the other hand, GCC exporters are likely to gain significantly from the margins of preference under the new customs union, though the margins will be limited to 5 percent by the CET. The proposed EU-GCC FTA expands the number of internationally competitive sectors to include several, mainly manufactured goods categories in which substantial trade creation might be expected to occur in especially the GCC countries under the proposed free trade agreement. At the same time it would be expected to open new opportunities for expanding exports by GCC producers to the EU as well as neighbouring Gulf countries.

As expected, potential gains to EU consumers are more difficult to identify given the relatively low level of tariff protection in the European Union.⁸⁹ EU exporters, however, might be expected to experience significant gains from their margins of preference in GCC countries in the non-competitive sectors identified in Table 72 (see Annex XII.T).

The trade simulation model results for the GCC and the EU are summarized in Table 73 and Table 74 respectively, disaggregated by three broad trade categories: agriculture, minerals, and manufacturing. Simulation results are presented in a similar manner for the six individual GCC countries in Table 75- Table 80. The detailed simulation results, namely, those by the 21 sections of the Harmonized System, are reported in Table 83 for the GCC and in Table 84 for the EU (see Annex XII.T, for tables).

The simulation results for the GCC customs union are considered first, then the simulation results for the proposed EU-GCC FTA. This ordering of the simulation results enables

⁸⁹ Notably, under the proposed EU-GCC FTA, EU consumers do not benefit from trade creation in the internationally competitive sectors identified in Table A8 because it is the aggregate export capacity of the EU countries themselves that is responsible for the several sectors identified in the table.

determination of the marginal impact on the GCC countries of adopting the FTA "on top of" their recently adopted customs union. Finally, the simulation results for the MFN scenario, considered last, provides an indication of the degree to which the customs union and FTA trading arrangements leads to trade and welfare impacts approximating those under the most liberal free trade arrangements possible between the GCC countries and EU, namely, open regionalism.

VI.C.2 GCC Customs Union

The GCC customs union involves the GCC countries simultaneously adopting a zero tariff on trade with one another and a common external tariff on trade with the rest of the world. Given the initial tariff rates of members in annex XII.T, Table 70, the 5 percent CET involves an appreciable reduction in the average level of tariffs in the GCC countries, except Kuwait and Qatar which previously applied an average MFN rate of 3-to-4 percent. Thus, although the CET might be expected to be trade creating in Bahrain, Oman, Saudi Arabia, and the United Arab Emirates, it might be substantially less the case in Kuwait and Qatar, the two most outward-oriented GCC countries. In recognition of this, a second customs union scenario is considered in which the CET is set no higher than the lowest tariff level of the GCC countries in each commodity category (resulting in an average CET of 3.3 percent). This "textbook" version of the GCC customs union leaves no GCC member compelled to adopt a higher external tariff, and hence it should be expected to result in somewhat greater economic benefits for Kuwait and Qatar, and the bloc as a whole.⁹⁰

Under both representations of the GCC customs union, liberalization of external tariffs results in depreciation of GCC exchange rates by 3-to-4 percent on average, as demand for imports, especially imports of manufactures, is stimulated in GCC countries by the component of general trade liberalization under the new customs union. Simultaneously, to maintain balance of payment equilibrium, domestic export prices rise, giving exporters incentive to increase their exports of not only mineral products (petroleum) but also manufactured products such as chemicals, metal products, and textiles and clothing, the most labour-intensive of these manufactured products being typically clothing.

The supposition that the minimum CET leads to greater benefits than the 5 percent CET is confirmed in the simulation results, but the margin of economic benefit measured in terms of either net trade creation or overall economic welfare is not particularly large. For the GCC countries as a bloc, net trade creation improves by less than \$300 million, from \$1,279 million to \$1,591 million, and overall economic welfare relative to GDP improves by only about 0.3 percentage points, from 1.5 percent to 1.8 percent. These results for the GCC bloc, however, mask important results for the two low tariff GCC countries, Kuwait and Qatar. In both these countries, welfare losses amounting to about 0.5 percent of GDP under the GCC customs union with a 5 percent CET are reduced to nearly zero under the alternative GCC customs union with a minimum CET, and in the high tariff GCC countries (Bahrain, Saudi Arabia, and UAE) welfare gains are higher by margins of 0.3-to-0.5 percentage points under the alternative GCC customs union incorporating the minimum CET.

Under the GCC customs union, GCC tariff revenues decline by between \$4,493 million and \$5,478 million, or about 2 percent of GDP. However, only \$500-to-\$700 million of the decline in tariff revenues is forgone tariff revenues and hence a true economic loss. The remaining tariff revenue losses are simply a transfer between the government and domestic consumers, with no net impact on national economic welfare.

⁹⁰ Economic textbooks often consider customs unions preferable to free trade areas because, for political economy reasons, customs unions tend to establish a common external tariff at or near the lowest external tariff level of their members.

Given that the European Union is not party to the GCC custom union, EU economic welfare is not affected by adoption of the GCC customs union (see Annex XII.T, Table 74), and the modest impact on EU trade found by the trade simulation model occurs only indirectly through the adjustment of world prices.

VI.C.3 EU-GCC FTA

The proposed EU-GCC FTA would provide wider opportunities than the GCC customs union for preferential market access by the GCC exporters, namely in the lucrative EU market. Also, as noted previously, GCC consumers should be expected to benefit from duty-free access to EU exports in the internationally competitive sectors identified in Table 72, including (among others) chemicals, machinery, and transport equipment.

In Table 73, the proposed FTA results in somewhat greater depreciation of the exchange rate in GCC countries (about 6.5 percent on average) than under the GCC customs union, and in Table 74 to a modest appreciation of the EU exchange rate on average (about 0.3 percent).

For the GCC countries, the exchange rate impact follows from appreciable expansion of duty-free imports induced by the FTA, by about \$1,500 million (and, again, from the concomitant necessity that exports expand sufficiently to maintain balance of payments equilibrium). Indeed, trade diversion under the FTA is reduced by comparison to trade diversion under the customs union precisely because of the capacity of the EU export supply to satisfy GCC import demand fully at a duty-free price in the internationally competitive sectors identified in Table 72.

For the EU, the exchange rate impacts follow mainly from the FTA-induced expansion of exports in non-competitive sectors where EU exporters would enjoy margins of preference in the GCC countries, and from the inability of the GCC countries to satisfy EU import demand fully at a duty-free price in any sector in the model. For the EU, trade diversion effects and forgone tariff revenues dominate the simulation results such that trade creation is negative on a net basis and the computed change in economic welfare is also negative. The underlying trade impacts of the EU-GCC FTA, however, are small relative to the GDP of the European Union so that the changes in both EU economic welfare and tariff revenues are insignificant relative to EU output in the aggregate.

This is not the case for the GCC countries. Under the EU-GCC FTA, both net trade creation and economic welfare are substantially greater than under the GCC customs union, and the improvement in GCC economic welfare relative to GDP is a full percentage point or more greater on average than under the customs union, including in the two low-tariff countries, Kuwait and Qatar. GCC consumers gain most from increased imports of manufactures at duty-free prices in the internationally competitive sectors, while GCC producers gain most from increased exports of minerals (petroleum) induced by the further exchange rate depreciation. Finally, it is apparent in Table 73 that forgone tariff revenues and changes in actual tariff revenues under the EU-GCC FTA remain very similar in magnitude to those under the GCC customs union, especially when the minimum CET is assumed.

VI.C.4 Open Regionalism

The results of the MFN trade liberalization scenario are clearly superior to those for either the GCC customs union or EU-GCC FTA. They indicate that economic welfare relative to GDP would be improved by 3.2 percent on average in the GCC countries and by 0.8 percent on average in the European Union. It is also apparent from the results of the MFN trade liberalization scenario that the loss in tariff revenues is greater than in the other scenarios. However, unlike in the preferential trade liberalization scenarios, changes in tariff revenues under MFN trade liberalization are entirely transfers between the government and domestic consumers because no trade diversion or forgone tariff revenues occur.

Remarkably, the proposed EU-GCC FTA yields an aggregate welfare gain for the GCC countries (2.7-to-2.9 percent) that is similar in magnitude to the aggregate welfare gain for the GCC countries under open regionalism (3.2 percent). Thus, on economic welfare grounds, the proposed FTA should be preferred by GCC countries to their current customs union, which yields substantially smaller welfare gains (1.5-to-1.8 percent). Further, the simulation results indicate that if the current 5 percent CET of the GCC customs union were lowered significantly as part of the FTA negotiations, namely, to the minimum CET average (3.3 percent) or a still lower level, the trade and welfare gains to the GCC countries would be decidedly close to those under non-discriminatory trade liberalization. Also, simultaneously adopting a lower CET with the proposed FTA would further increase the attractiveness of the GCC countries to outward-oriented foreign direct investment by multinational corporations globally (not solely EU-based multinational corporations), given that foreign direct investment decisions in the global economy today are importantly influenced by, among other factors, the openness of the host country's trade regime.

VI.D DISCUSSION & CONCLUSIONS

Against the backdrop of the recent dismal economic performance of several GCC countries and increasing concerns for productive employment of both skilled and unskilled labour in these countries, this paper has sought to quantify the economic impacts of the new GCC customs union and proposed EU-GCC FTA on the six GCC countries. Using a computable partial equilibrium model of world trade focused on the region, the analysis yields relevant insights to the possible trade and welfare impacts of the new and proposed preferential trading arrangements between the GCC countries and the European Union, albeit limited by the inevitable shortcomings of the quantitative analysis but also by the still incomplete details surrounding the new GCC customs union and the ongoing negotiations of the proposed free trade agreement between the EU and GCC countries.

VI.D.1 Results Highlights

In chapter VI.A.1 we set up a set of stylised facts, or expected outcomes, worth considering in the quantitative modelling, before in the subsequent chapter VI.B.1 setting up five modelling scenarios designed to test these expected outcomes.

As we have seen however, the results do not entirely confirm the 'stylised facts' or expectations set out in chapter VI.A.1 and are in some cases somewhat surprising. In terms of the expected outcomes set out in chapter VI.A.1 the key results obtained are the following:

- **Intra-GCC trade increases** more than might be expected under the GCC CU;
- There is probably more scope for **GCC trade creation in the EU under an FTA than expected**, as trade liberalisation reveals some competitive sectors in the GCC non-oil economy;
- Potential **EU trade expansion into the GCC is mitigated under an FTA** by larger than expected boost to intra-GCC trade from the new customs union;
- However **GCC imports also expand more than expected** by the stylised analysis, so EU exports into the GCC increase as well as intra GCC trade;
- These **GCC export increases occur due to minimising 'Dutch disease' distortions** within the GCC economies have stunted the scale of economic activity in sectors in which it can now *reveal* a comparative advantage;
- The GCC import boost occurs as **trade reforms release previously untapped, or under-utilised, human and physical resources** which provide a boost to the scale of domestic demand.

Hence, in general the results are more optimistic than might have been expected, and we are assuming that this is because the GCC economies are (or have been) severely demand constrained. Given appropriate realignment in their outward orientation they generate trade gains under both the CU and the FTA.

As the results are somewhat counter intuitive to our previous expectations, the modelling exercise does appear to have provided some novel, slightly surprising insights which we consider can be justified post hoc by what we know of the GCC economies present inward orientation and economic distortion as a predominantly oil-based region.

VI.D.2 Conclusions

To add clarity to the results description above, we group the conclusions in the following way. First we take a look at the 'big picture'. A comparison of the outcome of the CU for the GCC when compared to the outcome of an FTA (for EU & GCC) and finally contrast this with an 'idealized' position called Open Regionalism. Second, we examine any 'intra block effects' that may occur, and compare the intra-GCC effects from the CU with the relative EU/GCC effects that may result from an FTA. Finally, we look at any industry-specific effects that might emerge from the trade reforms in terms of gains and losses for particular industry sectors (where possible).

Looked at in this way, the core message coming out of the results for these three levels of analysis is the following:

Level one – the big picture

The CU has a small positive benefit for GCC, but the FTA a greater one both for GCC and EU - open regionalism does best (but only slightly better than FTA)

Level two – regional effects

Most **intra-GCC trade increases in the CU** (possibly counter-intuitively) as the GCC FTA could have soaked up all the benefits already. But **GCC exports (into EU) increase more under the FTA** and the EU doesn't lose out on increasing exports into the GCC. This last effect is probably **due to a relaxing of the 'Dutch Disease' distortions**, which result in non-oil GCC exports increasing into EU as well as the EU's export share being maintained in the GCC, despite increased intra-GCC trade due to the CU completion.

Level three – industry effects

We would expect low-to-medium tech (i.e. previously Dutch-disease constrained), **non-oil export sectors, such as clothing or textiles to expand in the GCC**, as these benefit from new access into EU under FTA. However, **export gains for the EU** into GCC are also likely, predominantly in high-tech, non-oil sectors.

Enclosed, we discuss possible trends in Textiles taking into consideration the liberalisation of the markets in 2005 (as a consequence of the dismantling of the Multi Fibre Agreement under WTO rules), and the implications of the EU enlargement by May 1, 2004. (See Annex XII.W)

In general, the quantitative results indicate that both the new GCC customs union *and* the proposed EU-GCC FTA would appreciably expand trade and improve economic welfare in the GCC countries, with little significant economic impact on the EU. Given the dominance of petroleum in the exports of the GCC countries, adjustment of trade in this sector dominates much of the quantitative results. However, both the new customs union and the proposed preferential trading arrangement stimulate trade in some other important sectors, including GCC exports in labour-intensive sectors such as clothing and in more skilled labour-intensive sectors such as chemicals and metal products.

As might be expected, the proposed EU-GCC FTA results in larger trade and welfare gains for the Gulf countries. Indeed, trade diversion under the FTA is reduced by comparison to

trade diversion under the customs union because of the capacity of EU exporters to fully satisfy the – currently constrained – GCC demand for imports at duty-free prices in a number of internationally competitive sectors. GCC consumers would get the opportunities to benefit from imports of chemicals, machinery, and transport equipment, among other major categories of trade goods, at internationally competitive prices, with little trade diversion. On the production side, the source of the welfare benefits can also be traced to greater gains for GCC exporters, mainly in response to greater depreciation of the exchange rate under the proposed FTA, rather than preferential access to the lucrative EU market for imports.

The reason for large intra-GCC effects under the CU is that considerable trade diversion occurs - trade diversion that is undone in part when the EU enters the picture under the FTA (this effect shows through reasonably clearly in the results). An important point to keep in mind is that the high-protection GCC countries get a particularly important, positive boost from liberalizing their MFN tariffs under the new 5% CET.

Most of the above points can be made with reference to Table 73 and Table 74. Reading across the five scenarios from left to right in Table 73 and Table 74, we observe that all the trade creation; consumer surplus; and welfare measures increase progressively as we go from left to right.

The simulation results should be read as applying per annum, in perpetuity. So, although the model results are not 'dynamic' in the proper sense of the term and are in many cases appear small, for instance relative to GDP, they are likely to be long-lived and their present value is not unimportant. Especially to individual firms and consumers, the simulation results, if they became reality, would loom very large indeed.

The two 'sensitive' GCC countries, Kuwait and Qatar, are the two GCC countries with initial tariff rates below the 5% CET. We can see that they are not significantly disadvantaged under the CU, and their position is again improved under the FTA.

Although the simulated welfare gains under the proposed FTA closely approximate welfare gains under a policy of open regionalism (i.e., EU-GCC trade liberalization on an MFN basis), the GCC countries should consider lowering their current CET, from 5 percent to a figure closer to 3 percent, as part of the current FTA negotiations. By doing so, the GCC countries would be better placed to attract the outward-oriented foreign direct investment.

Attracting foreign direct investment is becoming a prerequisite for further improvements in economic growth and welfare. If, as we have argued, the Gulf economies are currently performing below their full potential there will be ample opportunities to fulfil pent-up demand, driven by the social and economic expectations of the regions rapidly growing demographic profile.

VI.E DISCUSSION & CONCLUSIONS ECONOMIC ASSESSMENT

Against the backdrop of the recent dismal economic performance of several GCC countries and increasing concerns for productive employment of both skilled and unskilled labour in these countries, this paper has sought to quantify the economic impacts of the new GCC customs union and proposed EU-GCC FTA on the six GCC countries. Using a computable partial equilibrium model of world trade focused on the region, the analysis yields relevant insights to the possible trade and welfare impacts of the new and proposed preferential trading arrangements between the GCC countries and the European Union, albeit limited by the inevitable shortcomings of the quantitative analysis but also by the still incomplete details surrounding the new GCC customs union and the ongoing negotiations of the proposed free trade agreement between the EU and GCC countries.

In general the quantitative results indicate that both the new GCC customs union *and* the proposed EU-GCC FTA would appreciably expand trade and improve economic welfare in the GCC countries, with little significant economic impact on the EU.

Given the dominance of petroleum in the exports of the GCC countries, adjustment of trade in this sector dominates much of the quantitative results. Both the new customs union and the proposed preferential trading arrangement stimulate trade. Whereas, the CU stimulates exports in most sectors, on top of that the FTA gives an additional stimulus to exports in some labour-intensive sectors such a

. However in the skilled labour intensive sectors, such as chemicals and metal products, the additional boost to exports from the CU is dampened somewhat by the FTA because this opens the GCC market up to more competitive producers from inside the EU.

As might be expected, the proposed EU-GCC FTA results in larger trade and welfare gains for the Gulf countries. Indeed, trade diversion under the FTA is reduced by comparison to trade diversion under the customs union because of the capacity of EU exporters to fully satisfy the – currently constrained – GCC demand for imports at duty-free prices in a number of internationally competitive sectors. GCC consumers would get the opportunities to enjoy imports of chemicals, machinery, and transport equipment, among other major categories of trade goods, at internationally competitive prices, with little trade diversion. On the production side, the source of the welfare benefits can also be traced to greater gains for GCC exporters, mainly in response to greater depreciation of the exchange rate under the proposed FTA, rather than preferential access to the lucrative EU market for imports.

Although the simulated welfare gains under the proposed FTA closely approximate welfare gains under a policy of open regionalism (i.e., EU-GCC trade liberalization on an MFN basis), the GCC countries should consider lowering their current CET, from 5 percent to a figure closer to 3 percent, as part of the current FTA negotiations. By doing so, the GCC countries would be better placed to attract the outward-oriented foreign direct investment. Attracting foreign direct investment is becoming a prerequisite for further improvements in economic growth and welfare. If, as we have argued, the Gulf economies are currently performing below their full potential there will be ample opportunities to fulfil pent-up demand, driven by the social and economic expectations of the regions rapidly growing demographic profile.

VII. Environmental Impact assessment of the EU-GCC Free Trade Agreement

VII.A POTENTIAL ENVIRONMENTAL IMPACTS OF GCC-EU FTA

This chapter takes into account the results of the economic modelling and the assessment of services, which suggests ways in which a GCC-EU FTA will impact specific economic and services sectors. The modelling exercise indicates that there will be little impact of a GCC-EU FTA in the countries of the EU. This chapter also includes an assessment of services that have been highlighted in chapter V.I.4 as providing opportunities for growth under an EU-GCC FTA. Because the EU already have commitments under the GATS in a number of services sectors, across a wide range of modes, both the chapter on trade in goods and trade in services will focus on impacts that might be felt in the countries of the GCC.

A general conclusion offered by this discussion is that there may be environmental risks associated with trade-related growth in specific industrial sectors in the short term (for

example textiles and apparel) and the medium and longer term (for example chemicals). However, these risks can be mitigated by the existence and enforcement of a robust regulatory regime for environmental protection. They can also be tracked through the development of an effective monitoring system, along the lines of the indicators specified. This discussion also points to the potential for significant benefits that might be offered by liberalisation in services.

VII.B TRADE IN GOODS: ENVIRONMENTAL IMPACT

A general finding in the economic analysis is that trade is likely to expand and that it is most likely to occur in specific sectors. The following sectors are highlighted in the modelling exercise as those where opportunities for trade between the GCC and the EU exist as a result of a FTA: petroleum, clothing, chemicals, metal products, machinery and transport equipment. The petrochemical and aluminium sectors are addressed in separate case studies.

In some instances these opportunities will flow to the countries equally, for example, all countries of the GCC can expect to increase their exports of textiles, apparel and leather by between 4.25% (Saudi Arabia) and 5.3% (Oman) as a result of an EU-GCC FTA that occurs on top of the existing GCC Customs Union (see annex XII.X, Table 103). However, the environmental impacts might be felt most acutely in areas that are already environmentally stressed, or those areas that are already heavily involved in the sector, such as in Kuwait (2,221 establishments) and Qatar (1,237 establishments) where the number of establishments are high, but they are typically small, employing only an average of 6 and 9 people per establishment, respectively. In other countries in the region, such as Oman, the textiles sector is critical, although there are only 29 establishments, but they employ an average of 195 people each. Similarly the number of establishments in the UAE is 218, but with an average level of employment per establishment of 146 people (see annex XII.V, Table 96). A critical question for assessing the environmental impacts is to collect information regarding the extent to which the larger establishments employ modern production practices and technologies for waste disposal, compared to the smaller establishments where pollution control equipment may not be employed. This will help ascertain the spatial impacts and the intensity of impacts on the environment of growth in that sector, which could accrue disproportionately for example, in this case to Kuwait and Qatar, if the industry is undeveloped and inefficient. The regulatory regimes and the existence of government programs to assist SMEs could also impact the risks associated with this production. These types of questions warrant further in-depth study across all of the sectors highlighted in the modelling exercise.

In addition, the opportunities for increasing exports of fabricated metal products, machinery and equipment accrue to the EU and not the GCC. Exports from the GCC to Europe in this sector are expected to decline while exports to the GCC from Europe are expected to increase by between 2.6% (to Oman) to 4.63% (Bahrain) (see annex XII.X, Table 115). In this case, depending on the nature of the products exported to the GCC there may be benefits for sustainability, while the impacts of the production of these products will be felt in the EU. Again, more information on the nature of the products and the production processes associated with them (including technology) and the regulatory environment, would allow for a clearer assessment of any potential environmental impacts.

Given these limitations, the environmental impacts of expanded opportunities for export in these sectors is presented here in terms of potential risks associated with increasing trade-induced economic activity. The modelling exercise indicates that the general impact of an EU-GCC FTA will be on the countries of the GCC, so this will be the focus of this chapter. There is insufficient evidence of volume changes or information on critical variables for this analysis such as precise production processes, geographic location of industry, and technology use in the GCC countries to make a detailed assessment at this stage. Nevertheless, the general consideration of potential risks points to issues for further consideration, particularly as they related to the five priority environmental areas in the GCC,

identified in chapter V.E (see also Box 1). This chapter is, therefore, organised around the five priority areas:

- The severe shortage of water resources both in quantity and quality.
- Deterioration of coastal and marine areas.
- The limitation of available lands and deterioration of land resources.
- The unsustainable consumption of natural resources.
- The rapid rates of urbanisation and associated problems.⁹¹

VII.C WATER RESOURCES

The availability of freshwater resources is among the most important, if not the most important environmental challenge facing all the GCC countries. There is currently a severe shortage of water resources and withdrawal rates are unsustainable. This makes it even more imperative that the water resources that exist remain pristine, to ensure supply for human consumption.

Water quantity. Agriculture is by far the largest consumer of water resources in the GCC, among the three major sectors: agriculture, industry and domestic use. On average across the GCC (for various years where data is available) agriculture is responsible for 74.5% of water withdrawals compared to 22.8% for domestic use and only 3.5% for industrial use. Water withdrawals are particularly important for agriculture in Oman and Saudi Arabia, where they are correspondingly less important for industry (**Table 19**).

	Agriculture	Industry	Domestic
Bahrain (1991)	56	4	39
Kuwait (1994)	60	2	37
Oman (1991)	94	2	5
Qatar (1994)	74	3	23
Saudi Arabia (1992)	90	1	9
UAE (1995)	67	9	24
<i>GCC -- Average</i>	<i>73.5</i>	<i>3.5</i>	<i>22.8</i>

Source: WRI. Earth Trends 2003.

That said, levels of trade in agricultural products are very low between the EU and the GCC compared with trade in energy machinery, for example. For example, in 2002 the EU imported only €0.2 billion worth of agricultural products from the GCC countries compared with 12.6 billion worth of energy products, €1.4 billion in machinery and €1.2 billion in chemical products. The EU is a net exporter of agricultural products to the GCC, exporting €2.8 billion worth in 2002.⁹² Moreover, the results of the economic modelling exercise do not

⁹¹ Abu Dhabi Declaration on the Future of the Arab Environment Programme (CAMRE, 3 February 2001).

⁹² Eurostat, Brussels, June 2003, DG Trade/A2/CG/SG.WB.

indicate that there will be any short or longer term gains for agricultural products from the GCC through the implementation of an EU-GCC FTA.

Therefore, liberalization in and of itself, is unlikely to have a large impact on the agricultural sector in the GCC countries. However, there still may be opportunities, through trade in environmentally sound and efficient technologies to relieve some of the pressure on water resources. These opportunities including, *inter alia*, access to relevant irrigation technologies, should be explored.

Liberalization could have an impact on water use in industrial processes depending on any trade-induced structural shifts that occur in the economies of the GCC towards, or away from industrial activities that rely on water as important inputs. Increases in scale of production, driven by increasing trade, will bring about increases in use of water as an input. In particular, of relevance in this SIA as demonstrated by the results of the economic modelling exercise, are the chemical and the textiles sectors, both of which use large quantities of process water, and in the case of the chemical industry, cooling water.

To the extent that the industries that are likely to expand as a result of liberalisation are 1) large water users, and 2) unregulated in terms of the levels and state of effluents they discharge, there could be important impacts on water quantity and quality as a result of economic growth, driven by trade. Other key questions include efficiency of water use, technology employed in production practices, and the potential for recycling water for industrial use. The amounts of water used for industry will impact the quantity available for other uses, including domestic use, and divert water away from agriculture, which could impact food production and food security, based on domestic production.

Water quality. Water quality issues will be impacted by the production processes and discharges of major water users. This includes agriculture, followed by domestic use and industry (see above).

Agricultural activities will have the greatest impact on water quality to the extent that production processes are intensive and employ high levels of agro-chemical inputs that run-off into groundwater and surface water.

There is no data available for pesticide use in the GCC countries, and total amounts of fertiliser use in the GCC are relatively low. However this reflects the relative lack of importance that agriculture generally plays in the economies of the GCC countries. The more important indicator in this instance is the intensity of use. Intensity of use of fertilisers is very high in the GCC countries – on average 135.6 kg/ha of cropland. This is well above the world average of 94 kg/ha of cropland. Intensity is particularly high in UAE, Kuwait and Bahrain (See **Table 20**).

Country	Average fertilizer use (1999)		Number of tractors (1997)
	Total (‘000 m tons)	Intensity (kg/ha cropland)	
Bahrain	1	150	12
Kuwait	1	157	100

Oman	7	95	150
Qatar	1	48	60
Saudi Arabia	354	94	9,500
UAE	36	270	272
<i>GCC Average</i>	--	<i>135.6</i>	--
<i>World Average</i>	--	<i>94</i>	--

Source: WRI. Earth Trends 2003.

Clearly, there are potentially important impacts on water quality from agricultural run-off, given the intensity of use in the GCC countries. Despite the fact that this sector has not been prioritized in this SIA and the results of the economic modelling do not suggest that a UE-GCC FTA will have significant impacts on agriculture, there may be opportunities to mitigate the potentially large negative impacts on water through the employment of alternative technologies that could benefit from liberalization. These opportunities should be explored, given the scarcity of the resource in the region.

Water sources are also used by a number of industrial sectors as mechanisms for the disposal of effluents. Levels of effluents into water courses will impact the quality of the water, and therefore limit the quantity of clean, freshwater available. Both the chemical and textile sectors, in addition to being large water users, also discharge considerable quantities of effluents. Any increases in scale of production, resulting from trade-induced industry growth could unless properly handled with existing or future infrastructure development, result in increasing levels of effluents in watercourses.

The textile and apparel sector encompasses a number of sub-activities such as dyeing and the production of leather goods that render it quite toxic, broadly speaking. Among those, are dyeing processes, and in particular tanneries and leather finishing, which are among the most toxic industries based on the World Bank's ISIC Codes.⁹³

Environmental pollution created from the textiles industry comes mainly from the discharge of wastewater that can contain Biochemical Oxygen Demand (BOD), suspended solids, salts, sulphates, and toxic metals. Wastewater is produced in a number of processes including dyeing, chemical fibre production, wool washing, de-gumming and chemical fibre pulp production. The wastewater from dyeing is the key source of pollution, accounting for 80 per cent of the total wastewater discharge in this sector.⁹⁴ Effluents from the many toxic solutions used, containing suspended solids, sulphates, and chromium.

To the extent that the clothing industry employs leather, pollution issues could be more intensive. The process of converting hides to leather end products includes the following stages: (a) production of hides; (b) chemical processing: liming/deliming, pickling, tanning, dyeing and finishing; (c) mechanical processing: cutting, grading, making-up, sewing; and (d) packaging.⁹⁵ Leather production has a propensity for high toxic releases of untreated effluents into soil and water. Most discharges occur during the chemical processing and can include wastewater that contains BOD, suspended solids, salts, sulphates, toxic substances, and in particular chromium⁹⁶.

⁹³ Hettige *et al* 1995, cited in UNEP 2003..

⁹⁴ EPTSD Secretariat, 1998.

⁹⁵ FAO 1994 in WTO 1997.

⁹⁶ UNEP. Handbook on the Integrated Assessment of Agriculture (final draft, 2003.).

Emissions from the chemical industry affecting water include, *inter alia*, ammonia, solvents, heavy metals (cadmium, mercury), oil products, Chemical Oxygen Demand (COD), Biochemical Oxygen Demand (BOD), suspended solids and Poly Chlorinated Biphenyls (PCBs). Emissions can also result in changes in water temperature and Ph, all of which can affect aquatic life and water quality. In addition, any increase in the risk of spills can impact water quality.

Deteriorating water quality is brought about by industrial pollution from oil and gas production contamination from other industrial sources, and household sources such as septic tanks. In the GCC countries, only about 400 million m³ of the annual 918 million m³ of treated wastewater are tertiary-treated and used for irrigating non-edible and fodder crops and landscaped areas. About 60 per cent of the partially-treated wastewater is discharged to sea or low-lying land.⁹⁷

The GCC faces additional challenges of increasing efficiency in water use, developing methods to reuse water, effectively managing water distribution and sanitation networks and maintenance activities in water and wastewater plants, applying waste water treatment, and increasing the quality of drinking water. Research on the use of solar energy for desalination and power generation, coupled with advances in agricultural research and techniques for saving irrigation water, could help ease the impact of these problems.⁹⁸

Some relevant indicators that might help track future impacts on water of increased industrial activity and transportation that arises in export-oriented sectors could include the following: *Freshwater quantity*: Renewable water resources (per capita), annual water withdrawals (per capita) in m³, water balance (per capita); *Freshwater quality*: BOD/dissolved oxygen in inland water, concentration of nitrates and phosphates in inland waters, concentration of heavy metals, exceedance of critical loads of Ph in water and sewage treatment connection rates.

VII.D COASTAL AND MARINE AREAS

A second priority area for the GCC countries is the state of their coastlines, marine pollution and their marine resources. The marine ecosystems in the water surrounding the GCC countries are home to significant amounts of biodiversity including a number of coral species. Indeed, the West Asian region as a whole contains around 8 per cent of the world's mapped coral reefs. Almost two-thirds of those in the Persian Gulf are classified as at risk. In addition, red tides and associated fish kills have increased in distribution and frequency in many coastal areas, and increasing extent of coastal areas is becoming unsuitable for recreation and food production, countries are experiencing a loss remaining mangroves, and the existing fish stock could be threatened with collapse.⁹⁹ There are major threats to the continued health of the marine ecosystem from both land-based sources (see **Box 5**) and marine-based sources of pollution.

Land-based sources of pollution. Land based sources of marine pollution are generally aggravated by increasing pressures of industrial activity and human settlements along the coastline. Much of the population is concentrated on or near the coastlines in the GCC countries. Much of the industry is also based around coastal areas. If there are significant increases in scale of trade, these will likely translate into increases in production, perhaps new facilities, and perhaps attracting additional populations to the coastal areas in search of work. One important variable that should be considered is the geographic location of any

⁹⁷ UNEP. GEO 2000.

⁹⁸ UNEP. GEO 2000.

⁹⁹ UNEP/ROWE.

concentration – whether it occurs along the coastline as a whole, or in particular in specific areas with access to adequate transportation infrastructure such as ports, for the transportation of goods to foreign markets, notably for this SIA, the EU.

Box 5: Land-based sources of marine pollution from industrial activity

- **Oil pollution:** Petroleum hydrocarbons from refineries, petrochemical industries, oil terminal, oil spills from ships, pipeline accidents, disposal at sea of oil contaminated ballast water and dirty bilge, and sludge and slop oil. Some 1.2 million barrels of oil are spilled into the Persian Gulf annually
- **Solid waste:** Discharges include household refuse of 0.5-1.5 kg/person/day and food wastes of 1.4-2.4 kg/person/day. However, this situation is being improved as a result of Cooperation between ROPME, GCC and the European Union.
- **Sewage:** Some 20-30 per cent of the sewage discharged into the sea is estimated to be untreated or only partially treated. This poses a potential threat of eutrophication in confined areas such as bays.
- **Sand:** Sand depositions from the atmosphere as high as 29 g/m²/year have been reported.
- **Land-based effluents:** Levels of persistent organic pollutants (POPs) are still relatively low but screening of contaminants in marine sediments and biota have also revealed low levels of halogenated pesticides, PCBs and organic phosphorous compounds.
- **Heavy metals:** Heavy metal concentrations are generally low but there are hot spots near the old outfalls of chemical plants where there are relatively high levels of mercury. Copper and nickel levels are also relatively high near the outfalls of desalination and power plants.
- **Hot brine:** Discharge of concentrated and hot brines from desalination plants.

Sources: ROPME/IMO 1996; IMO 1995; ROPME 1996; UNEP GEO 2000.

To the extent that industry is concentrated along the coastline, the chemical and textile industries, for example, will to the extent that populations migrate to locales along the coastline to work in growing industries, this could increase pressure on the fragile coastal resources. The discharge of effluents are the same as those that could affect freshwater – including BOD, suspended solids, sulphates, ammonia, solvents, oil products, PCBs, and heavy metals such as chromium and mercury.

In addition, large populations have settled in growing cities along the coastlines. In Bahrain, Kuwait and Qatar, 100 per cent of the populations live within 100 km of the coast. This could increase if populations migrate to the coastal areas in search of work generated by increasing economic activity. The contribution of these human settlements to land-based pollution of marine areas will depend, in part at least, on existing and future levels of municipal infrastructure to service those populations. In Bahrain, Kuwait, UAE and western Saudi Arabia, all sewage is treated prior to discharge and some is recycled. About 60% of the partially treated wastewater is discharged to sea or low-lying land. Sewage treatment facilities will need to be improved to meet the increasing volumes of waste generated, in order to avoid increasing eutrophication and negative impacts on marine water and marine life.

There may also be increased pressure to provide services, such as clean drinking water, to growing concentrations of the population. To meet these demands, the countries of the GCC rely to a relatively high degree on desalination plants, which render seawater suitable for domestic and industrial use. In the GCC countries desalination plants supply about 40 m³ out

of the total renewable water supply of 381 m³ *per capita/year*.¹⁰⁰¹⁰¹ To the extent that increased pressures are met by increasing desalination plants a corresponding level of pollution could result given their discharges of hot brine and chlorine with detrimental effects on the local and marine environment.

Marine-based sources of pollution. Impacts on the marine and coastal areas in the GCC countries are aggravated by increasing transportation through the waters surrounding the region. More than 30 per cent of the world's oil tankers move through this area every year.¹⁰² There is an ongoing discharge of oil and oily waste into waters surrounding the GCC. Some 1.2 million barrels of oil are spilled into the Persian Gulf annually.¹⁰³ Increases in the scale of trade will result in increasing transportation – moving goods within the countries of the GCC and to markets in Europe. Environmental impacts of transportation will almost always increase with the volume of goods transported. The mode of transportation employed for the increased movement of goods will have an impact on the environmental consequences of this activity.

Shipping is the mode of transportation that will have the greatest impact on coastal and marine zones as a result of increases in scale. The dangers inherent to the environment of increase shipping traffic include: direct damage to marine ecosystems such as coral reefs from propellers, for example, marine-based pollution from ships, and an increasing risk of accidents, and subsequent spills, as a result of increased waterway traffic. Marine-based pollution from ships, such as pollution from increased ballast water discharges, can affect the aquatic food chain, disturb aquatic habitats and species and decrease biodiversity. To the extent that industry discharges untreated effluents into the waters of the Persian Gulf, this can impact the habitats for marine life. Accidents in the region, which results in spills, could result in environmental disasters, particularly where products that are being transported are inherently dangerous to the environment. Any increased shipping of petroleum or chemical products would therefore increase the risk of major damage.

Increases in industrial activity along the coastline, and increases in shipping transportation could also affect the coastline by increasing development of infrastructure to service the growing trade, which could affect the health of coastal zones. Where existing infrastructure is unable to absorb such increases, there may be development of additional infrastructure along coastlines, such as ports, and transportation networks to access the ports.¹⁰⁴ The construction of deep-water ports, which are crucial for the development of general merchandise trade, can pose a danger to coral and potential for coastal erosion. To the extent that increased infrastructure is required more the movement of goods, such as additional deep-sea ports, their development and construction should be the subject of an environmental impact assessment, and their operation should be closely monitored and regulated.

¹⁰⁰ UNEP. Global Environment Outlook (GEO), 2000.

¹⁰¹ Kuwait has developed some of world's largest and most sophisticated facilities, which now provide much of the country's water. Saudi Arabia has also developed extensive desalination facilities. And since the early 1980s desalination plants needs for water in Bahrain have met 60 per cent of daily consumption. Despite their high capital and operating costs (desalinated water costs around US\$1.0-1.5/m³), desalination plants will continue to be built to meet the domestic water demands of the GCC countries. According to the GCC, desalination capacity is expected to increase from 2,316 million m³ in 1996 to more than 3,000 million m³ in 2020. UNEP. GEO 2000 (GCC 1996).

¹⁰² UNEP 2000, WRI, ICLARM, WCMC, UNEP 1998.

¹⁰³ The level of petroleum hydrocarbons in the area exceeds that in the North Sea by almost three times and is twice that of the Caribbean Sea. UNEP.GEO, 2000.

¹⁰⁴ The ports of Oman experienced double digit increases in 1999 and 2000.

In addition, to the extent that changes in trade flows from a customs union, coupled with an FTA, encourage competition among the GCC ports of entry as internal customs borders are abolished leading to free circulation of goods from one GCC member to another (which means that goods can enter at the most efficient points and then be transported freely throughout the region), this could lead to increased economic activity in those areas in close proximity to the most efficient GCC ports. It is important to ensure that the areas where this might occur are capable of absorbing such increases from an environmental and health perspective. If not, policies will need to be put in place to help address any unsustainable concentrations in particular geographic locales.

VII.E LAND USE

A third area of environmental priority for the GCC countries involved the limitation of available lands and deterioration of land resources. Most land in the region is either desertified or vulnerable to desertification. The percentage of desertified land is nearly 100% in Bahrain, Kuwait, Qatar and the UAE.¹⁰⁵ Levels of soil contamination are an environmental challenge common to the countries of the GCC – and are typically impacted by industrial activity such as oil and gas production. Other contributors include contamination that occurs as a result of the extensive application of agro-chemicals such as pesticides and fertilisers. There are a number of variables that could pose risks to land in the GCC region as a result of increased industrial activity induced by EU related trade in the specified sectors. In particular, the characteristics of the production process and the disposal of cire waste is relevant. To the extent that there are increases in scale of trade, there will typically be increases in production.

Over abstraction of water in the production process not only affects available reserves (see above) but can also impact land. Unsustainable withdrawals can lead to the intrusion of seawater along the shoreline, causing salinisation of coastal agricultural lands. This in turn will reduce agricultural production and ultimately destroy available arable land. For example, the *Batinah* coastal plain of Oman has been completely lost, and it is estimated that the saline interface between the sea and groundwater in Bahrain advances at an annual rate of 75-130 metres.¹⁰⁶ These changes in land, can also impact biodiversity and a the further desertification of the area, because they end up with the groundwater necessary for the existent ecosystems.

Where industry employs hazardous products in the production process, there may be issues associated with the proper disposal of this cire waste. Discharges from textile and chemical industries that can include heavy metals and other pollutants, which require specialised treatment and disposal. Leather production can also have impacts on soil, such as solid waste from the tanning industry, which can include chromium sludge from cleaning installations. Solid waste in the form of sludge from effluent treatment is also a by-product of textile production. In the transport equipment sector, the largest solid waste streams generated by an automobile assembly plant are wastewater treatment sludge, waste oil, plant trash, and scrap metal. Where disposal facilities are inadequate, there could be important impacts in terms of soil contamination and acidification of the soil.

Industries, which employ high levels of chemicals in their production processes, or where the end product itself is hazardous, are of particular relevance in terms of potential risks of contamination of land. Many hazardous substances are persistent and break down very slowly in the environment. They therefore enter food chains, being transferred from one species to another and becoming more concentrated in the process. There is a serious risk that environmental concentrations of some pollutants may reach levels that make it difficult to repair the damage before their effects are detected. In mammals, hazardous chemicals are

¹⁰⁵ FAO 1997, GEO 2000.

¹⁰⁶ UNEP. GEO 2000 (UNEP/UNESCWA 1991; UNEP/ESCWA 1992).

transferred from mother to offspring and further generations could suffer the impacts of pollution if chemicals damage the genetic material.

In the GCC countries, urban waste generation ranges from 430 kg per capita per year in Qatar to 750 in Dubai.¹⁰⁷ In some GCC countries, waste collection and disposal are highly efficient and sanitary landfills are widely used. Some composting plants have even been opened producing organic manure and soil conditioners.¹⁰⁸

In addition, increasing infrastructure may be required to transport an increasing number of goods from production sites to disembarkation sites. At present inland freight movements in the GCC countries move entirely by road, except in Saudi Arabia, where a modest rail network exists. Key factors in assessing the transportation infrastructure include the state of the roads, the age of the trucks carrying goods, the size of trucking fleets and their efficiency. Where the roads are insufficient to handle the increased traffic associated both with inter-regional trade, and with moving goods to ports to trade with the EU, there may be new infrastructure required. Building roads can impact land, fragment habitats, and can encourage the increased use of heavy trucks, with associated air quality impacts and accidents. Where transported goods are inherently dangerous products, such as chemicals, this increases the risks of spillage and the resulting threats to contaminate soil, damage habitats and pose a threat to human health. The nature of the regulatory regime and its enforcement will make a difference here.

Variables that can mitigate the environmental impacts of transportation induced by increased trade in goods are modes of transportation and technologies. A modern, efficient, rail network, for example, which does not exist at present in the GCC countries, could reduce the environmental impact per unit of consumption. This could be combined with trucking fleets that employ modern technology and fuels to reduce emissions, to reduce some of the potential environmental impacts. Where increased infrastructure is necessary, such as the construction of new roads or rail lines, or improvements to existing infrastructure, they should be subject to environmental impact analysis.

Moreover, threats to soil and land resulting from increased industrial activity and transportation that arises in export-oriented sectors such as high rates of erosion, deficient nutrient quality of the soil, high levels of salinisation, high levels of municipal waste, high levels of industrial waste, high intensity of generation of hazardous waste, frequent movements of hazardous waste and recycling rates should be monitored.

VII.F NATURAL RESOURCES

A fourth priority concern for the GCC region is the unsustainable consumption of natural resources, including energy, water and other resources. Increases in trade in various industrial sectors can be expected to have impacts along the production chain beginning with the extraction of natural resources and including the use of resources in their production processes and in their ultimate transportation.

Inputs include raw materials such as wool, cotton and synthetic fibres, along with chemicals for treatment. The production of inputs is associated with separate environmental impacts, such as the extensive use of water for irrigation in cotton production. To the extent that the clothing industry employs domestically produced cotton, there will be important upstream impacts for water use. Other industries, including transport equipment and machinery will also require the increased use of virgin materials. Vehicles consist of approximately a number of parts, including steel, iron and plastic, and non-ferrous metal. The environmental impacts

¹⁰⁷ UNEP. GEO 2000. For comparison, in Toronto the figure is 511 kg *per capita*/year. (Habitat 1997).

¹⁰⁸ UNEP. GEO 2000.

and concerns that arise from the acquisition and processing of virgin resources that serve as input for automotive material include the substantial consumption of resources, including materials and energy. The largest contribution to waste in vehicle production is mining waste associated with energy generation and iron ore production.

In production processes, impacts on energy and water use will depend on the extent to which specific industries use these resources as key inputs into their production processes. Both the chemical and textile industries are major users of water (see above). They are both also major users of energy. Energy consumption by textile industry is most significant with regard to polymer and other synthetic fibre production. With respect to transport equipment and machinery, large quantities of energy are consumed in heating, cooling, and producing millions of tons of steel, aluminium, plastic, and glass.

The transportation sector also consumes significant amounts of energy. The OECD has found that the energy use and air pollutant levels were markedly higher for trucking than for other modes of freight transport (air, shipping, and rail).¹⁰⁹ Therefore, to the extent that transportation among GCC countries and to points of debarkation for trade occur by truck, resource use can be expected to be higher than if that transportation were to occur by rail, for example. Given that inter-regional and international freight is likely to increase, to the extent that transport activities leads to the consumption of fossil fuels there is a negative environmental effect.¹¹⁰

The development of clean fuels, fuel efficient technologies and advanced exhaust gas treatment can mitigate some impacts, both on energy consumption and on environmental impacts associated with increased use of fossil fuels. Regulatory measures, including the setting standards and the use of taxes could help creating the incentives for the might “mix” of transport modes to address legitimate environmental concerns.¹¹¹

VII.G URBANISATION

A fifth priority issue for the countries of the GCC are the rapid rates of urbanisation and associated environmental problems. From an environmental perspective, these problems include, *inter alia*, urban air pollution, congestion, noise, and waste disposal. Urbanisation is associated with rapid industrialisation and will be encouraged in areas where industrial development occurs in response to trading opportunities and other forces. Urbanisation has occurred relatively rapidly in the GCC countries, within the past four decades as GDP and revenues from oil increased. By 2002 over 75 per cent of inhabitants in all GCC countries lived in cities. In Kuwait, this figure was as high as 96 per cent. It was lowest in Oman with 76 per cent. By 2015, UNDP predicts that over 80 per cent of the population in the GCC countries will live in urban areas. Projections show that for all countries, with the exception of Oman at over 82 per cent, will have urban populations that make up over 90 per cent of total populations.

In all cases where urbanisation occurs at a rate that is not matched by infrastructure to support it, there might be negative impacts across all environmental media including air, water, land, coastal resources and biodiversity. Some impacts of the growth of human settlements in coastal regions and impacts on freshwater and land are discussed above. Other important

¹⁰⁹ OECD. 1997. *Freight and the Environment: Effects of trade liberalization and the transport sector reforms*. Paris.

¹¹⁰ WTO. 2002. *Discussion Paper on the Environmental Effects of Services Trade Liberalisation*. Secretariat Note. 3 October. WT/CTE/W/218.

¹¹¹ WTO 2002.

impacts of urbanisation will be the effects on urban air quality, congestion from personal vehicles and vehicles transporting goods, and noise pollution.

Urban air quality will be particularly impacted by the location of industry in or near urban areas. For example, the manufacturing operations associated with transport vehicle production, such as painting and coating operations, and metal casting operations, emit over half of the emissions in that industrial sector. The textiles and clothing industry emits particulates, SO₂, hydrocarbons (HC) and odours. Emissions from the tanning industry include leather dust, hydrogen sulphide, CO₂, chromium compounds. Noise from machines has been noted as contributing to noise pollution. Emissions from the chemical sector include particulates, SO₂, NO_x, CO, CFCs VOCs and other organic chemicals. They also contribute to odours. In addition, given the inherently dangerous nature of the processing, industry located in or near urban areas increases the risk of explosions and fires, which negative impacts on the environment and particularly on human health and safety. To the extent that these operations are located outside of urban areas, and employ modern pollution prevention technologies, negative impacts on urban air quality can be mitigated.

A number of indicators can and should be monitored in order to assess and monitor the short, medium and long term impacts of urbanisation, and particularly urban air quality. These include: SO_x per unit of GDP (kg/1,000 USD), NO_x per unit of GDP (kg/1,000 USD), SO₂ concentrations in selected cities, NO₂ concentrations in selected cities, Expenditure on air abatement pollution control, atmospheric ODS concentrations, ground-level UV-B radiation, stratospheric ozone levels in selected cities and existing CFC recovery rates.

VII.H TRADE IN SERVICES

The discussion of trade in services in chapter V.I.4 suggests the following areas as those where significant opportunities exist under a prospective GCC-EU FTA: business services, communication services, construction and related engineering services, distribution services, environmental services, financial services and transport services. The potential environmental impacts of liberalization in these sub-sectors is discussed below. Services are particularly relevant for their potential contribution to social sustainability through consumer safety, choice, price, professional training, and employment opportunities.

The EU has made commitments under its GATS schedule to liberalise a number of services areas across a range of modes, and has recently submitted additional areas for GATS liberalisation (see annex XII.R). Within the GCC, the potential for liberalisation is significantly higher with countries such as Bahrain, Oman and Saudi Arabia, which have made few (or no commitments in the case of Saudi Arabia) under the WTO GATS schedule. Where commitments do exist, there is considerable room for liberalisation across all services sectors, but particularly in communications services, distribution services and transport services. A EU-GCC FTA will not impact on educational services, health and related social services, Recreational, cultural and sporting services, the state-owned postal services, nor on the audio-visual sector.

In all cases, the economic implications of liberalization in the services sector will depend on parallel liberalization of public procurement to the extent that services are public and the extent to which procurement favours domestic suppliers. Also relevant are technical standards, licensing and professional qualifications standards, subsidies. National barriers to the entry or operation of international services suppliers, limitations on rights of establishments of commercial presents via investment and preferential treatment for national services suppliers, under general or sectoral regulatory frameworks. The extent to which these types of issues are included in negotiations will impact significantly the levels of liberalisation and thus any potential sustainability impacts, positive and negative.

Taken together, the services sector is typically thought to have lesser trade-related risks for the environment than the production and transportation of goods. This is particularly true in

light of the knowledge-intensive nature of many of the services sectors, and that technology and innovation may offer significant environmental benefits.

Environmental effects common to all service sectors, are operational impacts involved in running an office and travelling to clients. These include consumption of energy for heating, lighting, and use of vehicles and equipment (resulting in the release of smog-causing contaminants such as nitrogen oxide, sulphur dioxide, carbon monoxide, particulate matter, and greenhouse gases); and production of waste (including paper, refuse, sanitary waste, and chemical waste from office equipment). Related effects of operating a service industry could include impacts of constructing buildings and other facilities to house the services (resulting in localized soil erosion, loss of wildlife habitat, and production of construction wastes).¹¹²

Specifically, a number of services areas offer the prospect of knowledge and technical expertise related to environmental protection and enhancement. Business and professional services form an essential part of the intermediate services provision for both government and private organisations. There are a number of categories of business services that, if liberalized, could have environmental impacts (see **Box 6**). These include specific areas of expertise related to environmental liability and law-making and regulation, auditing, design and building codes, urban planning, engineering services, measuring and monitoring services, environmental risk analysis, environmental management processes, expertise on environmental impact assessment and other areas of expertise, where the countries of the GCC could benefit from the extensive experience in Europe to develop their own expertise in these areas, which could then be applied throughout the economy to conduct EIA on infrastructure projects and policies and diffuse knowledge throughout the economy.

Box 6: Business Services Related to the Environment

Professional Services

Legal Services
Accounting, auditing and book-keeping services
Architectural services
Engineering services
Integrated Engineering services
Urban planning and landscape architectural services
Other

Research and Development Services

R&D services on natural sciences
R&D services on social sciences and humanities
Interdisciplinary R&D services

Rental/Leasing services without operators

Relating to other transport equipment (i.e., not ships or aircraft)
Relating to other machinery and equipment

Other Business Services

Management consulting service
Services related to management consulting
Technical testing and analysis services
Services incidental to agriculture, hunting and forestry
Services incidental to fishing
Services incidental to mining
Services incidental to manufacturing
Services incidental to energy distribution
Related scientific and technical consulting services
Maintenance and repair of equipment (not including transport equipment)
Building-cleaning services
Source: OECD 1999.

¹¹² Government of Canada. 2002. Initial Environmental Assessment: Trade Negotiations in the World Trade Organisation. 22 November.

The diffusion of knowledge and expertise for environmental protection and enhancement, and the development of public dialogue on issues of importance to the environment will be facilitated by increasingly available communications services, where there is considerable opportunity for development from basic phone service, which remains low by European standards, to computer technology, which is essentially limited to Saudi Arabia.

The construction and related engineering services sector is of great significance to both EU and GCC firms, and is relatively large in the GCC States, accounting for between 12 and 24% of non-oil GDP, apart from in Kuwait. There are a number of areas under this general heading, which can have positive impacts on the environment, through the diffusion of knowledge, training and expertise. These include:

- General construction work for buildings (Prov. CPC classification 512)
- General construction work for civil engineering (Prov. CPC classification 513),
- Installation and assembly work (514+516,)
- Building completion and finishing work (517).¹¹³

In terms of financial services, insurance for the export of goods in transit is an important service, which has yet to be developed. From an environmental perspective, this is particularly significant for insurance for damage of spills caused by accidents or natural disasters that can be expensive to clean up and require specialised expertise. Management systems that promote environmental and social responsibility, including, for example, procurement practices could also have clear environmental benefits. For example, the financial services sector is among the highest users of paper and the practice of employing post-consumer recycled copy paper as opposed to virgin copy paper can conserve large amounts of raw materials (wood) every year, and generate less solid waste, less wastewater pollution and less GHG emissions.

Clearly there is also an important market in the GCC for services related to the energy sector and for environmental services. Environmental services are one part of the environment industry and are often considered in tandem with environmental goods. The industry is described as follows:

*The environmental goods and services industry consists of activities which produce goods and services to measure, prevent, limit, minimise or correct environmental damage to water, air, and soil, as well as problems related to waste, noise and ecosystems. This includes cleaner technologies, products and services that reduced environmental risk and minimize pollution and resource use.*¹¹⁴

Environmental services includes a number of general areas of relevance to this SIA, including water treatment services, solid waste management, hazardous waste management, consulting and engineering, remediation and industrial services, and analytical services. The GATS classification of environmental services (see Table 21) focuses on pollution control and waste management (sewage, refuse disposal, sanitation and similar services and “other”).¹¹⁵ The Central Product Classification (CPC) are somewhat broader, in keeping with current trends

¹¹³ OECD. 1999. Future Liberalisation of Trade in Environmental Goods and Services: Ensuring Environmental Protection as well as Economic Benefits. Paris. COM/TD/ENV(98)37/FINAL.

¹¹⁴ OECD/Eurostat. 1999. The Environmental Goods and Services Industry, Manual for Data Collection and Analysis.

¹¹⁵ WTO. Services Sectoral Classification List, Sector (A-D) in MTN.GNS/W/120, 10 July 1991.

away from traditional “end-of-pipe” solutions towards services related to the prevention, control and monitoring of environmental problems.

Table 21: CPC and GATS categories of environmental services	
CPC Division 94: Sewage and Refuse Disposal, Sanitation and Other Environmental Protection Services	GATS sectoral classification 6: Environmental Services
9401 Sewage Services 9402 Refuse disposal services 9403 Sanitation and similar services 9404 Cleaning services of exhaust gases 9405 Noise abatement services 9406 Nature and landscape protection services 9409 Other environmental protection services	A. Sewage Services B. Refuse Disposal Service C. Sanitation and similar services D. Other

Source: OECD 1999.

As the market for international trade in environmental services has grown, the focus on barriers to such trade has sharpened, in particularly with respect to limitations on commercial presence (Mode 3) and the employment of nationals of a company’s home country (Mode 4). In the GCC governmental services, which are not supplied on a commercial or competitive basis are not subject to the GATS. The extent to which they will be included depends on the extent of market access and national treatment granted to government procurement.

For the GCC in particular, the environmental benefits of liberalisation of environmental services could contribute to addressing a number of environmental priorities. Particularly relevant are the prospects of attracting expertise to contribute to the provision of clean water, waste collection, recycling of effluent water for industrial use, use of waste recycling to create alternate sources of energy, opportunities for environmental management, education and training and skill transfer, and the development of innovative infrastructure. It could also lead to the availability of a larger choice of environmental technologies.¹¹⁶ The potential opportunities associated with this sector make it worthy of further detailed examination.

Box 7: Examples of relevant environmental services

Water and wastewater treatment: Control systems, aerobic and anaerobic systems, trenchless boring and facilities management.

Marine pollution control: emergency response services.

Remediation of contaminated land (includes the identification, assessment and remediation of contaminated sites): sampling/analysis.

Waste management: collection and disposal services.

Energy management. Energy audits

Noise and vibration control. Vibration measurement systems and noise and vibration measurement.

Environmental monitoring and instrumentation. Installation and maintenance.

Source: Adapted from OECD 1999 (P. ten Brink and R. Haines 1997).

¹¹⁶ OECD. 2000. Environmental Services: The “Win-Win” Role of Trade Liberalisation in Promoting Environmental Protection and Economic Development. Paris.

VIII. Social Impact assessment of the Free Trade Agreement

VIII.A INTRODUCTION

Chapter VI on the economic impact assessment pointed out that an FTA would not have a substantial impact on the economies of the EU. On the other hand, most GCC countries could benefit substantially from this agreement. At the same time chapter V.F.4 on the 'Labour market and the increasing problem of unemployment' already clearly pointed out that the economies of the GCC have a daunting task of creating large numbers new jobs for their own citizens in the following years, not only for the male population but also for the better educated female population. Therefore this social impact assessment of the FTA will concentrate on the GCC and in particular the job market in the GCC.

Prior to the impact of the FTA on the labour market, two peculiar features for the GCC labour market are looked at more into detail, i.e. the extraordinary presence of expatriates on the GCC labour markets (chapter VIII.B) and the limited presences of females in these labour markets (chapter VIII.C). This is followed by chapter VIII.D which extrapolates the results of the economic assessment to the labour market. The potential impact of the FTA on the labour market through the trade in services is also analysed in chapter VIII.E. Finally, the social impact assessment is concluded with a chapter that describes the impact of the FTA on the share of expatriates in the total work force (chapter VIII.F) and on gender related issues (chapter VIII.G). This chapter is concluded by a short discussion on the potential impacts on health and welfare issues (chapter VIII.H).

VIII.B EXPATRIATES, WHAT DO THEY DO? WHERE DO THEY COME FROM?

Statistical information on expatriates is not readily available in the GCC and therefore this part relies heavily on non- governmental sources¹¹⁷. The typical migrant worker in the Gulf is healthy and young (18-35 years old). He/she comes from the Indian subcontinent, the Far East or Africa. Origin countries are developing or underdeveloped, characterized by a low GNP and high rate of unemployment. Many workers are originate from rural agricultural communities; many are also illiterate or semiliterate, and unskilled or semiskilled. Except for housemaids and nannies, nurses, and secretaries, the workforce is almost entirely male. For most migrant workers, employment in the Gulf is a means to a wealth unobtainable back home. They are a source of vital foreign currency that helps to strengthen the economies of their home countries.

VIII.B.1 Influx of migrants into the labour market in the GCC¹¹⁸

It is worthwhile noting from the start that there exists many similarities among the six GCC countries, particularly with regard to labour and employment policies. Collectively, one may characterize the labour market in the GCC region as having gone through three major transitional stages.

The first, *the Major Influx*, occurred between the early 1970s and early 1980s when the flow of oil revenues provided the financial backing required building a modern infrastructure. The process of building it up on such a large scale required highly skilled manpower at first in

¹¹⁷ Source: Arabian Gulf: Country Profile 1997, <http://is7.pacific.net.hk/~amc/papers/AMY98GU.htm>

¹¹⁸ Maurice Girgis 2002.

order to design national strategic plans, coordinate these plans and put them into effect. A massive inflow of foreign workers ensued with each GCC country competing with the others to attract American, European, Arab and some Asian workers. Due to strong cultural, social, religious and linguistic similarities with Arab neighbouring countries, GCC states relied heavily on Arab workers, especially from Egypt, Yemen and Palestine.

The second, *the Asian Presence*, began a decade later and lasted until the mid 1990s. An atmosphere of austerity followed the sharp decline in oil prices and government spending in the mid-eighties, which forced public and private employers to cut costs, including labourers. This was reinforced by a fundamental shift in the demand for labour in that most of the required infrastructure projects had been completed and a new emphasis was placed on maintenance rather than on building new projects. Given Asian workers' lower wages, their skills and availability, *a substitution of less skilled Asian workers for Arab workers* started to take effect. Up till the end of this stage, nationals routinely picked top jobs in the expanding government sector.

The third, *The Open Unemployment of Nationals*, is going on at the present time. It occurred as the result of external shocks that affected the region such as the two Gulf wars, as well as internal disturbances including persistently weak oil prices, unprecedented financial constraints and depleted foreign assets. The public sector is no longer able to hire nationals due to financial exigencies and the private sector is reluctant to hire them since they often lack the basic skills.

VIII.B.2 Origin of expatriates

Data on foreign population classified by ethnic composition is scarce in the GCC, making it difficult to accurately trace developments in say Asian and Arab populations over time and across countries. In the absence of extraordinary developments such as the second Gulf War, ethnic composition normally changes quite slowly over time. Recent evidence from Kuwait and Saudi Arabia help shed some light on this issue. The profile of Arabs and Asians based on Kuwait and Saudi Arabia experiences, which together constitute 78,5% of the surface of the GCC region, does indicate that one can assume that the size of the foreign population in the GCC is split about 40-60 in favour of Asians.¹¹⁹ The Arabian group is dominated by workers from Egypt and to a lesser extent from Palestine and Sudan. The Asian group is constituted primarily of workers from India and Pakistan and, to a much lesser extent, from Iran. For more detailed information about numbers of Arabs per country and Asians per country we refer to annex XII.CC, Table 122.

VIII.B.3 Skills of expatriates¹²⁰

There are major distinctive features between Arabs and Asians skill distributions. From 1989 to 2000, Arabs dominated the upper echelons of skill categories- such as the technical, the managerial and the clerical - while Asians dominated services, agriculture and production-related jobs. They both split the 68 thousand mid-skill sales jobs about evenly. The strong skill distinction between the two groups can be seen further from the fact that in spite of the large decline in the number of Arab workers in 2000 and the simultaneous substantial increase in the number of Asians, Arabs still held the majority of high skill occupations while Asians held the bottom categories. Jobs in sales seem to have swung toward Arabs in 2000. For further details about occupations by Arabian and Asian expatriates in Kuwait 2000, we refer to annex XII.CC, Table 123. The majority of Europeans, and North and South Americans are employed in technical, scientific and managerial jobs.

¹¹⁹ Maurice Girgis 2002.

¹²⁰ Public Authority for Civil Information, Population and Labour Force, Kuwait, 2000

VIII.B.4 Employment sectors of expatriates

A large number of Asians are employed in either menial jobs that are not in demand by nationals; e.g. household services, sales and factory workers, or in jobs that are difficult to be done by nationals due to their lack of experience in certain fields; e.g. machine operators, maintenance and repair of electric and electronic machinery, etc. A large percentage of Arab workers hold jobs that can readily be performed by nationals, e.g. teachers at all levels, clerks, cashiers, engineers, lawyers, translators, sales managers, executives, accountants, physicians, researchers, economists, etc.

To the extent that Arab workers, typically, earn higher wages than non-Arab expatriates, the financial burdens of future reforms are likely to be disproportionately onerous to Arabs compared to non-Arabs, because nationals would tend to be more substitutable by Arabs than by Asians.¹²¹ Overall, about 50-60% of migrant workers are domestics (cooks, servants, housemaids, nannies, gardeners) or labourers (carpenters, masons, plumbers, fitters, electricians). 30% of migrants work as salesmen, secretaries, clerks, peons and office boys, and about 7% are technical staff. Managers, business executives, pilots, etc. form merely about 1% of the total workforce and are often Western professionals.¹²²

VIII.B.5 Wages of expatriates¹²³

There exists a huge disparity in wages (100 - 250%) between migrant and local workers, including those doing the same job. Nevertheless they still earn more in the GCC than in their home countries. Due to the decreased economic fortunes of the GCC, there are reports that migrant workers, especially labourers, suffer delays in salary payments. Average monthly wages for domestic workers and labourers are as low as US\$120 (with accommodation) but generally range from US\$150 to 300 per month. Administrative, service and office staff earn between US\$300-700 per month. Technical staff earn between US\$500-800 per month, while managers earn between US\$1,000-3,000 per month. Experts can earn as much as US\$4,000 per month. The number of professional women is too small (About 80% of migrant workers are men.) as to determine whether there is equality in wages. The only known exception where equal pay exists is in the nursing profession.

VIII.B.6 Access to utilities

Access to utilities, such as water and power supply, is not equal for nationals and expatriates. The emirate of Abu Dhabi has increased electricity and water charges by as much as 80 per cent for expatriates from 1 January 2000 for electricity, to 20 fils (three cents) per kilowatt. Nationals pay five fils (less than one cent) per kilowatt. The changes mean expatriates will for the first time pay more for utilities than their actual cost, currently running at 2.8 cents for a kilowatt of electricity and 5.23 dollars for 1,000 gallons of water. This phenomenon is also known in Saudi Arabia, where since 2000 expatriates pay more for utilities than their actual cost.¹²⁴

VIII.B.7 Human rights of expatriates in the GCC

An article of Human Rights Watch¹²⁵ reports on the need of legal protection of migrants in the GCC countries. According to this article, migrants-including large numbers of women

¹²¹ Maurice Girgis 2002.

¹²² Source: Arabian Gulf: Country Profile 1997, <http://is7.pacific.net.hk/~amc/papers/AMY98GU.htm>

¹²³ Source: Arabian Gulf: Country Profile 1997, <http://is7.pacific.net.hk/~amc/papers/AMY98GU.htm>

¹²⁴ Source : Middle East, May 200, GCC economies: time for revival,

<http://www.africasia.com/themiddleeast/may00/meca0501.htm>

¹²⁵ Human Rights Watch 2003.

employed as domestic servants- face intimidation and violence at the hands of employers, supervisors, sponsors and security forces. Intimidated by violence or the threat of violence, workers are often afraid to demand unpaid wages, protest for the poor conditions in which they live and work, or seek legal recourse for abuses. Hanny Megally, executive director of the Middle East and North Africa division of Human Rights Watch said that in the Gulf States, documented migrants can easily slip into illegal status through no fault of their own. “Unscrupulous employers and sponsors deliberately let residence permits expire, or literally sell workers to other employers, thereby invalidating their work permits. Desperate migrants also flee terrible working conditions and end up outside the law.” Sponsors and employers continue to confiscate migrants’ documents, including passports and residence permits. This severely restricts freedom of movement and limits migrants’ ability to report mistreatment to authorities without risking arrest, imprisonment, and steep fines. Migrants in undocumented or “irregular” situations are among the most vulnerable. Recruiters in their home countries traffic migrants en masse, promising them jobs and salaries that never materialize. These workers have often paid recruiters significant sums to secure what they believed were legally enforceable contracts and work visas. Deeply in debt and with no other options once they arrive, they have little choice but to work for local sponsors or employers under highly exploitative conditions that effectively amount to forced labour or servitude. In all the Gulf States, laws and regulations either prohibit or restrict migrants’ participation in independent trade union activities.¹²⁶

Problems experienced by migrant workers in terms of perceived difficulties can be categorized into the following major areas: overwork (50%), emotional and physical abuse (30%), unpaid wages (10%), and contract disputes (5-10%). Complaints about poor or inadequate working conditions are infrequent.¹²⁷

Restrictions and permit fees give rise to evasion through illegal recruitment and forged documents (a thriving industry) as well as informal trading of permits. Firms employing workers on unofficial contracts can pay lower wages and fewer benefits than stipulated by law, and can impose harsh working conditions on illegal workers who are powerless to complain for fear of deportation. Most evidence suggests that employers retain the premium saved by avoiding levy payments and compensate illegal workers below their legal counterparts; there is some countervailing evidence, however, that savings are passed on to the illegal workers, whose wages are effectively higher than their legal counterparts.¹²⁸

VIII.B.8 Capital remittance¹²⁹

Expatriate workers in the six-nation GCC siphoned out nearly \$ 107 000 million over the period 1997-2001, with Saudi Arabia emerging as the main origin of this capital flight, accounting for nearly two-thirds of the transfers, according to independent estimates. (see annex XII.DD, Table 124) Single migrant workers remit to their home country about 50-90% of their wages while married workers remit about 25-70%. The remittances have allied with persistent volatility in oil prices and high defence spending to maintain instability in the group's balance of payments despite an increase in non-oil exports and slight change in imports. Bankers said Indians and Pakistanis were the largest remitters, accounting for nearly a third of the total annual transfers. Their transfers were made through banks, exchange

¹²⁶ Human Rights Watch 2003.

¹²⁷ Arabian Gulf: Country Profile 1997, <http://is7.pacific.net.hk/~amc/papers/AMY98GU.htm>

¹²⁸ Wong, 1997

¹²⁹ Source: Gulf News Online, <http://www.gasandoil.com/goc/news/ntm22878.htm>

houses and hawala, an alternative remittance system typical for the Arab region, they said. Officials have repeatedly underscored the problem of heavy financial transfers by expatriates and their negative impact on the economic and fiscal system.

VIII.B.9 Education levels of expatriates

Half of the population of expatriates have a low education degree. In Kuwait for example, 55% of the expatriates have a primary or lower education level in 1996.¹³⁰ Having so many foreigners at the lower end of the skill ladder serves the needs of the GCC economies in that they take up jobs that are either “unacceptable” to GCC nationals or that, for certain skills, the supply of nationals falls short of the demand, or both. At the highest class of jobs, in areas that require tertiary education, expatriates are generally better educated than nationals. In 1995, 1.2 million expatriates, or 15 per cent of the expatriates in the GCC, are holders of diplomas, university degrees or higher qualifications compared to 650,000 nationals (about 4 per cent of the GCC nationals). Among the expatriates, in absolute terms, males outnumbered females significantly in all education levels. However, in percentage terms, female expatriates are better educated than male expatriates: 22 per cent of female expatriates are holders of degrees or diplomas compared to 13 per cent for male expatriates.

VIII.B.10 Labour productivity

The Asian/Arabs replacement phenomenon was supported by the import substitution strategy that was biased toward low value added activities and also by factor price distortions, which artificially lowered Asian wages in particular. More specifically, employers tended to substitute high skilled Arab workers by low skilled Asians, which culminated in increasing the number of expatriates disproportionately. Available evidence shows that this strategy led to a 50 percent reduction in labour productivity. This trend has accentuated skill distinctions that existed between Arab and Asian workers in general. Empirically, Arabs typically constitute a higher percentage of the top three high skill categories, in a 7-way classification as used in Table 123 in annex XII.CC, while Asians typically constitute a higher percentage of the bottom three low skill categories.

VIII.C WOMEN, WHAT DO THEY DO? WHERE DO THEY WORK?

VIII.C.1 Female population in the GCC

The total population in the GCC in 2000 is estimated by the UNDP in the Human Development Report 2003, to be 28,5 million (see annex XII.G, Table 50). Another source (Girgis, 2002) reports a population of 30,4 million¹³¹. reliable statistical data on female population and employment by females in the GCC is even more difficult to obtain . Statistics are not readily available. However, based on the shortcomings on availability of data, we could make an estimation of female population and labour force in the different GCC countries, based on data from Kuwait (1993)¹³² (see Table 22).

	Population of Nationals	Population of Expatriates	Total Population
% Females in...	50,4%	33,2%	41%
	National labour force	Expatriates labour force	Total labour force

¹³⁰ Maurice Girgis 1999.

¹³¹ Maurice Girgis, 2002

¹³² Muhammed Ali al-Ramadhan 1994

% Females in...	30,8%	21,4%	24%
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For the data of Kuwait, we see that the population ratio women/men is 41/59. This figure is not what we would expect, since generally spoken, the population ratio women/men is estimated to be 51/49. But taking a closer look at the data, and in particular to the huge number of expatriates in the Gulf region, we see that the population ratio national women/national men, is 50,4/49,6. The distortion of the overall ratio is to the result of the low percentage of female expatriates in the GCC. This low percentage can be explained by the fact that most foreigners are Asians (see VIII.B.2), which do not bring their wives and families to the GCC.¹³³ The national labour force consists of 69,2% men and 30,8% women. The expatriate labour force is more dominated by men (78,6% men/21,4% women).

Table 23: Employment of females, Kuwait, 1993

	National females	Expatriates females	All females
Employment %	13,9%	43,9%	27%

However, the employment level of expatriate women is much higher (43,9%) than the employment level of the national female population (13,9%). (See Table 23)

Numbers on the division of females and males in the overall population and the labour force, both for national citizens and expatriates cannot be found. Nevertheless in annex XII.FF an estimation can be found for the countries within the GCC. These estimates tell us that female citizens participation in the labour force is exceptionally low, at 12,12 % Instead 42,86 % of female expatriates are active in the labour force. (See Table 24)

Table 24: Division of females / males and nationals / expatriates in the population and the labour force in the GCC in 2000

	Nationals			Expatriates			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Population	9,7	9,9	19,5	7,1	3,5	10,6	16,8	13,4	30,1
Labour force	2,8	1,2	4,0	5,7	1,5	7,2	8,3	2,7	11,2
% of that population group active	28.87%	12.12%	20.51%	80.28%	42.86%	67.92%	49.40%	20.15%	37.21%

Note: see annex XII.FF for sources

VIII.C.2 Female expatriates

As said in chapter VIII.B.9 female expatriates are relatively better educated than male expatriates. In 1995, 23 per cent of all female expatriates held a diploma or degree and work as nurses, teachers, etc.¹³⁴ Female Asians dominated employment of females in general in the

¹³³ Maurice Girgis, 2002 "Because of the presence of Arab families with high dependency ratios, Arab population outweighed Asians while Asian workers outweighed Arabs. The picture that emerges, assuming that Kuwait in 2000 is a representative of the Gulf region, is that Asian migrant workers are hired in all occupations but with a distinct bias toward low skill categories. The opposite is true for Arabs. In so far as total employment is concerned, they outnumber Arabs even if the Arab population exceeds theirs. Clearly this implies that Asians tend to migrate without their families as compared to Arabs."

¹³⁴ Edwards Economic Research Inc., May 1995 issue of *Gulf Marketing Review*, in the "Databank" series <http://www.econresearch.com/Datapak/Demographic/gm9505.html>

period 1989-2000. For instance, in Kuwait, they represented 62.9 percent of all jobs held by females compared to 26.5 percent for Kuwaiti women and 9.5 percent for expatriate Arab women. Note that 94.5 percent of Kuwaiti women hold government jobs, which could actually indicate a serious problem of hidden unemployment.¹³⁵

Abuse of migrant women occurs, but due to recent international media exposure, this is becoming less widespread. In the case of Qatar, the government has recently shown increasing willingness to investigate, arrest, and punish offenders, whether citizens or foreigners. However, citizens usually receive lighter punishment. In any event, many workers suffering abuse do not press charges for fear of losing their jobs.¹³⁶

VIII.C.3 Education and employment of females in the GCC

According to the World Bank there is a mismatch between women's expectations and their achievements. Most Middle Eastern countries have hugely expanded their investments in women's education, producing a remarkable improvement in the opportunities of women in the region. But the involvement of women in the economy has not increased in step with education. Part of the exclusion reflects conservative attitudes; many men in the region still fear losing their jobs if women join the workforce in greater numbers. And in many countries, men are seen as the only natural breadwinners - a role often reinforced by legislation or tax rules. But low female participation is also related to women's established preference for public-sector jobs, such as medicine, teaching or the civil service - a sector of the economy that is under pressure all over the region.¹³⁷

The female labour force has an educational profile that is much higher than those of male workers, as shown in XII.EE, Table 125. In fact, in some cases the level is twice that of males, and the increase in their levels of education over time is more pronounced than in males. (Only in Saudi Arabia, the female workforce is less educated than Saudi males.) This clearly indicates that the female labour force is over-educated and under-employed.

NOTE: Islamic law and the status of woman

One of the least understood aspects of Islam is the status of Muslim women and their role in society. It is widely believed in the West that Muslim women are oppressed, repressed, suppressed and depressed.

1. It is assumed that they have no rights and are treated as second-class citizens in Islam. This is further fuelled by sensational stories appearing in the media about honour killings, female circumcision, merciless flogging and the alleged treatment of women by the Taliban in Afghanistan.
2. The Islamic law (Shari'ah) is based on the divine source, the Koran and Hadith, the traditions of Prophet Mohammed. It is in the light of Shari'ah that we will examine the status of women and not dwell on the non-Islamic practices in some Muslim countries. Shari'ah, like any other body of law, needs to be understood in a comprehensive and contextual way rather than picking on bits and pieces.

¹³⁵ Maurice Girgis 2002.

¹³⁶ Arabian Gulf: Country Profile 1997, <http://is7.pacific.net.hk/~amc/papers/AMY98GU.htm>

¹³⁷ Sexism 'costs Arab economies dear', BBC News, September 2003, <http://news.bbc.co.uk/1/hi/business/3116136.stm>

3. The most important aspect to consider is that Islam accepts both men and women as equal in their creation and in their relationship to Allah¹³⁸. The Koran clearly defines the origin of men and women as coming from a single soul, thereby rejecting any claims that men are greater or better than women or vice versa.
4. In the history of Islam, the question of whether a woman has a soul or not, was never entertained as she was always considered a person under Shari'ah with the same human rights as men¹³⁹.

In the economic realm, Shari'ah treats woman as a completely independent entity. She can make any contract, bequest in her own name and is entitled to inherit as a mother, wife, daughter and sister. She can carry out trade or business independently and is not liable for her husband's debt. She is not obliged to spend a penny on the family, and her husband has no rights on her money whether earned or inherited. If she chooses, out of her free will, to contribute towards the family or help her husband, this is considered charity on her part. The husband, on the other hand, is obliged to provide for her and the family. Muslim women also maintain their maiden name after marriage, further stressing their independent personality.

VIII.D WHAT CAN BE LEARNED OF THE ECONOMIC MODELLING EXERCISE FOR THE SOCIAL IMPACT ASSESSMENT?

The economic impact assessment in chapter VI concluded that there is probably more scope for GCC exports growth to the EU under an FTA than expected, as trade liberalisation reveals some competitive sectors in the GCC non-oil economy. Not only the all important oil sector would benefit from the FTA (mainly through exchange rate effects) but also important GCC labour-intensive sectors such as textile sector. In the other higher skilled sectors the impacts are not all positive, even though less pronounced than some could have feared knowing that the EU is mostly highly competitive in many of these high skilled sectors.

In order to look at the impacts in more detail one needs to compare the data from the economic modelling exercise with any relevant data on employment in these sectors. In the following chapter VIII.D.1 the methodology to do so is discussed briefly.

VIII.D.1 How can the results of the economic modelling be linked to social impacts?

The economic modelling exercise in Chapter VI involved only goods. These are typically classified by way of the 'Harmonized System'. For the sectors in which these goods are produced, some limited amount of sector activity data is available in the '*Statistical abstract of the ESCWA region*' by the UN Economic and Social Commission for Western Asia (ESCWA). Data from the modelling exercise were linked to the activity data on the industrial sectors from ESCWA. For a detailed description on the applied method for linking these two data sets, see annex XII.U. This resulted in activity and economic impact data sets for the following sectors:

1. Manufacture of Food, Beverages and Tobacco
2. Textile, Wearing Apparel and Leather Industries
3. Manufacture of Wood and Wooden Products, Including Furniture

¹³⁸ . "O humankind, be careful of your duty to your Lord, Who created you from a single soul and from it created its make ... Be careful of your duty to Allah in Whom you claim your mutual rights" (K 4:1).

¹³⁹ "And for women are rights over men similar to those of men over women" (K 2:226).

4. Manufacture of Paper and Paper Products, Printing and Publishing
5. Manufacture of Chemicals and Chemical, Petroleum, Coal, Rubber and Plastic Products
6. Manufacture of Non-Metallic Mineral Products, except Products of Petroleum and Coal
7. Basic Metal Industries
8. Manufacture of Fabricated Metal Products, Machinery and Equipment
9. Other Manufacturing Industries

The activity data sets consist of:

1. the number of people employed
2. the wages paid (in local currency and US \$)
3. the number of establishments in that sector

The economic impact data sets consist of:

1. to what respect the GCC Customs Union would increase or decrease imports/exports in these sectors with respect to the present situation.
2. to what respect the EU-GCC Free Trade Agreement would increase or decrease imports/exports in these sectors with respect to the present situation.
3. to what respect the EU-GCC Free Trade Agreement would increase or decrease imports/exports in these sectors with respect to GCC Customs Union.

Note that it is only this last economic impact indicator that is crucial if one wants to interpret the impact of the FTA on certain sectors because the GCC Customs Union has already come into effect and it will have an impact in the medium term. The FTA cannot change that fact; therefore the impact of the FTA in comparison to what happens after the CU is introduced is of importance for an SIA of the FTA.

For the data sets per country see annex XII.V, for the data sets per manufacturing sector see annex XII.X. *Note that the activity data set for the 'Manufacture of Chemicals and Chemical, Petroleum, Coal, Rubber and Plastic' sector in Table 108 does not include the all-dominant oil sector whereas the aggregated economic impact data set in Table 109 do include the oil sector. Therefore one has to be careful when comparing both tables (see Annex XII.X).*

VIII.D.2 Impact of the FTA on the employment in the Manufacturing industries

Five manufacturing industries represent over 84% of all employees in the nine manufacturing sectors, with a high of 87% in Saudi Arabia and a low of 76% in Qatar (see shaded areas in Table 25). The rest of this chapter will therefore focus on these 5 sectors that are of considerable importance to the labour market in the GCC countries.

	Qatar	Oman	Kuwait	Saudi Ar.	UAE	GCC exclud. Bahrain
31 - Manufacture of Food, Beverages and Tobacco	8.9%	20.8%	17.1%	14.3%	11.1%	13.8%
32 - Textile, Wearing Apparel and Leather Industries	35.6%	17.4%	18.0%	6.2%	18.1%	13.0%
33 - Manufacture of Wood and Wood Products.	1.4%	3.0%	6.3%	4.7%	1.9%	3.9%

34 - Manufacture of Paper and Paper Products, Printing and Publishing	9.6%	7.1%	6.6%	5.3%	5.9%	6.0%
35 - Manufacture of Chemicals and Chemical, Petroleum, Coal, Rubber and Plastic Products	11.6%	9.6%	15.8%	23.6%	13.3%	18.4%
36 - Manufacture of Non-Metallic Mineral Products, except Products of Petroleum and Coal	9.3%	17.5%	11.3%	15.9%	15.7%	15.0%
37 - Basic Metal Industries	5.3%	2.4%	1.3%	1.0%	3.3%	1.9%
38 - Manufacture of Fabricated Metal Products, Machinery and Equipment	10.9%	15.8%	21.8%	26.8%	24.6%	24.2%
39 - Other Manufacturing Industries	7.4%	6.3%	1.7%	2.2%	6.1%	3.7%

The comparison of wages in these sector draws to the conclusion that some of them have clearly the characteristic of a high wage, high skilled sector (see Table 26). This is certainly the case regarding the Manufacture of Chemicals with wages up to 4 times the average over all manufacturing industries (see also discussion in chapter IX.B.6.2). Also in the Manufacture of Paper and Paper Products, Printing and Publishing high wages are paid. The Basic Metal Industries pays medium to high wages and can therefore also be seen as a sector requiring skilled to even high skilled labour. All other sectors are rather low paying sectors whereby the Textile and Manufacture of Wood and Wood Products sectors are by far the lowest paying sectors, with wages well below average wage in all countries for which data is available. This clearly indicates that they employ low skilled employees and are thus probably dominated by expatriates.

Table 26: Level of wages paid in the different manufacturing sectors, 2000

	Qatar		Oman		Kuwait	
	% of average wage in the manufact. Sectors	Aver. Wage US \$	% of average wage in the manufact. Sectors	Aver. Wage US \$	% of average wage in the manufact. Sectors	Aver. Wage US \$
31 - Manufacture of Food, Beverages and Tobacco	57%	4286	107%	5933	72%	6370
32 - Textile, Wearing Apparel and Leather Industries	33%	2511	42%	2359	42%	3716
33 - Manufacture of Wood and Wood Products, Including Furniture	50%	3772	90%	4988	53%	4667
34 - Manufacture of Paper and Paper Products, Printing and Publishing	110%	8325	110%	6095	129%	11365
35 - Manufacture of Chemicals and Chemical, Petroleum, Coal, Rubber and Plastic Products	389%	29467	170%	9450	274%	24097
36 - Manufacture of Non-Metallic Mineral Products, except Products of Petroleum and Coal	63%	4767	103%	5721	71%	6282
37 - Basic Metal Industries	195%	14758	172%	9560	76%	6654
38 - Manufacture of Fabricated Metal Products, Machinery and Equipment	56%	4211	106%	5885	65%	5749
39 - Other Manufacturing Industries	59%	4444	76%	4256	83%	7256
Total	100%	7584	100%	5566	100%	8792

Sectors with low skilled employees are sectors where it will be difficult to increase the number of local citizens employed because GCC citizens simply don't accept the low wages paid to low skilled expatriates. The sectors that require medium skilled to high skilled labour

are the sectors, where jobs creation is possible for the GCC citizens. Out of the 5 main sectors described above, only the Chemical sector is of sufficient size to be a potential engine for job creation. The other sector that requires high skilled labour, i.e. the Basis Metal industries, only employs 1,9 % of the labour force employed in the overall manufacturing industries.

VIII.D.3 Impacts on sectors that require low skills

In Table 27 below, the indicators on the impact of the CU and FTA on import, export and the overall trade balance are represented for the whole GCC.

The sector with the largest positive trade balance is the Textile sector. The FTA increases exports dramatically in this sector by 4,6 per cent, whereas imports decrease by 3,59 per cent. This results in an overall improvement of the trade balance for textiles by 5,5 per cent. GCC exporters can take advantage of the margins of preference they get through the FTA compared to other textile producers outside of the EU-GCC FTA area. On a territorial basis, three countries increase their trade in the Textile sector, i.e. Qatar + 25 per cent, Bahrain + 22 per cent and Oman + 18 per cent (see annex XII.W, Table 103). As a consequence, it can be expected that employment in this sector will increase in those territories. Definitely for Qatar this could be of importance due to the whopping 35,6 per cent of the work force in the manufacturing industries that is employed in this sector and the expected increase in trade surplus of 25 per cent. But due to the low skilled employment employed in the textile sector the potential benefits for the employment of GCC local citizens in the textile industry could be rather limited. On the other hand, the influx of low skilled expatriates will increase in these sectors. The textile industry is a sector renowned for abuses such as sweatshops. Therefore local governments should set up appropriate social and Health & Safety policies and regulations to prevent these abuses.

Furthermore consumer pressure groups within high-income markets such as the EU are increasing their pressure to guarantee that clothing imports into the EU are produced in a socially acceptable manner.

The 'Food, Beverages and Tobacco' manufacturing sees a limited deterioration of the trade balance -1,12 % spread out evenly over all GCC countries. This seems understandable due to the natural comparative advantage that the EU has in these sectors closely related to agriculture. Negative impact on employment in these sectors should therefore be minimal certainly if one notes that exports only decrease marginally with - 0,37%.

In the remaining low skilled sectors, i.e. 'Fabricated Metal Products, Machinery and Equipment' and 'Non-Metallic Mineral Products' the FTA could actually lead also to a deterioration of the trade balance of respectively -3,69 % and -4,36%. Thereby also putting pressure on labour demand from these sectors. In both cases imports increase and exports decrease. Therefore it cannot be expected that the FTA will increase total employment in these sectors. If the GCC countries would like to increase employment of its own citizens within these sector, they would have to resort to substituting expatriates for locals, which could be difficult due to the low wages paid in these sectors, although they are still substantially higher than in the textile sector. As a consequence, the shifting to import of these products, will create jobs by the increase in services, related to import of products. Because of the requirement for mid skilled workers for these services, nationals could fill in these jobs.

VIII.D.4 Impacts on sectors that require high skills

For the overall Chemical, Petroleum, Mining and Quarrying Mineral Products sector a positive increase of the trade balance (+ 1,38 %) is predicted with the FTA upon the CU. This is the aggregated result of the Mineral Products, Chemicals and Rubber & Plastics sectors. It is predominantly the Mineral products sector that increases its exports. The other two sectors actually see their exports decrease with the introduction of the FTA (see annex XII.T, Table 83). The mineral products sector comprises crude oil and natural gas but also the petroleum and several important petrochemicals. These sectors clearly remain by far the primary sectors

that could absorb high skilled local citizens due to increased labour demand following the introduction of an FTA. In these sectors an inflow of female nationals is possible, because of their higher education level (see also VIII.C.3). Such an inflow will have an impact on the labour force balance between national/expatriates. In chapter IX.B the impacts on the petrochemical sector are discussed in detail.

From the above one could conclude that it is improbable that the liberalisation of the trade in goods under the FTA on itself will cause an increase in labour demand that is sufficient enough to absorb the high amount of newcomers on the market in the coming years.

Therefore it is crucial to consider the implications of the FTA on the labour market of those other sectors that constitute the largest net employers of locals in the GCC, i.e. the services sectors (see chapter VIII.E).

Table 27: Linking data on employment with the results of the economic model per manufacturing industry in the GCC, 2000

		Manufact. of Food, Beverages and Tobacco	Textile, Wearing Apparel and Leather Industries	Manufact. of Wood and Wood Products	Manufact. of Paper and Paper Products, Printing and Publishing	Manufact. of Chemicals and Chemical, Petroleum, etc. Products+ Mining and Quarrying	Manufact. of Non-Metallic Mineral Products,	Basic Metal Industries	Manufact. of Fabricated Metal Products ,Machinery &Equipment	Other Manufacturing Industries	Total manufacturing industries
Exports, million US \$		653.31	1,119.56	9.20	227.32	114,864.99	235.96	2,475.40	1,308.09	182.03	120,857.75
% Change	GCC CU	6.78%	9.12%	8.69%	9.24%	1.76%	9.66%	9.76%	7.16%	9.12%	2.12%
	EU-GCC FTA	6.38%	14.14%	10.87%	7.57%	3.11%	8.05%	7.89%	5.82%	9.34%	3.39%
	FTA on top of the CU	-0.37%	4.60%	2.00%	-1.53%	1.33%	-1.47%	-1.70%	-1.25%	0.20%	1.24%
Imports, million US \$		7,698.08	6,202.34	754.16	754.16	10,417.12	1,261.93	5,050.21	28,482.44	4,254.03	64,874.47
% Change	GCC CU	8.52%	4.36%	2.06%	1.67%	2.38%	6.55%	2.54%	1.67%	6.32%	3.33%
	EU-GCC FTA	9.60%	0.62%	-1.27%	5.05%	3.21%	10.00%	3.01%	5.18%	0.43%	4.49%
	FTA on top of the CU	1.00%	-3.59%	-3.26%	3.33%	0.81%	3.24%	0.46%	3.45%	-5.54%	1.12%
Trade Balance, million US \$		-7,044.77	-5,082.78	-744.96	-526.84	104,447.87	-1,025.96	-2,574.81	-27,174.35	-4,072.00	55,983.27
% Change	GCC CU	-8.68%	-3.32%	-1.97%	1.59%	1.69%	-5.84%	4.39%	-1.41%	-6.19%	0.72%
	EU-GCC FTA	-9.90%	2.36%	1.42%	-3.97%	3.10%	-10.45%	1.67%	-5.15%	-0.03%	2.11%
	FTA on top of the CU	-1.12%	5.50%	3.33%	-5.65%	1.38%	-4.36%	-2.84%	-3.69%	5.80%	1.38%

Source: adapted from the results of the economic modelling exercise, see chapter VI.

VIII.E IMPACT OF SERVICES LIBERALISATION UNDER THE FTA ON THE LABOUR MARKET

In the previous chapter we discussed the impact of the FTA on the labour market of manufacturing industries. Given the importance of services to the economies in the GCC regions, it is likely that services are important in the further liberalisation negotiations between the EU and the GCC. The service sector is a relatively important sector in the GCC, even though less developed than in the EU (see also V.I.2). Data on employment in the service sector are scarce. When we take the available data for UAE as an example for the GCC (see annex XII.J, Table 56), we observe that services accounts for 60% of total labour force employment. Government services accounts for one fifth of the total employment in the service sector. Growth in this sub-sector is not expected to be a result of the FTA and is unlikely to happen because the past open policy of hiring all nationals by government regardless of needs, qualifications and the fiscal burdens of wages on government budgets is no longer sustainable¹⁴⁰. Positive impacts of the EU-GCC FTA could occur in business services, communication services, construction and related engineering services, distribution services, environmental services, financial services, and transport services (see also V.I.4). These are all sectors where medium to high skilled manpower is required. Given the fact that medium skilled occupations are the most suitable jobs for nationals, high employment opportunities for nationals are identified in these sectors. Because of these opportunities, the social impact of liberalisation of trade in services will probably be greater to the local citizens than will be the liberalisation of trade in goods.

Because nationals used to work at high wages in governmental institutions, the shift to employment in the service sector will take time. And the success of the employment of nationals in these new created jobs will highly depend on long term government policies (reforms in the labour market, economic policies, education system, investment promotion and private sector development, among others)¹⁴¹ and on the pace and success of removing the existing barriers for not hiring sufficient numbers of nationals in the private sector.¹⁴²

Some reasons for the private sector to employ high number of expatriates and very few locals are:

- ✓ Nationals do not all possess the skills to work in the private sector.
- ✓ Nationals' reservation wages are significantly higher than their foreign counterparts; i.e. their wage expectations are too high.
- ✓ Nationals' productivity levels are low.
- ✓ Expatriates command low wages, partly because of their low share in the national dividends; i.e. in terms of subsidized public utilities, health care, etc.
- ✓ Lower pay scale and longer working hours in the private compared to the public sector.
- ✓ Typically, nationals are paid higher wages than expatriates for the same job.
- ✓ In contrast to the public sector, the private sector offers limited fringe benefits.

¹⁴⁰ Maurice Girgis, 2002

¹⁴¹ Maurice Girgis, 2002

¹⁴² Maurice Girgis, 1999

- ✓ The ease by which private sector employers can terminate employment of expatriates compared with nationals.

In response to rapidly growing foreign populations, many countries introduced mechanisms to stem the inflow of workers and encourage the employment of nationals; measures typically included permit requirements for foreign workers as well as incentives to promote job creation targeted specifically to nationals. Some of these policies actually contributed to the proliferation of foreign workers, however. In Kuwait, for example, the decision to create public sector jobs for nationals led to high wage expectations among Kuwaitis, due to relatively high wages and generous benefits in the public sector, and insufficient labour supply to the private sector. On the demand side, employers must finance the military service obligations of Kuwaiti males, rendering foreign workers relatively less expensive. These price and quantity controls effectively distorted the labour market in Kuwait such that private sector labour demand had to be met by an ever-present supply of cheap foreign workers. In Bahrain, all foreign workers in the public sector other than those judged to be indispensable were replaced with Bahraini nationals. High public sector compensation compared to the private sector led to high reservation wages and queuing for government jobs by Bahraini nationals, generating even greater demand for foreign workers to fill unskilled jobs despite the additional costs of work permits. Across the region, the composition of the pool of foreign workers has evolved considerably over time, and the available supply has increased in conjunction with globalisation. Moreover, policies to limit foreign labour face considerable challenges because they may be counterproductive with respect to economic growth. The tension between competing objectives to generate employment through sustainable economic growth on one hand, and to limit the number of expatriate workers on the other hand, has impeded the efforts of GCC policy makers on both fronts.¹⁴³

We can conclude that it is probable that the liberalisation of the trade in services under the FTA will cause an increase in labour demand in some service sectors. This job creation in the service sector demands a medium to high skilled labour force. The question remains if government will smoothen the way for national citizens to enter the service sector and absorb high amounts of new locals coming on the market in the coming years, or if the private service sector will further depend on expatriate labour force.

VIII.F WHAT IS THE IMPACT ON EMPLOYMENT OF NATIONALS AND EXPATRIATES?

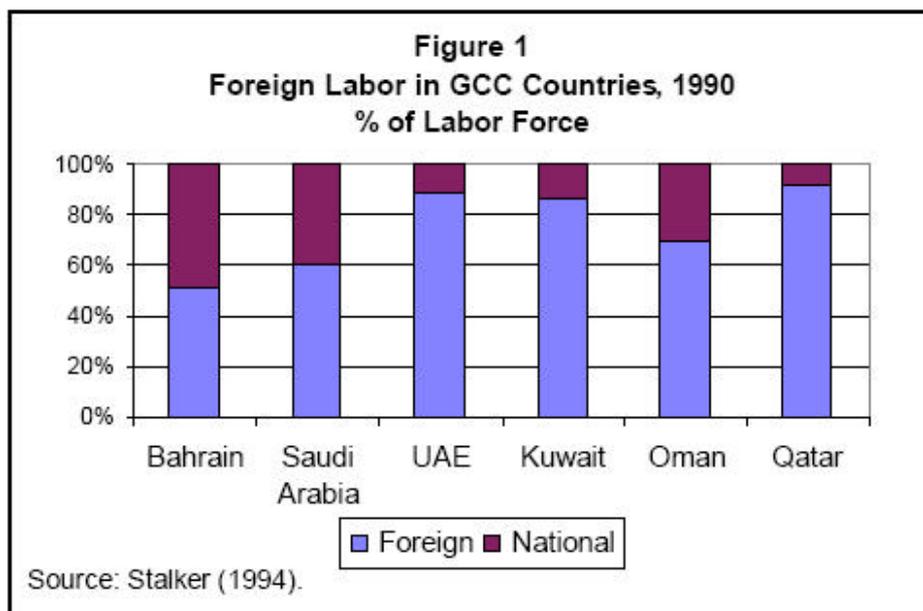
Labour markets in the GCC region exhibit considerable segmentation along public and private employment that is in fact accompanied (and exacerbated) by distortionary employment and wage policies.¹⁴⁴ Moreover, the distinction and separation between domestic and foreign workers has become more apparent because of the growing size of the foreign labour force in the region.¹⁴⁵ The presence of expatriate workers has in fact outgrown the indigenous workforce, and typically represents a large majority, as shown in Figure 1 below. In Kuwait, Qatar and the United Arab Emirates, over 80 percent of the labour force is foreign.¹⁴⁶

¹⁴³ Managing Foreign Labour in Singapore and Malaysia: Are There Lessons for GCC Countries? E. Rupert, World Bank, 1818 H Street, NW, Washington, DC 20433

¹⁴⁴ World Bank, 1994, 1995a, 1996

¹⁴⁵ Managing Foreign Labour in Singapore and Malaysia: Are There Lessons for GCC Countries? E. Rupert, World Bank, 1818 H Street, NW, Washington, DC 20433

¹⁴⁶ Stalker, 1994



There may be a size dimension to this issue, in which the dynamics of the labour force vis-à-vis growth and skill composition depend on some critical value of the foreign labour share. Below this value, the community of foreign workers remains self-contained and the externalities it generates (e.g. social capital) either are small or remain within the scope of their separate community. Above the critical value, however, the expatriate labour force acquires dynamic forces of its own, with externalities affecting the entire labour market and generating additional supply in sending countries. Within the context of such a framework, Malaysia's and Singapore's foreign labour policies apparently kept the share of expatriate workers in check below the trigger point, whereas in the GCC countries, the foreign labour share exceeds the trigger point, leading to increasing foreign labour inflows that are mutually reinforcing and facilitated through the formation and accumulation of social capital.¹⁴⁷

If one of the impacts of an FTA is to boost higher-skilled indigenous employment in the service sectors, making use of domestic graduates and technicians, this would help to keep the share of expatriate workers rising farther – and might hold it down closer to or below the trigger point mentioned above.

VIII.F.1 Asian expatriates

According to the economic model, increase in labour forces in the GCC could be -among others- expected to take place in the textile industry (see also VIII.D.3). The textile industry is dominated by low skilled employment. It is more than likely that Asian expatriates will occupy the low skilled jobs in the textile industry. Asians have been replacing Arab workers in the GCC during the last two decades for many reasons. The most important reasons for assuming that Asians will fill the jobs in the textile industry are Asians command lower wages, work longer hours and do not expect promotions over time. Moreover, it is not unusual to find high skilled Asians willing to accept low skill jobs at low skill pay. The potential benefits for the employment

¹⁴⁷ Managing Foreign Labour in Singapore and Malaysia: Are There Lessons for GCC Countries? E. Rupert, World Bank, 1818 H Street, NW, Washington, DC 20433

of GCC citizens themselves will be limited in the textile industry. All sectors, where the FTA will create low-skilled jobs, will encounter the same social issues as described for the textile industry.

More Asian expatriates could work in the GCC due to increased low skilled labour demand following the introduction of the FTA.¹⁴⁸ However, because the high transferability of Asian expatriates between manufacturing industries, there could be a shift from expatriates from other low skilled sectors to the manufacturing sectors with increasing production.

VIII.F.2 Arabian expatriates

The increased labour demand following the introduction of an FTA, will probably have a negative social impact on the Arabian expatriates working in the GCC since the FTA job creation will be more easily filled in by the high number of young unemployed nationals. Additional employment for expatriates following the implementation the FTA, is likely to be limited because:¹⁴⁹

- ✓ Arabian expatriates outnumber Asians in government jobs, due to the need for staff with knowledge of the Arabic language. Nationals can easily fill in the requirements for these government jobs.
- ✓ To the extent that Arab workers typically occupy skills that require higher educational degrees as compared to Asian workers who are more of hands-on experience workers than holders of educational degrees, Arabian expatriates are more likely to be replaced by nationals with higher academic levels.
- ✓ A large percentage of Arab workers hold jobs that can readily be performed by nationals, e.g. teachers at all levels, clerks, cashiers, engineers, lawyers, translators, sales managers, executives, accountants, physicians, researchers, economists, etc.
- ✓ Among expatriates, there has been a discernible substitution of Asian workers.

The possible losses of Arabian jobs and possible consequence of out-migration of Arabian expatriates will have negative social impacts on the home countries and their relatives, when there are no job opportunities for those expatriates in their home countries. On the other hand, there could be a positive social impact for those returning to their home countries with built up experience (e.g. as a lawyer or as a teacher in the GCC) relevant and with added value to their home labour demand.

VIII.F.3 Nationals

According to the economic model the FTA could increase exports of the GCC in -amongst others- the sector that produces Mineral Products. Also the petrochemical sector is expected to increase its output (see further in chapter IX.B.3), what will increase labour demand in these sectors. These sectors require high skilled employees, and national citizens should be able to fill in.

¹⁴⁸ More Asian expatriates could remain in the GCC labour force due to the fact that the threat of replacement by nationals is minor than for Arabian expatriates because: A large number of Asians are employed in either menial jobs that are not in demand by nationals; e.g. household services, sales and factory workers, or they are employed in jobs that are difficult to fill by nationals due to the lack of similar experience; e.g. machine operators, maintenance and repair of electric and electronic machinery, etc.

¹⁴⁹ Maurice Girgis, 1999, 2002

The contested area where nationals and expatriates will compete for jobs will be the sectors with medium skilled labour (as indicated above). These include a wide range of occupations such as all clerical jobs, cashiers, mail sorters and distributors, teachers, religious Imams, sales supervisors, para legal assistants, business intermediaries, telephone operators, drivers of heavy machinery, etc.

Much will depend on the support government will give to the nationals on the short term (subsidies to employers, training programs) and on the long term (education system, private sector development, adapted social systems that encourage full employment) to obtain existing jobs and fill in created jobs by the FTA. The absence of these reforms will result in the inability of the economy to create jobs may fall more on nationals than on expatriates, thus, worsening the current national unemployment.

Not all jobs currently held by expatriates will be taken over by nationals, due to the lack of the right skills, qualifications and competences.¹⁵⁰ The demand for labour should increase by around 6% to absorb the new national entrants and to start reducing the existing unemployment.¹⁵¹ The economical model indicated that the impact of the FTA on labour demand would certainly be not high enough to solve the problem of current open unemployment in the GCC.

VIII.F.4 The importance of education in combating unemployment

Education is considered to be an important component of promoting the necessary skills to economic diversification and economic and social development. However, levels of education beyond the primary level are lower in the GCC than for example in Europe (with the exception of Bahrain, see chapter V.F.2). Increasing levels of secondary education and training is important for the GCC to create a pool of employees with the skills to contribute to a competitive and dynamic private sector, and to absorb the increasing proportion of young people in the population, combating the increasing unemployment and underemployment.

VIII.G IMPACT OF THE FTA ON GENDER ISSUES

Positive impacts on the labour force of the EU-GCC FTA will be greatest for nationals with medium to high skills, since the FTA will amongst others generate new jobs in services and new highly educated jobs in some manufacturing industries (e.g. oil and petrochemical industry). Due to the greater import in other sectors, other service jobs will also be created, such as in logistics and in the transportation sector. The present highly educated female work force has the right skills to fill these new created jobs. In this way, the FTA would encourage the integration of women in the economy. The internal pressure to hire highly educated women for these jobs will increase due to the fact that the female labour force is well educated and internal social changes are taking place. Literature gives many indications of future growth of female participation in economy and growth of female employment in the GCC:

- ✓ The World Bank emphasis the need for reform of the education system in the Arab World, which give the people the practical skills needed to function in the global economy and calls for the greater inclusion of women in the labour force.¹⁵²
- ✓ Female participation is expected to rise due to a number of reasons:

¹⁵⁰ Daily News, 31 August 2003, Expats needed for years in Gulf, Soman Baby.

¹⁵¹ Maurice Girgis, 2002

¹⁵² BBC News, September 2003, Jobs key to Middle East growth,

- the heavy reliance on expatriate maids and household support will help reduce fertility rates and create the environment to join the labour force,
- the continued rise in education levels among women,
- economic slowdowns, uncertainty and negative per capita income growth are likely to force young families to rely on two incomes, and
- there are constantly changing social conditions in most Gulf States where women are demanding greater recognition and are accorded receptive responses from key government leaders and opinion makers.

As female participation rates rises in the labour force, it will proportionately decrease the number of available jobs for expatriates, *ceteris paribus*. This trend is tempered by the fact that the vast majority of GCC women is currently employed in the public sector. On the other hand, if they seek employment in the private sector (e.g. the petrochemical industry), then they, too, will crowd out male Arab workers.¹⁵³

There is a general confusion about the content and interpretation of the Shari'ah in the EU, when looking at the position of women according to Shari'ah.

- Islam accepts both men and women as equal in their creation and in their relationship to Allah¹⁵⁴. The Koran clearly defines the origin of men and women as coming from a single soul, thereby rejecting any claims that men are greater or better than women or vice versa.
- **In the history of Islam**, the question of whether a woman has a soul or not, was never entertained as she was always considered a person under Shari'ah with the same human rights as men¹⁵⁵.
- **In the economic realm**, Shariah treats woman as a completely independent entity. She can make any contract, bequest in her own name and is entitled to inherit as a mother, wife, daughter and sister. She can carry out trade or business independently and is not liable for her husband's debt. She is not obliged to spend a penny on the family, and her husband has no rights on her money whether earned or inherited. If she chooses, out of her free will, to contribute towards the family or help her husband, this is considered charity on her part. The husband, on the other hand, is obliged to provide for her and the family. Muslim women also maintain their maiden name after marriage, further stressing their independent personality.
- **In the interpersonal realm**, Muslim women are free to choose their partners and cannot be forced in to marriage against their will¹⁵⁶. Shari'ah does not recognize marriage of a Muslim woman to a non-Muslim man and strictly forbids such a union unless the man freely converts to Islam¹⁵⁷. The reasons for this are practical and wise. To expect a spouse

¹⁵³ Maurice Girgis, 2002

¹⁵⁴ . "O humankind, be careful of your duty to your Lord, Who created you from a single soul and from it created its make ... Be careful of your duty to Allah in Whom you claim your mutual rights" (K 4:1).

¹⁵⁵ "And for women are rights over men similar to those of men over women" (K 2:226).

¹⁵⁶ "Do not prevent them from marrying their husbands when they agree between themselves in a lawful manner" (K 2:32).

¹⁵⁷ "And do not give your women in marriage to unbelievers until they believe: (K 2:221)

who does not share one's faith or way of life to abide by these values is a recipe for conflict. Muslim women have similar access to divorce as men, and are free to remarry if divorced or widowed.

As such, women and men have according to Shari'ah equal rights and obligations. The fact that the concrete situation in specific countries does not always reflect the interpretation of these principles as explained above, has more to do with the presence and dominance of other cultural aspects in the Region than Shari'ah.

VIII.H IMPACT OF THE FTA ON HEALTH AND WELFARE ISSUES

VIII.H.1 Improved welfare

The economic modelling assessment pointed out that improvements of economic welfare are substantially greater by the implementation FTA than with the GCC customs union. For Kuwait and Qatar the CU implies even a decrease in economic welfare because it needs to increase its tariffs to comply with the 5% common external tariff of the GCC CU. With the FTA all GDPs increase more, with an additional growth for Kuwait of 0,8 % up to an additional growth of 2,3 % for Qatar (see Table 28).

Most of this is achieved through increases in producer surplus and to a lesser extent through increases in consumer surplus (see Table 73, annex XII.T). In sectors with increases in production surplus, production, profits and wages will also probably increase. However, 87% of the increase in production surplus occurs in the mineral products sector that contains the oil sector and has limited spill-over effects to the other sectors.

Customers will benefit from the opportunity to have access to a wider set of goods at reduced price due to lower tariffs, increasing their consumer surplus. 50 per cent of the total improvement of the consumer surplus can be found in the machinery sector. This is logical because this sector is already the largest import sector in the GCC.

Table 28: Increases in GDP in the GCC countries due to the CU and FTA

% increase in GDP compared to present	CU	FTA	FTA on top of the CU
Bahrain	5	7	2
Kuwait	-0.3	0.8	1.1
Oman	1.2	2.8	1.6
Qatar	-0.6	1.7	2.3
Saudi Ar	1.8	3	1.2
UAE	2.1	2.9	0.8
GCC	1.5	2.7	1.2

Source: Results of the economic modelling exercise, see Table 73 up to Table 80.

VIII.H.2 Increased exposure to pollution due to production increases

Due to the FTA the all-important Mineral Products sector sees an increase in exports and thus production. This includes the oil extraction sector and oil refining industries. Due to their size, these sectors are probably the largest industrial emitters of hazardous substances into the environment in the GCC that can harm human health. These hazardous substances can enter human bodies through the air they breathe, through food and drinking water, or by direct contact with the skin. Air pollution, is caused largely by high levels of sulphur, sulphur dioxide, nitrogen oxides, carbon monoxide from industrial processing and the heavy metal industry. These

substances contribute to the general air pollution including smog and acid rain as well as ground level ozone. The health effects resulting from increased exposure to ground-level ozone include increased incidence of asthma, respiratory infections and chronic respiratory problems including bronchiolitis. It contributes to urban ozone problems inflicting harm on residents with respiratory ailments, especially among the elderly and the young.¹⁵⁸ Among the other important air issues associated with the combustion of fossil fuels, airborne mercury emission and mercury's subsequent accumulation in animal fats. Human health effects can include liver and kidney damage, infertility, and fetal malformation.

Fossil fuel combustion also contributes to respirable particulates in the ambient environment. Respirable particulates are particulate matter smaller than 10 microns (PM₁₀); they can be inhaled into the lungs. A recent review of studies on the health impacts indicate that exposure to inhalable particulate matter can impair lung function, lead to increased respiratory deficiency symptoms and functional limitations, increased physician and emergency visits for asthma, increased hospitalization for respiratory conditions and increased mortality.¹⁵⁹ Studies indicate that approximately 50 per cent of the ambient respirable particulate matter is derived from the formation of secondary compounds of acid gases such as nitrogen oxides and sulphur dioxide. Effects on human health of SO₂ include eye and respiratory system irritation. Children and those with respiratory disease are particularly susceptible to harm.

These industries are typically smokestack industries that vent their emissions through tall chimneys in order to reduce the direct impact for on-site workers and the surroundings but thereby increasing exposure to the general population that live down the predominant wind direction. The potential impacts could be mitigated to the extent that the GCC countries employ the most efficient combustion technologies for the control of emissions. It is not likely that for the crude oil sector an EU-GCC FTA will increase regulatory barriers related to environmental issues due to the crucial importance of this natural resource for the EU economy. Increasing 'environmental' regulatory barriers would simply increase prices in the EU, not a favoured outcome of the FTA. Therefore it will probably be up to the local governments to put in place the required regulations and monitoring systems in order to ensure that increased production in the mineral products sector would not lead to increased harmful emissions.

VIII.H.3 Increased exposure to pollution due to increases in transport

The FTA will both lead to increases in imports and exports of goods and services. Increasing volumes of trade will inevitably lead to increased transportation of goods and persons. Much of this increased demand will be met by the shipping sector. As shipping lanes become more congested, the chances of spills and accidents involving petroleum or chemicals, which are inherently dangerous and hazardous substances, increase. This could threaten put the marine environment at even greater risk. The potential impact of increased volumes of trade on the coastal and marine areas was already discussed in chapter VII.D. At the same time this would also threaten the viability of desalination plants along the coastline and thus the freshwater supply in some vulnerable coastal areas in the GCC that rely heavily on desalination plants for their freshwater supply. For instance in Kuwait 46% and the UAE and 19% of freshwater consumption is supplied by desalination plants (see Table 9, chapter V.E.1). One prudent measure would be to review and if necessary strengthen integrated regional systems for immediate emergency response to tanker spills and similar accidents or threats.

¹⁵⁸ CEC 1999.

¹⁵⁹ Verday 1993 cited in CEC 1999.

VIII.H.4 Better health and welfare through better Medical Services?

In chapter V.F.3 it was already pointed out that most of the countries of the GCC have comprehensive well-developed publicly accessible health care systems that cover a wide range of services. In a number of countries, particularly Qatar and Kuwait, the health care system relies heavily on foreigners for staffing. But at the same time only one Kuwait has signed up to commitments under the GATS with respect to health related and social services (see chapter V.I.3, Table 15). As said before, in the commitments on trade in services governments are given considerable flexibility in order vary the level of obligation they will assume in a particular service sector or sub-sector. Keeping local sensitivities in mind, the GCC could improve the efficiency of its medical services by negotiating with the EU on a liberalisation of its medical sector.

IX. In-depth sector specific assessments

IX.A SELECTION OF THE SECTORS

As said, the aim of these in-depth sector SIAs is to look at sectors that are likely to be affected by the FTA and that can have a potential impact on the sustainable development of the countries within the GCC and/or the EU. These in-depth sector SIAs allow trade negotiators to acquire better insights in the complex interactions between trade regulations and economic, social and environmental policies for those sectors of particular importance to the involved countries. These additional insights should help them and other policy makers in defining sustainable trade regulations and other related policies, not only for the sectors within the in-depth sector SIA but also the other sectors covered by the Global preliminary SIA.

Simply put, a sector examined in an in-depth sector specific SIA should fulfil at least the following two basic requirements:

- it is significant for the sustainable development of the countries involved;
- the outcome of the trade negotiations could have a significant impact on this sector;

⇒ And thus on the sustainable development of these countries.

UNEP has refined these criteria in its "*Reference Manual for the Integrated Assessment of Trade-Related Policies* (2001)" by defining essential requirements that relevant sectors for a sector specific SIA should:

- The sector is important to the national economies and in particular in its contribution to export revenues.
- The sector relates directly or indirectly to major environmental media and natural resources.
- The sector relates directly or indirectly to important issues of equity and social well-being.
- The sector has been, or might become, the subject of changes in the economic rules induced by trade-related policies.
- The sector is one with significant trade flows in both volume and financial terms and is experiencing changes in trade flows.
- The sector is one where one might expect, *a priori*, that there are important sustainability effects attributable to trade-related policies.

Particularly for the GCC it is hard to come across sector specific data on major environmental media, natural resources use, equity and social well-being. Therefore when selecting the two sectors for the in-depth sector specific SIA a focus was put on importance of the sector in the trade flows and the likelihood that they would be an issue in the ongoing trade negotiations.

If we look at the exports from both regions we see large differences between the regions. The exports out of the EU are mainly focused within the industrial manufacturing sectors. The exports of the GCC are dominated by crude oil and other petroleum products (see **Table 29**).

In the EU the industrial manufacturing sectors account for a whopping 88 % of all EU exports. Major export products are road vehicles (9,6 %) and electrical equipment and appliances (7,7 %). The chemical sector and the more diverse manufactured goods sector, with goods ranging from textiles to aluminium, also represent a sizable part of the EU exports with respectively 14,3 % and 14,6 % of the total. The goods exported by the EU are highly diverse and mostly produced within capital-intensive industries.

Table 29: Exports 2001 of GCC and EU

	EU Exports billion €	%	GCC ^a Exports billion \$	%	% (excl.oil)
0: Food and live animals	36	3.70%	0.7	0.60%	5.34%
1: Beverages and tobacco	15	1.50%	0.4	0.40%	3.05%
2: Crude materials except fuels	16	1.60%	0.5	0.40%	3.82%
3: Mineral fuels	25	2.60%	98.4	88.20%	/
4: Other	23	2.40%	0.1	0.10%	0.76%
5: Chemicals	140	14.30%	6.6	5.90%	50.38%
6: Manufactured goods (e.g. steel, ...)	143	14.60%	2.6	2.30%	19.85%
7: Machinery and transport equipment	459	47.00%	1.3	1.20%	9.92%
8: Miscellaneous manufactured articles (e.g. furniture, medical equipment, ...)	120	12.30%	0.9	0.80%	6.87%
Total	978	100%	112	100%	100%

^a no data for the U.A.E., data Kuwait 1998; Sources: Statistical Office of the European Communities, 2003; United Nations Statistics Division (UNSD), 2003, classification based on 'Standard International Trade Classification 3' (SITC Rev.3)

The exports from the GCC (does not include the U.A.E.) are much less diversified. With 88,2 % stemming from mineral fuels exports. Of these 88,2 % almost everything entails the export of crude oil and natural gas (75,0 % and 4,4 % respectively). The other sectors are dwarfed by the oil sector. Only the chemical sector represents still a sizable share of the total exports with just a bit less than 6 % of total exports, over 50% if you exclude the oil sector. The third largest export sector, those of manufactured goods only represents 2,3 % of total exports, just below 20% if you exclude the oil sector.

IX.A.1 Selecting the petrochemical sector

When comparing exports between the two regions we clearly identify the chemical sector as a sector that has a competitive exports basis in both regions with substantial export trade flows. When one looks at more detail at the intra trade flows for the chemical sector on notes that the EU still has a substantial trade balance surplus in chemicals with the GCC (see **Table 30**). But in those capital intensive transformation sectors that transform crude oil into the more basic chemicals and primary plastics, i.e. the petrochemical sector, we see that the GCC has actually a trade surplus with the EU. Instead in those sectors that produce more complex chemicals or

chemicals for end-use often based on patented industrial technologies and trade marked end products, we see that the EU has a trade surplus with the GCC. It seems that due to the relative abundance of the necessary feed stocks (often left-over products from the oil sector), the GCC has a comparative advantage in the petrochemical sector, what makes it an interesting case for an in-depth sector specific SIA.

Table 30: Trade flows in Chemicals between the two regions, 2001 (million €).	EU into the GCC	GCC into the EU	Trade balance EU
51:ORGANIC CHEMICALS	208	645	-437
57:PLASTICS IN PRIMARY FORMS	360	437	-77
56:FERTILIZERS , MANUFACTURED	15	2	13
52:INORGANIC CHEMICALS	54	11	43
58:PLASTICS IN NON-PRIMARY FORMS	197	5	192
53:DYEING, TANNING AND COLOURING MATERIALS	239	9	230
59:OTHER CHEMICAL MATERIALS AND PRODUCTS	529	6	523
55:ESSENTIAL OILS + PERFUME MATERIALS; TOILET, POLISH + CLEAN. PREPARAT.	846	54	792
54:MEDICAL AND PHARMACEUTICAL PRODUCTS	1060	15	1045
Total chemicals exported	3509	1185	2324
Total exports	33504	19744	13759

Source: Statistical Office of the European Communities, 2003, classification based on 'Standard International Trade Classification 3' (SITC Rev.3)

Within the GCC some countries, such as Bahrain and Saudi Arabia, still have barriers in place meant to protect the most vulnerable of their chemical industries. Instead the EU has low barriers, but nevertheless still higher ones than the two other main markets, i.e. the US and Japan.

Table 31: Average Most Favoured Nations Import Tariff Rates (%)									
	Bahrain	Kuwait	Oman	Qatar	Saudi A.	UAE	EU15	Japan	US
Chemical	17.4 %	4 %	7.3 %	4 %	11.4 %	11.3 %	4.2 %	3.4 %	2.2 %
Rubber - plastics	18.1 %	4 %	6.2 %	4 %	12.1 %	13.5 %	4.7 %	3 %	3.2 %

Source: See annex XII.R ,Table 70

EU producers face severe restrictions in their investment options in the GCC. Earlier it was already discussed that there are severe limitations to Foreign Direct Investment (see chapter V.J.1) in the GCC, also in the petrochemicals industry. Restricting access in the region assures that only local, often government owned, companies can enjoy from the benefits of the natural comparative advantage of the region. This can be seen as a trade distortion.

Finally the petrochemical industry is faced the issue of double pricing. As said the region already has a comparative advantage in the petrochemical sector due to the abundance of feedstocks in the region but local governments have on top of that actively intervened in the market to increase this cost advantage. This is known as “double pricing”, which is generally considered to be an unfair trading practice. . Therefore it will almost certainly feature in the ongoing FTA negotiations, just as it does in the Saudi Arabia’s WTO accession negotiations.

The chemical sector is important for both regions and more specifically the petrochemical sector for the GCC. Furthermore negotiators for this FTA at both side of the table clearly will want to tackle some of the trade issues concerning this sector. The petrochemical sector is at the same

time highly energy intensive and potentially polluting. It demands high-skilled employees and is known to pay high wages. There are clear long-term sustainability issues at stake of importance to the relatively small GCC economies. Therefore the petrochemical industry was selected as one of the two sectors for which an in-depth sector specific SIA is undertaken.

IX.A.2 Selecting the aluminium sector

The manufactured goods sector is second largest in both regions if one excludes the oil sector in the GCC. EU's exports dwarf those of the GCC (see annex XII.Y, Table 119). In the GCC the largest export sector of manufactured goods in value terms is the non-ferrous metals sector with 36% of manufactured goods exports in the GCC. When one looks in detail at the kind of non-ferrous metals that are exported from the GCC one sees that 86 % comes from aluminium exports from Bahrain. For Bahrain itself, Aluminium exports represent 15 % of all exports and even 45 % if one excludes oil and natural gas exports.

Therefore aluminium represents for the GCC as a whole the largest manufactured good exports and for Bahrain it is even relatively large compared to the all important oil and gas exports. For Bahrain, which itself is not endowed with lavish oil and gas reserves, aluminium is a crucial part of its attempt to diversify its economy and therefore very important for its long term sustainable development.

Bahrain is not the only producer of Aluminium. It produces roughly 50 % of all aluminium in the GCC (see for more details chapter IX.C.2.2). The other half is produced in Dubai in the UAE. In the trade statistics in Table 32 the UAE were not included due to lacking data. Therefore in reality the relative importance of aluminium could even be higher, definitely for the economies of the UAE and Bahrain. Furthermore in the medium term large increases in aluminium production capacity are foreseen in the GCC (see chapter IX.C.8.1, Box 8), indicating that the aluminium sector is seen in the GCC as one of the growth areas that could help these economies with a long-term sustainable growth pattern.

Table 32: GCC exports of non-ferrous metals, 2001

Million US\$ ^a	Saudi Ara.	Qatar	Kuwait	Oman	Bahrain	GCC
681 - SILVER/PLATINUM ETC	3.66	0	0	0	0	3.66
682 - COPPER	31.84	0	0	47.85	0.73	80.42
683 - NICKEL	0.17	0	0	15.00	0.00	15.17
684 - ALUMINIUM	23.52	0	0.34	0	825.21	849.06
685 - LEAD	4.41	0	0	0	0	4.41
686 - ZINC	1.54	0	0	0	0	1.54
687 - TIN	0.00	0	0	0	0	0.00
689 - MISC NON-FERR BASE METAL	0.13	0	0	0	0	0.13
Total	65	0	0.34	63	826	954

^a no data for the U.A.E., data Kuwait 1998; Sources: Statistical Office of the European Communities, 2003; United Nations Statistics Division (UNSD), 2003, classification based on 'Standard International Trade Classification 3' (SITC Rev.3)

Exactly the same trade issues as in the petrochemical sector are associated with the aluminium industry, i.e. high tariffs, restriction on FDI within the sector in the GCC and pricing of energy inputs within the GCC, even though some differentiations exist. Certainly the tariff issue is more striking in the aluminium sector than in the petrochemical sector (for a detailed discussion see chapter IX.C.7).

It is clear that aluminium is seen as an important growth industry in the GCC. It will receive most certainly attention of the negotiators in the FTA negotiations. It is also highly energy intensive and has received the last few years some bad press due to its relatively high emissions of greenhouse gases. It also demands high-skilled employees and is known to pay high wages. Due to this combination of factors, its importance for 2 specific GCC countries, i.e. the UAE and in particular Bahrain, and the issues at stake in the negotiations, the aluminium sector was selected as the sector for which a second in-depth sector specific SIA is undertaken.

IX.B IN-DEPTH SECTOR SPECIFIC ASSESSMENTS: THE PETROCHEMICAL INDUSTRY

IX.B.1 Main Characteristics of the Petrochemical Sector

The petrochemical sector is composed of six core sub-sectors: (1) synthetic gases produced, i.e. *methanol, ammonia, urea and liquefied petroleum gas (LPG)*; (2) *ethylene* (and its derivatives such as polyethylene, mercaptoethylguanidine (MEG), and polyvinyl chloride (PVC)); (3) *propylene* (and its derivatives such as polypropylene and acrylonitrile); (4) *butadiene* (and synthetic rubber), (5) *aromatics* (such as polyester, polystyrene, benzene, para-xylene (PX) and derivatives, and (6) the *chloralkali chain and Methyl tert-butyl ether (MTBE)*.¹⁶⁰ Perhaps the most important sub-sector is ethylene—it is regarded as a barometer for overall petrochemical activity and commands global capacity is over 100 MM tons per year.¹⁶¹

There are a number of sectors, both upstream and downstream from the petrochemical sector that are closely associated with sustainability and should be included in this discussion. First and foremost, the industry is heavily dependent for its dominant inputs on the petroleum industry. The existing and potential inputs or “feedstocks” for petrochemicals are: *natural gas, associated gas, and crude oil*.

These three basic feedstock sources produce an overlapping cluster of intermediate products as follows:

- *natural gas*: methane, ethane and LPG;
- *associated gas*: ethane, LPG and condensate;
- *crude oil*: LPG, naphtha and gas oil.

After further processing these intermediate substances in turn produce the six major clusters of petrochemical products:

- synthetic gas (which creates ammonia, urea, methanol, and gas-to-liquids(GTL));
- ethylene (polyethylene, MEG, PVC)
- propylene (polypropylene, acrylonitrile)
- butadiene (synthetic rubber)
- aromatics (polyester, polystyrene etc)
- MTBE.

A summary of the characteristics and resulting uses associated with each category is presented in Table 33 below.

¹⁶⁰ Based on Roger Newenham, “Petrochemical and Fertilizer Projects in the Gulf: A Short, Medium and Long Term Perspective,” Jacobs Consultancy, Presentation to the 1st International Conference on Development of Gas Markets in the Gulf, March 2002.

¹⁶¹ The major derivatives of ethylene are LDPE, LLDPE, HDPE, ethylene glycol, styrene and EDC/VCM.

Table 33: Selected Petrochemicals: What are they and what are they used for?	
What is it?	What is it used for?
<p>Synthetic Gas <i>e.g., Ammonia:</i> A colourless gas with a very sharp odour. It is made both by humans and by nature. It dissolves easily in water and evaporates quickly. It is commonly sold in liquid forms.</p>	<p>Ammonia: Most of the ammonia produced in chemical factories is used to make fertilizers. The remainder is used in textiles, plastics, explosives, pulp and paper production, food and beverages, household cleaning products, refrigerants, and other products. It is also used in smelling salts.</p>
<p>Ethyl oxide and its derivatives A man-made chemical; flammable gas.</p>	<p>Used to make other chemicals such as <i>ethylene glycol</i> (a chemical used to make antifreeze and polyester). Small amounts are used as a pesticide or to sterilize medical equipment. Exposure to ethylene oxide can cause irritation of the eyes, skin, nose, throat, and lungs, and damage to the brain and nerves.</p>
<p>Propylene and its derivatives <i>e.g., Acrylonitrile:</i> A colourless, liquid, man-made chemical. It can be dissolved in water and evaporates quickly.</p>	<p><i>Acrylonitrile:</i> Used to make other chemicals such as plastics, synthetic rubber, and acrylic fibres.</p>
<p>1,3-Butadiene A chemical made from the processing of petroleum. It is a colourless gas with a mild gasoline-like odour.</p>	<p>About 75% of the manufactured 1,3-butadiene is used to make synthetic rubber. Synthetic rubber is widely used for tires on cars and trucks. 1,3-Butadiene is also used to make plastics including acrylics. Small amounts are found in gasoline.</p>
<p>Aromatics <i>e.g., Benzene:</i> A colourless liquid. It evaporates into the air very quickly and dissolves slightly in water. It is highly flammable. <i>e.g., Polycyclic aromatic hydrocarbons (PAHs):</i> A group of over 100 different chemicals that are formed during the incomplete burning of coal, oil and gas, garbage, or other organic substances. PAHs are usually found as a mixture containing two or more of these compounds, such as soot.</p>	<p><i>Benzene:</i> Some industries use benzene to make other chemicals which are used to make plastics, resins, and nylon and synthetic fibres. Also used to make some types of rubbers, lubricants, dyes, detergents, drugs, and pesticides. A natural part of crude oil and gasoline. <i>PAHs:</i> Some PAHs are manufactured. These pure PAHs usually exist as colourless, white, or pale yellow-green solids. PAHs are found in coal tar, crude oil, creosote, and roofing tar, but a few are used in medicines or to make dyes, plastics, and pesticides.</p>
<p>Methyl tert-butyl ether (MTBE) A flammable liquid. It is made from blending chemicals such as isobutylene and methanol.</p>	<p>It has been used since the 1980s as an additive for unleaded gasolines to achieve more efficient burning.</p>

The product footprint of the industry is extensive, being used extensively by household and industrial consumers alike. Therefore, there a number of downstream sectors that might also warrant consideration. Moreover, petrochemical firms often operate in a cluster of related industries such as chemicals, fertilisers, plastic resins, metals and gases.

There is also a trend toward backward integration, through refinery-petrochemical integration.

The petrochemicals industry is a cyclical business.¹⁶² It is currently in the midst of a slump, created by three factors: the global downturn started by the Asian economic crisis in 1997; the recession and slow recovery in most OECD countries; and high feedstock prices outside the GCC, due in part to OPEC's policy of keeping prices artificially high. The resulting combination of high input and falling product prices has led to poor profitability, consolidation, restructuring, and an intensified quest for competitive advantage.

One major result of these dynamics has been a north-to south migration of production facilities, driven by the shift of plants to "best cost" locations in fast-growing, low-cost developing regions, especially those with available hydrocarbons well beyond domestic demand. Indeed, in 1984 over three-quarters of global ethylene and methanol production came from the traditionally major markets of Europe, North America and Japan, and less than 10% from developing countries. In the subsequent 16 years to 2000, developing countries added one-third of the new ethylene and over four-fifths of the new methanol capacity, while high-cost facilities in the developed world were closed. This north-to-south migration is expected to continue over the next decade.

The Middle East as a whole is expected to be a favoured new destination for these "migrants." On the demand side, global demands for petrochemicals in Europe and other established industrial regions such as North America and Japan is expected to grow only at the rate of overall GDP, or about 2-3% per cent per year. In contrast, in emerging markets such as the Near East, Southeast Asia, and the Indian subcontinent, GDP growth is expected to be a vibrant 5-6% per year, with growth in overall petrochemicals and its polyfins component at 45% per year. This translates roughly into demand for an additional 5 million metric tons of ethylene per year. Demand is particularly strong in Asia. Indeed, to the year 2010, it is expected that global demand, led by Asia, will require annual new capacity as follows:

- Methanol: one world scale plant of 1.5 MT, as global demand grows at 3% a year.
- Urea: 3 world scale plants of 1 MT.
- Polyethylene: 8 plants of 400 KT, as Asia grows to 35% of global demand.
- Ethylene glycol: 1-2 plants of 450 KT, as Asia grows to 50% of global demand.
- Ammonia: global growth of 3% a year.

The countries of the GCC are well positioned to supply this new demand. The region is located in good proximity to the new centres of global demand. It is now well-advanced in its process of diversifying from basic petroleum production into higher value-added petrochemicals. Moreover, the slowdown in adding new capacity in Europe, is affecting global trading patterns, opening up more of the European market and the global market long-served by European plants. The GCC continues to have a strong advantage in low-cost feedstock, especially in regard to associated gas

¹⁶² Abdullah Al-Dabibi, "Development of the Middle East Petrochemical Industry," Address to the 21st Annual Petrochemical World Trade Conference, September 25, 2003, Houston, Texas.

that has no other economic use and is thus “cost free.”¹⁶³ In this respect, EU and other non-GCC producers are also concerned of the cheap supply of the other feedstocks, sometimes due to official policies intended to create a price gap between internal prices and export prices for these feedstocks. This is referred to as the issue of double pricing.

Already in the Middle East, the next wave of ethane capacity is now firming up, targeted at two derivatives – PE and MEG. Four world scale ammonia/urea plants are underway as are several methanol and GTL projects. Potential also exists, if natural gas prices are inexpensive enough, for propylene plants, which are in short supply.

However there are a host of competitive challenges for producers in the GCC, and other Middle Eastern producers. One is the temptation of producers to locate new production in Asia, to be closer to the expanding market, rather than the readily transportable low cost Middle East feedstock source. Another is whether feedstock prices will remain high. A third is how quickly Iraqi feedstock and product production, now with potentially new state-of-the art plant and equipment, might come on stream. A fourth is how well producers in various regions develop or adopt new technologies, such as those using methane, ethane and LPG feedstocks, notably the conversion of ethane into vinyl chloride monomer (VCM). Other variables include the relative record in various regions of access to low cost capital, preferential access to lower cost indigenous feedstock in the context of global and regional trade rules, i.e. the issue of double pricing, and environmental, safety and security regulations that affect feedstock and product transportation.

IX.B.2 Main Characteristics of the Petrochemical Sector in the GCC countries

Despite these contingencies, it is clear that by 2005, the Gulf region will become the world’s largest producer and exporter of petrochemicals and plastics. In 2003 the region exported over 30 million metric tons per year of product to 70 countries. Given the facilities currently under construction and scheduled to come on-stream in the next two years, that will increase to over 40 mm tons by the end of 2005. Gulf production is expanding faster than that of any other region in the world. This will help the Middle East as a whole exceed the United States in export volume by 2005. By 2010, the Gulf countries will account for over 50% of the globe’s annual new ethylene capacity.

This relative growth of the Arabian Gulf is fuelled by several factors. As over 40% of the world’s oil and gas reserves are located in the Gulf, its producers have a strong feedstock cost advantage, especially those using naphtha. More specifically, the Arabian Gulf accounts for an estimated 66% of global oil reserves, and 30% of natural gas reserves. Over the past 15 years the Gulf has build high efficiency, state of the art production facilities, and the international strategy, sales and marketing capabilities to accompany them. It also has adequate logistics (ships, terminals, warehouses, and port services), a component, which together constitutes 12% of the plant-to-customer value chain. Yet over the next four years, as more such logistics are required, the Gulf States are expected to become the largest contractor of sea transport, logistics services and facilities in the globe.

Finally the Gulf region is geographically privileged, being strategically located near the fast growing markets of Central and South Asia, the Pacific Rim and Eastern Europe, near the large mature markets of Western Europe, and near to what some regard as the potentially promising markets of Africa and the Middle East.

¹⁶³ Gulf Organization for Industrial Consulting, Strategic Directions for the Middle East Petrochemical Industry: Outlook for Development, Prospectus, April 2002.

In particular the Gulf's (in particular Saudi Arabia and Qatar's) assured supply of low cost, and at times preferentially priced, i.e. 'double priced' feedstock give it a global competitive advantage in methanol, ethane derivatives (PE and glycol), in ethane and especially in MEG (but not propane).

On the other hand, the Gulf petrochemical industry still lacks the technology and global integration of its global peers. This in part explains why the GCC's earlier successes with ethane and natural gas-based products have not been readily replicated by successor projects with MTBE, LPG-to-polyester, ethane/propane mixes, and vinyls. The US political situation has also been an impediment in the case of MTBE. Moreover the GCC's growing population and thus domestic market may shift some focus away from exports.

In general, the GCC petrochemical industry has succeeded and will succeed in large scale commodity products that use cheap feed stock, are cheap to ship, have a small number of processing steps, and use proven technology.

At present, Saudi Arabia alone has over one-quarter of the world's proven petroleum reserves and over 100 years worth of natural gas. Saudi Arabia also accounts for more than 80% of GCC petrochemical exports and it is home to the GCC's leading petrochemical firm – SABIC. It is one of the largest and fastest growing petrochemical companies in the globe, accounting for 5% of global petrochemical output in 2002. SABIC is the world's fourth largest producer of ethylene, the second largest producer of urea fertilizer, and the largest producer of granular fertilizer.

SABIC was created in 1976 when the Saudi government decided to use the hydrocarbon gases released in oil production for petrochemical production. The Saudi government owns 70% of the SABIC's shares, with 30% held by private investors in Saudi Arabia and other GCC states. SABIC produces basic chemicals, intermediates, PVC and polyester (in a Petrochemicals division created in September 2002), as well as fertilizers and metals. SABIC has sixteen world-scale production complexes in Saudi Arabia (some operated with multinational partners) and interests in three production complexes in Bahrain. In 2001 it had sales of €8.9 billion, and a net profit of €1.8 billion. In the first half of 2003 it had net profits of US\$ 850 million, a 224% increase over the same period the previous year.

Prospective liberalisation has already been incorporated into the firm's strategy. In April 2002 SABIC acquired an important Dutch company, DSM Petrochemicals, to further expand its global scale and reach. As DSM primarily sells polymers into Europe, the acquisition is expected to position SABIC to take strong and swift advantage of any opportunities to export to Europe that may arise.

SABIC in particular, and the Saudi petrochemical industry more generally, receive strong support from the national government. From 1996-200 Saudi Arabia allocated about 65% of its industrial investment to the petrochemical sector, which had grown at an annual average of 55% from 1985-1990. Looking ahead, new investments are expected to be more advanced, skills-intensive and selective, and thus of more direct benefit to small and medium sized firms. Thus far, however, the GCC still lacks an association for the petrochemical industry that could, *inter alia*, spearhead efforts at devising and implementing voluntary environmental and social codes of conduct.

IX.B.3 Trade Flows

Within this global context, the results of the economic modelling point to the trade impacts that can be expected on the GCC petrochemical industry as a result of the EU-GCC FTA alone, and in conjunction with a GCC Customs Union. Over 88% of GCC exports are mineral fuels and they are thus a major driver of the adjustment process.

Yet across GCC exports, mineral fuels are followed, by the chemical sector with 6% (but with over half of the non-fuel component) of total GCC exports. The economic modelling suggests that a CU+FTA will “stimulate trade. The CU itself stimulates exports in all sectors however the additional effects on exports of the CU are a bit dampened by the FTA in the skilled labour intensive sectors such as chemicals because the FTA opens up the GCC market to more competitive producers from inside the EU.” It will also expand GCC imports from the EU in the chemical sector, as “GCC consumers would get the opportunities to enjoy imports of chemicals, machinery and transport equipment...”

However several factors suggest that for the petrochemical industry, the major net impact will be an expansion of GCC petrochemicals exports to the EU, with the commensurate scale expansion effect on the petrochemical industry within the GCC countries. The first factor to suggest this is that the chemical sector in the modelling exercise simply does not portray the petrochemical sector. Within the Mineral Products sector, a sector that sees increased exports in the FTA beyond the CU, a large part of the core petrochemical products are included¹⁶⁴ such as liquefied petroleum gas (LPG), ethylene, propylene, butadiene, benzene and para-xylene. Note that it includes the most important sub-sector ethylene. Instead the Chemical sector, the petrochemicals are only a small group¹⁶⁵. Within this group the EU has already a trade surplus due to its strong presence in the more the specialized, highly processed sub-sectors (see also Table 30 in chapter IX.A.1). This is distinct from the petrochemicals sub sector which depends more on high-volume scale production using proven technologies, and depends on assured access to low or no-cost and possibly preferentially priced feedstocks (i.e., left over from oil production) within close proximity to reduce transportation costs. Therefore one could say that the modelling exercise probably gives a too bleak picture and that definitely for those petrochemicals in the Mineral Products group, exports are set to increase due to the FTA beyond the increase already experienced in the CU.

One should not forget that in particular with regard to exports to the EU GCC exporters now face trade barriers that, although they may appear low, are higher than those in the United States and Japan. This suggests that GCC petrochemical exports to the EU should expand once a FTA takes effect. Local GCC policies can even stimulate this more. For instance since December 1992 Saudi Arabia, in an effort to encourage high value-added further processing at home, has engaged in “double-pricing,” giving local industries using liquefied gas (butane, propane and LPG), and later raw materials such as condensate and naphtha (used in ethylene production), a lower price (up to 30%) than the export price. The EU, among others, has expressed concern about Saudi Arabia’s double pricing, a concern which has also arisen in the context of Saudi Arabia’s accession to the WTO.

A key factor in considering the prospects of the petrochemical sector in the GCC is its rapid modernisation, which suggests that companies will steadily acquire the world-class technology, plant and operational systems required to compete with the best in the industry, and equalize this cost advantage traditionally enjoyed by producers in Europe and other developed countries and regions. Current projects underway or in the planning stage provide an indication of how various

¹⁶⁴ Note that of course crude oil exports represent in volume the largest part of this product group.

¹⁶⁵ The modelling exercise is based on the Harmonized System product classification. The Chemicals are HS Category VI and in this category there are 11 sub-section (so-called chapters) of which the petrochemicals is only one, i.e. chapter 29. Many other chapters concerns specialized, highly processed chemicals such as pharmaceuticals, cosmetic preparations, etc.

GCC producers intend to, or will be able to, take advantage of the new market opportunities that an EU-GCC FTA will generate. In Saudi Arabia, for example, current projects include plans for means to achieve higher ethane recovery. At present the entire Saudi production of ethane derivatives is exported to the world market, but only restricted quantities to Europe at present. However, a FTA can be expected to lead to major increases in Saudi ethane derivative exports to the EU (and displace EU exports in other global markets), particularly if the Saudi 30% discount for feedstocks continue.

Additional projects in the planning or pre-planning stages in the GCC include those in Qatar where there is currently, in the planning or implementation stage, a GTL plant (by QP/Sasol) due to come on-stream in 2005-2006. Another, three times as large, is under consideration (by Exxon Mobil) that would come on-stream in 2006. Qatar has also conducted a feasibility study of an HPDE plant. In Bahrain projects include a propane/butane facility to supply PP and MTBE for the export market, and in Kuwait, an examination of profitable petrochemical investment opportunities is underway.

In addition, the rapid emergence of some GCC states as major financial systems could give the GCC petrochemical industry greater access to the low cost capital that is an important cost factor in building new plant and equipment or modernizing the old. Investment underway or planned in the transportation and other infrastructure will do so as well. Finally, should the GCC open further to foreign direct investment and foreign labour, as a matter of national or regional policy or as part of an FTA, GCC exports to the EU should further increase.

Most generally, these FTA-inspired export opportunities are likely, over the longer term, to have substantial economic impacts in the GCC countries. They are important to an overall economic development strategy of diversification from basic petroleum exports into high value added, further processed products. They require higher and more widespread skill levels. Moreover, they are a counter-cyclical cushion to basic petroleum, as the lower global prices that harm that primary sector, offer the lower feedstocks that give petrochemical production and exports an advantage.

Above all, the petrochemical sector holds out the prospect that the GCC will develop state-of-the-art manufacturing facilities, with economy wide spin-offs. For these reasons, it is reasonable to anticipate that considerable levels of public policy and business planning in GCC countries will be oriented to developing the petrochemical industry as a globally competitive, world class sector over time.

IX.B.4 Environmental Impacts

The modelling exercise undertaken for this SIA suggests that all GCC states are expected to increase their exports of mineral products as a result of EU-GCC FTA, in conjunction with the existing Customs Union and the analysis above suggests clear term potential for increased exports to the EU of major petrochemicals under a FTA provided the industry in the GCC continues to develop to put in place modern, state-of-the art facilities to allow it to compete more effectively with European production. This is particularly true for petrochemicals, as opposed to chemicals more broadly (such as pharmaceuticals) given the advantages enjoyed by the GCC countries with respect to availability of low-cost feedstock as outlined above. There may be particularly strong opportunities for increased exports of ethylene oxide and its derivatives, from Saudi Arabia in particular, to the EU. Other products that may well see increases include MTBE (particularly from Bahrain), GTL from Qatar and propylene.

There are important environmental issues associated with the petrochemical industry, including extraction issues related to inputs including crude oil and natural gas. There are also a number of

issues associated with the production processes employed in the petrochemical industry, and with the inherently hazardous nature of the products themselves. Any additional production implies additional extraction and use of feedstocks as well as the potential for increased emissions and discharges associated with production. In addition, increased volumes of trade will result in increased transportation. This section considers the potential environmental issues associated with these processes.

IX.B.4.1 Extraction

Petrochemicals rely for their inputs on the oil and gas industry more generally. This includes crude oil and natural gas, both of which are non-renewable resources. Sustainability issues associated with the extraction of inputs relate not only to the sustainable use of natural resources, but also to the pollution impacts associated with the process of extraction. Pollution impacts will be exacerbated to the extent that extraction occurs in sensitive areas such as in marine areas, on fragile deltas, or in areas that are already heavily industrialised and may not have the natural capacity to absorb the impacts.

For example, practices such as gas flaring are major contributors to greenhouse gas (GHG) emissions. Given the dominant role of Saudi Arabia in gas extraction, it is understandable that it is one of the most significant emitters of CO₂ from gas flaring, emitting 2,751 million tons in 1998. In all the countries of the GCC *per capita* emissions of carbon dioxide is well above the world average of 4.1 tonnes. CO₂ is not harmful to humans *per se*, but it represents the majority of all greenhouse gas (GHG) emissions. It is important to note that, to the extent that an export-inspired expanding GCC petrochemical industry can continue to use as an input associated gas from oil production that would otherwise be flared off, fewer immediate GHG emissions from petroleum production would result.

Table 34: Emissions from fossil fuel and other manufacturing, 1998^a

	Total CO ₂ emissions ('000s m tons)	CO ₂ Emissions by source (000 m tons)					CO ₂ Emission <i>per capita</i>	CO ₂ Per million Int\$ GDP (m tons)	Cumulative CO ₂ contributions from 1990-1999
		Solid fuels	Liquid fuels	Gaseous fuels	Gas flaring	Cement manuf.			
Bahrain	18,687	0	3,298	15,275	0	115	31.4	3,138	398
Kuwait	49,103	0	28,927	18,217	962	997	27.1	--	1,112
Oman	20,270	0	5,763	11,571	2,288	648	8.5	--	277
Qatar	46,772	0	8,838	37,585	0	349	80.8	--	588
Saudi Arabia	282,995	0	183,149	89,871	2,751	7,225	14.0	2,094	5,430
U.A.E.	88,198	0	24,065	58,258	2,885	2,990	37.5	1,943	1,896
GCC Average		0					33.2	2,391.6	
World Average							4.1	773	

Note: ^a emissions represent the mass of carbon dioxide emitted. Source: WRI. Earth Trends 2003. (--) indicates data not available.

Flaring also contributes to the emission of air contaminants such as nitrogen oxides (NO_x), carbon monoxide (CO), methane and sulphur oxides (SO_x). NO_x are ground level ozone precursors that also contribute to acid precipitation, dry deposition and photochemical smog. They are chiefly produced by high-compression internal combustion engines as well as by some industrial furnaces. There are also noxious odours associated with petroleum products and refineries and the refineries themselves present risks of explosions and fires, which can pose hazards to the

environment and human health. SO₂ are the principal contributors to acidification. Acid precipitation and dry deposition can damage ecosystems as well as buildings and highways, cause forest damage, accelerate leaching of metals from rocks and soils and decrease agricultural outputs. In addition, the acidification of lakes and rivers diminishes their ability to support aquatic life.

Moreover, the situation is worsening in the GCC. Between 1990 and 1998, for example, on average the total CO₂ emissions in the GCC countries increase by 83.1% compared to 8% in the rest of the world (

Table 35). Increases in the region were most pronounced in Qatar, where emissions increased by 243%. Likewise, per capita emissions are also increasing at an alarming rate – 55.3% on average for the GCC between 1990 and 1998 compared to a decline of 2% in the rest of the world. Finally, although little data is available, data on CO₂ emissions per million of GDP indicate that while the world generally is relying 10% less on CO₂ generating activity as a proportion of GDP, the countries of the GCC have increased their reliance on activity that generates CO₂ emissions by 23.6%.

	Total CO ₂ emissions (% change)	<i>Per capita</i> CO ₂ emissions (% change)	CO ₂ emission (m tons) per US\$ million of GDP (% change)
Bahrain	60	31	15
Kuwait	16	38	--
Oman	76	32	--
Qatar	243	187	--
Saudi Arabia	59	26	32
UAE	45	18	24
<i>GCC Average</i>	<i>83.1</i>	<i>55.3</i>	<i>23.6</i>
<i>World Average</i>	<i>8</i>	<i>-2</i>	<i>-10</i>

Source: WRI. Earth Trends 2003. (--) indicates data not available.

Any impacts of extraction of inputs may also be exacerbated by the infrastructure needs associated with drilling or other processes of extraction. This infrastructure includes roads, storage facilities and increased transportation. Environmental impacts include qualitative impacts, such as species and habitat reduction resulting from the infringement on wilderness of roads for exploration, drilling and gathering.

IX.B.4.2 Production Processes and Technology

Given that there may be some lead-time before the GCC countries are in a position to take full advantage of increased market access opportunities to the EU market, careful planning and development within the industry could mitigate the scale impacts that might be expected in terms of volumes traded in the future. There are a range of environmental issues associated with refining and processing petroleum products, covering a wide range of environmental media including water, air, and land (soil). Impacts are primarily the result of emissions, discharges and waste. The process of refining petrochemicals contributes to the air contaminants described above, but also, given the nature of the products, includes petrochemical hydrocarbons, and other

contaminants such as hydrogen sulphite, HCs, benzene, particulate matter, PAHs, mercaptans and toxic organic compounds. Some compounds such as ethylene oxide and propylene breakdown within 24 and 50 hours of being emitted into the air. Other substances take longer to break down. Benzene, for example, only breaks down after a number of days and can attach to rain and can be carried back down to the ground. Butadiene, MTBE and PAHs break down quickly in the air, particularly in sunny conditions. PCBs are very slow to break down and can travel long distances by air, being deposited in areas far away from where they were produced. These emissions, through their contamination of the air, and in some cases the soil and water pollute the environment and can affect human health.

Major impacts of petrochemical refining activities associated with water quantity include the use of cooling water in the production processes, threats posed by emissions, and other cire waste. Many of the chemicals produced dissolve quickly in water or are broken down by bacteria in surface water. Some, such as MTBE can remain in the water for longer, stick to particles in the water, and eventually settle to the bottom of the water body as sediment. The same is true for PCBs and PAHs which do not dissolve easily and attach to organic particles and bottom sediment.

Other emissions from the production process that impact water quality include HCs, mercaptans, caustics, oil, phenols, chromium, ammonia, urea, and effluents from gas scrubbers. These emissions will impact marine ecosystems to the extent that the refineries are located in coastal regions. In the GCC region, levels of persistent organic pollutants (POPs) are still relatively low but screening of contaminants in marine sediments and biota have also revealed low levels of halogenated pesticides, PCBs and organic phosphorous compounds as well as heavy metal concentrations near the old outfalls of chemical plants where there are relatively high levels of mercury.

Threats to land and soil come from the chemicals themselves, from their transportation, and from the cire waste. A number of the chemicals, when released into the air, settle on the soil, evaporate relatively quickly, or are broken down by bacteria and other micro-organisms. Such is the case, for example, with 1,3-butadiene. Others however, such as ethylene glycol, benzene, acrylonitrile, PCBs or PAHs take much longer to breakdown. They therefore pose a threat that they will move through the soil and contaminate groundwater. PCBs in particular can remain in the soil for very long periods of time.

Major impacts on land include cire waste such as the hazardous waste (including heavy metals and POPs), sludge from effluent treatment, spent catalysts, tars and slop oil. According to UNEP, the world's oil-producing countries generate from two to eight times more hazardous waste per capita than does the United States.¹⁶⁶ Solid waste also includes inert wood and paper.¹⁶⁷ Transportation within the countries of the GCC, whether on roads or in pipelines, also presents a risk of accidents and of spills.

Because these risks associated with increased petrochemical production exist, it does not mean that they will automatically occur. Nevertheless, it is expected that the GCC petroleum and petrochemical industry will continue to grow in the coming decade, at a level faster than that of the domestic or global economy, given its competitiveness on a global scale. Opportunities should be found to increase industrial output without increasing emissions loads by seeking economies of scale and other efficiencies and employing state-of-the-art technology in modern plants. One commentator has suggested that it is feasible to increase industrial output up to threefold without

¹⁶⁶ UNEP GEO 2000.

¹⁶⁷ Babiker, Mustafa.

increasing emission loads. Refineries in Kuwait, Saudi Arabia and the United Arab Emirates have already pledged to reduce sulphur emissions, gas flaring and other hydrocarbon releases as part of the drive towards efficiency and environmental protection.¹⁶⁸ These and similar initiatives throughout the region should be aggressively pursued to ensure that the potential negative impacts of scale increases in production do not occur. There may also be opportunities to replace inputs into the production process with less hazardous substances. Measures to foster an association among petroleum producers that could begin a process of voluntary environmental standard-setting would be a useful step.

Moreover, methods of treating waste water and hazardous waste need to be examined. Success in averting future damage from increased industrial activity here may depend in part on the level of existing regulatory oversight and enforcement. Regulations covering the following activities are relevant in this sector: siting of new projects, standards for transport, storage, packaging and labelling, industrial sewage and its treatment and emissions.

The EU has among the most stringent systems of environmental regulations in the world covering chemicals. These include directives on testing and notification, standards for classification, packaging and labelling, guidelines for the import and export of dangerous substances, and directives on the nature of the final products in terms of the high level of biodegradability of the surfactants they contain. Given that products entering the European market will have to meet these standards, this may encourage exporters to do so, where they do not already.

Table 36: Overview of potential impacts on air, land and water of production process

Air	Land	Water and Marine zones (including marine biodiversity)
<p>Emission from petrochemical hydrocarbons, and other contaminants such as hydrogen sulphide, HCs, benzene, particulate matter, PAHs, mercaptans and toxic organic compounds.</p> <p>Some compounds breakdown relatively quickly while others take longer.</p> <p>Benzene, only breaks down after a number of days and can attach to rain and can be carried back down to the ground.</p> <p>PCBs are also very slow to break down and can travel long distances by air, being deposited in areas far away from where they were produced.</p>	<p>Threats from transportation of inherently dangerous products.</p> <p>Threats from fire waste products generated in production.</p> <p>Some chemicals (e.g., ethylene glycol, benzene, acrylonitrile, PCBs or PAHs) do not evaporate quickly after settling on the soil and are not broken down in other ways, so emissions into the air can contaminate land and remain in the soil for long periods of time. They can also contaminate ground water.</p>	<p>Use of cooling water in the production processes.</p> <p>Some chemicals (i.e., MTBE, PCBs and PAHs) do not dissolve easily and attach to organic particles and bottom sediment.</p> <p>HCs, mercaptans, caustics, oil, phenols, chromium, ammonia, urea, and effluents from gas scrubbers affect water quality – will impact marine ecosystems to the extent that the refineries are located in coastal regions.</p> <p>Screening of contaminants in marine sediments and biota have revealed low levels of halogenated pesticides, PCBs and organic phosphorus compounds as well as heavy metal concentrations near the old outfalls of chemical plants where there are</p>

¹⁶⁸ UNEP 2000.

		relatively high levels of mercury.
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IX.B.5 Final Use of Petrochemical Products

A final set of environmental issues is associated with the use, disposal and recycling of consumer and industrial products produced from petrochemicals. Across a wide range of petrochemical based and related products, from fertilisers and pesticides to detergents and soaps, there is a need for proper handling and use. The disposal of petrochemical products also poses a significant challenge, involving waste management, and impacts on land, water and air (where incineration is involved). In comparison with other products such as paper, bottles and metals, the recycling challenges can be significant.

The EU has in place the world's highest standards for product safety and product recycling, disposal and waste management. GCC produced petrochemicals used as inputs into European-purchased products will thus have to meet these standards, just as European and other producers have long done. Moreover, it is likely that the trade-induced incentive to capture more of the European petrochemical-related marketplace, and to service it from world-scale plants in the Gulf, will induce GCC producers to operate those plants in order to produce at this high standard for all their markets, both at home and abroad. Constantly changing large integrated plants to produce through different processes for different markets involves costly inefficiencies that producers will seek to avoid. The appeal of the new European market could thus lead to healthier, safer, more environmentally friendly producers in the domestic marketplace in the Gulf region. More broadly, the FTA could induce greater integration between GCC and European firms, as SABIC's recent takeover of DSM Petrochemicals suggests. This would give GCC firms an in-house awareness of, and an easily available capacity to meet, the highest standards in the world.

IX.B.6 Social impacts

The results of the general modelling exercise carried out for this SIA suggests that a prospective EU-GCC FTA results in larger welfare gains for the Gulf countries than in Europe. It indicates that GCC consumers will get the opportunities to enjoy imports of chemicals, machinery, and transport equipment, among other major categories of trade goods, at internationally competitive prices, with little trade diversion. *On the production side, the source of the welfare benefits can also be traced to greater gains for GCC exporters in response to greater depreciation of the exchange rate under the proposed FTA, rather than preferential access to the lucrative EU market for imports.*

There are a number of issues related to social well-being that deserve some attention, however, in the context of the petrochemicals sector, and the spatial scope of this assessment, the EU-GCC relationship, particularly given the potential for rapid development in this sector. First and foremost, are the potential impacts of increased production of petrochemicals on human health and worker health (see chapter IX.B.6.1). Second, in the context of this SIA, employment is an important issues that will be considered in chapter IX.B.6.2, including the role of women in the sector.

IX.B.6.1 Human Health

The petrochemicals sector, and the upstream and downstream sectors associated with it include a range of products that are inherently hazardous to health, as inputs, in production processes, and with respect to the final products. These hazardous chemicals pose varied risks to human health. For example, they may cause acute poisoning or burns, or have long-term effects such as chronic

health problems, cancer, fetal damage and reduced fertility. The longer term effects are typically more difficult to quantify.

Increases in the production of petrochemicals will lead to increases in air pollution due to the increased combustion of fossil fuels required in the production process. Chapter VIII.H.1 already discussed the potential health-related issues with this increased pressure on air quality. In addition, a number of emissions are released during the production process which can cause damage to human health (see above section on the environment). For example, some PAHs may reasonably be expected to be carcinogens. Some people who have breathed or touched mixtures of PAHs and other chemicals for long periods of time have developed cancer. In addition, PCBs are probably carcinogenic to humans. Women who were exposed to relatively high levels of PCBs in the workplace or ate large amounts of fish contaminated with PCBs had babies that weighed slightly less than babies from women who did not have these exposures. Babies born to women who ate PCB-contaminated fish also showed abnormal responses in tests of infant behaviour. Some of these behaviours, such as problems with motor skills and a decrease in short-term memory, lasted for several years. Other studies suggest that the immune system was affected in children born to and nursed by mothers exposed to increased levels of PCBs. There are no reports of structural birth defects caused by exposure to PCBs or of health effects of PCBs in older children. The most likely way infants will be exposed to PCBs is from breast milk although transplacental transfers of PCBs have also been reported.

The actual chemicals and the substances that are produced are also inherently dangerous to human health (see annex XII.GG). Some products, such as benzene, are known human carcinogens, and can lead to leukaemia.¹⁶⁹ The final consumer products manufactured in this sector include a range of chemical products, fertilisers, plastics, resins and other products that, that can in and of themselves be damaging to health and whose use and disposal must be carefully regulated.

Other substances of general concern are persistent organic pollutants (POPs). As their name suggests, these substances are persistent, meaning that they break down very slowly in the environment. They therefore enter food chains, being transferred from one species to another and becoming more concentrated in the process. There is a serious risk that environmental concentrations of some pollutants may reach levels that make it difficult to repair the damage before their effects are detected.

Risk of exposure to a number of these chemicals is highest in the workplace, and for some to a lesser extent among the general population. One key variable which will determine the risks to the general population associated with any increase in export-oriented production is the extent to which production facilities and disposal sites are located in or near urban areas, or near major water sources, or coastal areas (i.e., with the possibility of effecting desalination plants).

In the workplace a number of products that are used in, or produced by, the petrochemical industry are extremely hazardous, particularly to workers who might come into contact with them on a day-to-day basis. Without information on the levels of protection for workers in the facilities in the GCC it is difficult to make any judgement about their safety. However, it is worth noting that in order to protect workers from hazardous levels of exposure, there needs to be ambient air quality standards in the workplace and short and longer term exposure limits in place for those chemicals which pose a risk.

¹⁶⁹ European Commission. White Paper: Strategy for a future Chemicals Policy. COM (2001)88final.

The extent to which the countries of the GCC employ technologies for the control of emissions from production facilities, have rigorous standards related to the disposal and treatment of hazardous materials, and have comprehensive reporting systems with regard to the health and safety aspects of the petrochemical industry, these potential impacts could be mitigated.

In general, it is likely that an EU-GCC FTA will, over time, create pressures and incentives for GCC petrochemical producers to move toward highest level, world class health, environmental and safety standards, both in their products and in their production processes within the Gulf states, if they have not already achieved these levels. The GCC's world-class firms using world scale plants to produce for a global market have an incentive to operate according to a single, high level system, to avoid regulatory barriers, product liability lawsuits, and negative reputations effects in their most demanding and lucrative markets, notably the EU, North America and Japan. While a short term surge in demand might overwhelm the current supply of such high level systems, there will be a strong demand for Gulf firms, governments and societies to fill the need.

IX.B.6.2 Employment

The demographic profiles of the GCC countries vary considerably, although they share similar characteristics including a large expatriate work force and a large portion of young people. It was already discussed that the influx of the expatriate work force has a dramatic impact on the demographic profile of the GCC countries (see also chapter VIII.B). A striking fact is also that the proportion of males between ages 15-64 is much larger than that of females, presumably due to the large influx of male expatriates.

The petroleum and petrochemical sector in the GCC is the second most important employer at a regional level in the manufacturing industries, employing 18.4% of the workforce in the manufacturing industries in 2000 (not including Bahrain). This ranges from a low of 9.6% in Oman, to a high of 23.6% in Saudi Arabia (see Table 37 below). Value added per employee in this sector is extremely high compared to the other manufacturing industries ranging from 527 % of the average value added per employee over all manufacturing industries in Kuwait, to 400 % in Qatar, down to 229 % in Oman. (See annex XII.Y, Table 118).

It is not surprising, therefore, that jobs in this sector (broadly defined) are relatively well paid. For example, average wages in Qatar, Oman and Kuwait were US\$29,467, US\$9,450 and US\$24,097, respectively, in 2000—well above the average wages across all sectors in those countries (see annex XII.V, Table 88 up to Table 92). Average salary levels, at least in Qatar and Kuwait, suggest that the jobs generated in this industry are relatively highly skilled, requiring higher levels of training and education.

From an employment perspective within this region, the petrochemical sector is by far the most important in Saudi Arabia and least to Oman. Nevertheless, it is a significant employer for all countries in the region overall.

Table 37: Activity data for the Manufacture of Chemicals, and Chemical, Petroleum, Coal, Rubber and Plastic products (2000)

	Number of employees	% of total employees in all manufng. Sectors	Average wage per employee US\$ (2000)	Number of establishments	Number of employees per establishment
Bahrain	..	..	..	..	..
Kuwait	12,313	15.81	24,097	62	199
Oman	3,127	9.62	9,450	68	46
Qatar	3,692	11.65	29,467	23	161

Saudi Ar.	74,113	23.56	..	667	111
UAE	23,467	13.31	..	383	61

(..) indicates data not available. Source: adapted from ESCWA 2001.

Saudi Arabia has by far the largest number of establishments in the region. They are relatively large, employing an average of 111 people per establishment. This compares with Oman, where this sector is least important, with 68 establishments, which are relatively small, employing an average of 46 people per establishment. Kuwait and Qatar has even fewer establishments than Oman, but they are much larger. On the other hand, the UAE has 383 establishments, which employ an average of 61 people, suggesting that typically they are medium-sized, or alternatively that there are some very large ones and some very small ones.

The structure of employment is divided very unequally along gender lines in the GCC region. For example, in Saudi Arabia, only seven per cent of the total work force is made up of women. In addition, comparisons between the estimated earned income between female and males in the GCC countries in 2000 indicates that females earn around one-quarter of men in terms of PPP US\$ (see Table 61 in annex XII.O). In the U.A.E, the only country where gender-related employment data was available, in 1999 eight per cent of total senior officials and managers were women and 25 per cent of professional and technical workers were women. However, there is growing pressure through the education system, to expand areas where women might work in the GCC. Unemployed women are typically secondary school graduates while unemployed men are generally primary school graduates or lower. Therefore policies to improve access to labour markets, including better defined educational and training programs (see below) geared to the private sector, will contribute to the attainment of a greater share in the overall labour markets of citizens within the GCC. The current prohibition on labour unions might also decrease the broader gains that are available in the manufacturing sector generally and the petrochemical industry in particular.

FTA induced export led petrochemical industry expansion is thus likely to have several employment enhancing effects. It is likely to increase demand for Gulf nationals in these industries, where an adequate or expandable appropriate supply should exist, given the presence of a petrochemical industry in the region since 1976. Second, the counter cyclical nature of the industry should provide an employment cushion when the basic petroleum industry slumps. Third, the emergence of world class Gulf based and owned petrochemical MNC's should provide more attractive employment, which state of the global art wages, benefits, associated firm supported social services, and opportunities for service and promotion on a global scale.

Given the high skill levels required, the premium on research and development and the location of work in the petrochemical industry, it could be more open over the long term to employing women (particularly given relatively high literacy rates and increasing attention to education for women), certainly compared, with, for example, the basic petroleum industry where a different corporate culture and work conditions prevail.

IX.C IN-DEPTH SECTOR SPECIFIC ASSESSMENTS: THE ALUMINIUM SECTOR

IX.C.1 Introduction to the world of aluminium production

After steel, aluminium is the most widely used metal in the world. Global production of primary aluminium has doubled from less than ten million tons in 1972 to more than 24 million tons by 2002.¹⁷⁰ Russia and China¹⁷¹ are major producers of primary aluminium, accounting for 31% of total world production, followed by America with 30% and Europe with 17% (the EU_15 accounts for 11%), Australia 9%, Asia 8% (including GCC) and Africa with 5 % of total world production.¹⁷² The production of aluminium involves refining the ore, bauxite, into alumina and transforming alumina into aluminium through smelting & electrolysis.¹⁷³ The primary Aluminium Industry includes bauxite mining, alumina production and production of primary aluminium (unwrought aluminium). The secondary aluminium¹⁷⁴ industries entails the semi finished product fabrication (wrought aluminium), component or part production and aluminium recycling (see annex XII.HH for an overview of primary and secondary aluminium Industry).

IX.C.2 Aluminium Production Cycle: a Global Business

IX.C.2.1 Bauxite mining- Alumina production

The main raw material for aluminium is bauxite, which is extracted from bauxites mines. More than 138 million tonnes of bauxite are mined each year¹⁷⁵. The major locations of deposits are found in a wide belt around the equator. Bauxite is currently being extracted in Australia, America, Africa, Asia and Europe. There is no bauxite mining activity in the GCC countries. Bauxite mining in Europe is located in Greece, Hungary and Yugoslavia. Greece is the main bauxite extracting country in Europe with 2,052 million tonnes a year. The total world share of bauxite production in Europe declined from 4,1% in 1991 to 2 % in 2001.

Bauxite has to be processed into pure aluminium oxide (alumina Al_2O_3) before it can be converted to aluminium by electrolysis. An average of 4 to 5 tonnes of bauxite are needed to produce two tonnes of alumina, from which one tonne of aluminium can be produced.¹⁷⁶ In 2001, 53 million tonnes of alumina were produced worldwide. The main alumina production areas are Australia and America. There is no alumina production in the GCC countries. The main alumina refineries in Europe are located in Ireland, Spain and Italy. The total world share of alumina production in Europe declined from 14% in 1991 to 11,4 % in 2001 (see annex XII.II for more details)

¹⁷⁰ World Metal Statistics, World Bureau of Metal Statistics, Ware, England, 1991-2001

¹⁷¹ Russia and China are the major producers of the eastern countries, which also include Kazakhstan, Ukraine, Azerbedjan, Hungary and Romania.

¹⁷² Garzia, C. and E. Mollona (2002), Aluminium for the Transportation Industry in Europe, Milan: Egea.

¹⁷³ Sustainability impact assessment of proposed WTO negotiations: sector studies for market access, environmental services and competition, mid term report, Institute for Development Policy and Management university of Manchester, December 2002

¹⁷⁴ In this paragraph, the secondary aluminium industry consists of the semi-fabrication industry and the aluminium recovery and recycling industry.

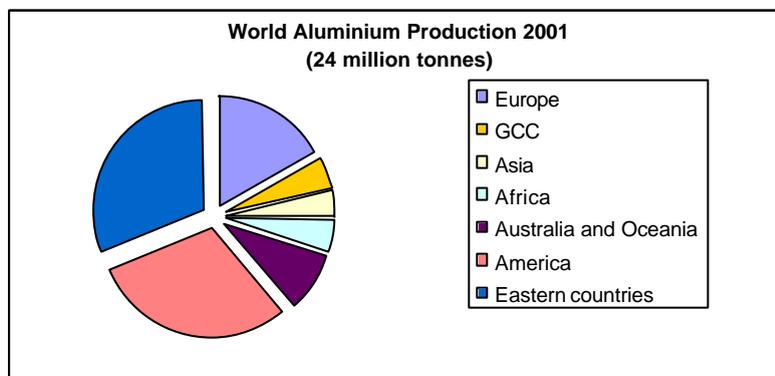
¹⁷⁵ World Metal Statistics, World Bureau of Metal Statistics, Ware, England, 1991-2001

¹⁷⁶ EAA Environmental issues in the Aluminium industry,

IX.C.2.2 Primary aluminium production

Primary aluminium is produced in reduction plants of aluminium smelters, where pure aluminium is extracted from alumina. The reduction of alumina into liquid aluminium is done at around 950° Celsius in a fluorinated bath under high intensity electrical current (electrolysis).¹⁷⁷ Aluminium smelting is a very energy intensive enterprise. Therefore the electricity is often generated specifically for the aluminium plant.¹⁷⁸ The smelting process is continuous. A smelter cannot easily be stopped and restarted. If production is interrupted by a power supply failure of more than four hours, the metal in the pots will solidify, often requiring an expensive rebuilding process. This is why the world's smelters are located in areas with access to abundant and reliable power resources (near hydro-electric or nuclear power plants, near location with abundant fossil fuel resources). Russia and China (belonging to 'Eastern countries' in Table 35, see below) are the main production areas of primary aluminium (res. 3,3 and 3,5 million tonnes in 2001).¹⁷⁹

Table 38: World Aluminium Production 2001



The GCC's market share in aluminium production doubled almost in ten years from 2,3% to 4,4% in 2001 (a change of more than 90%). There are two main production areas in the GCC, Bahrain and United Arab Emirates with a production of respectively 0,522 and 0,536 million tonnes in 2001.

¹⁷⁷ EAA Environmental issues in the Aluminium industry,

¹⁷⁸ To ensure a continuous power supply in an emergency, DUBAL is able to import up to 200 MW of electricity from the DUBAI Electricity and Water Authorities power station in neighbouring Jabel Ali.

¹⁷⁹ See Annex 4. Table World Aluminium Production

Aluminium Production	1991	2001	Share 1991	Share 2001	Change in Share
	(1000 tonnes)		(%)	(%)	('01-'91, %)
Bahrain	214	522	47,2	49,3	4,5
United Arab Emirates	239	536	52,8	50,7	-4,0
GCC	453	1.058	100	100	

In 2001, aluminium production in Europe accounted for 17% of world aluminium production. Although this is still a high percentage, the global European share declined from 1991 with 11%. Norway, Germany and France are the main producers of primary aluminium with res. 26%, 16% and 11% of total European production in 2001 (see annex XII.JJ, Table 130 for more details).¹⁸⁰

IX.C.2.3 Secondary Aluminium Industry

The output of the semi-finished aluminium fabrication includes rolled aluminium sheets, extruded aluminium profiles and aluminium casts. The main sectors that use aluminium are transport, packaging and construction. Aluminium is also highly recyclable. The energy costs of producing aluminium from recycled scrap are far lower than the costs of production from alumina. Aluminium is recycled by means of remelting. A large number of secondary refineries have been established, converting new and old aluminium scrap¹⁸¹ into foundry ingots, deoxidiser for the steel industry, extrusion billets, rolling ingots and master alloys.

The production of semi manufactured products (rolled aluminium, extruded aluminium, wire, cable, forgings) increased in the EU-15 from 4,45 million tonnes in 1991 to 6,06 million tonnes in 2002. Total amount of produced rolled and extruded aluminium in 2002 is 5,82 million tonnes. In Europe, recycling quantities of aluminium scrap increased in 1991 from 1,77 million tonnes to a level of more than 2,63 million tonnes of aluminium in 2001^{182,183}. The aluminium recycling industry in Europe accounts for 33% of the world aluminium scrap recovery industry (approx. 8 million tonnes). The top three end use markets for Aluminium products in Western Europe in 2002 were, transport 33%, building 20% and engineering 13% (see annex XII.KK for more details).

The GCC is to a certain level engaged in the secondary aluminium industry. In Bahrain, Garmco produces 120,000 tonnes of cold-rolled aluminium coil and sheets annually. Garmco is located next to one of the world's largest aluminium smelters, Aluminium Bahrain (ALBA). This ensures

¹⁸⁰ See Annex 5 Table European Aluminium production statistics per country

¹⁸¹ New scrap is surplus material that arises during the production and fabrication of aluminium products up to the point where they are sold to the final consumer. Old scrap is the aluminium material, which is recovered after aluminium article has been produced, used and finally collected for recycling.

¹⁸² World Metal Statistics, 2001

¹⁸³ In Europe, total aluminium scrap recycling accounts for 3,5 million tonnes, of which only 2,63 is in aluminium castings.

that GARMCO has a secure source of quality raw material.¹⁸⁴ In the GCC there is a very small activity of scrap aluminium recycling in Bahrain. This industry decreased from 2000 tonnes aluminium in 1991 to 1000 tonnes in 2001.¹⁸⁵

IX.C.3 Export Flows of Primary Aluminium in GCC and Europe

Export of primary aluminium is possible when the region or country has a production surplus. In reality trade flows can still occur if some specialised types of aluminium cannot be produced locally even if there is a production surplus. Production surpluses are estimated based on the production quantities in a year and the amounts of primary aluminium consumption for each identified country/region in the same year. Differences between the calculated product surplus and the real time exported quantities are to be explained by possible stock values of primary aluminium and less than perfect statistics. The world's primary aluminium consumption in 2001 was 23,52 million tonnes.¹⁸⁶ The GCC share is 1,3 % or a consumption of 295,000 tonnes of primary aluminium per year. Europe is becoming less important as a producer (4,11 million tonnes) but is a major consumer (5,77 million tonnes) and its share of the world consumption is around 25 per cent in 2001 (see also annex XII.LL). Table 40 combines production and consumption quantities, as reported in *'The World Metal Statistics, 2001'*, to obtain insight in production surpluses and associated export possibilities or import requirements for Europe and the GCC region. This table includes numbers of plants in each country. This also gives an insight in the market structure of primary aluminium.

Table 40: Production and consumption of primary Aluminium in the GCC and the EU

Primary Aluminium 2001	Production	Consumption	Surplus	Potential for Export?	# Plants ¹⁸⁷
	(1000 tonnes)				
GCC	1.058	295	763	YES	2
United Arab Emirates	536	34	502	YES	1
Bahrain	522	261	261	YES	1
Europe	4.113	5.771	-1.658	NO	34
EU_15	2583	5111	-2528	NO	22
Austria	0	201	-201	NO	0
Belgium	0	327	-327	NO	0
Denmark	0	44	-44	NO	0
Finland	0	37	-37	NO	0
France	469	761	-292	NO	4
Germany	652	1.552	-900	NO	5

¹⁸⁴ <http://www.garmco.com/page11.htm>

¹⁸⁵ World Metal Statistics, 2001

¹⁸⁶ World Metal Statistics, 2001

¹⁸⁷ www.world-aluminium.org/production/maps/index.html, d.d. 2000

Greece	162	210	-48	NO	1
Ireland	0	8	-8	NO	0
Italy	188	756	-568	NO	2
Netherlands	293	155	138	YES	2
Portugal	0	0	0	/	0
Spain	376	508	-131	NO	3
UK	341	433	-93	NO	3
Sweden	102	119	-17	NO	1
EU Candidate countries	265	517	-252	NO	4
Slovenia	76	116	-40	NO	1
Hungary*	34	223	-189	NO	1
Poland*	45	139	-94	NO	1
Slovakia*	110	39	71	YES	1
Croatia	0	38	-38	NO	0
Iceland	243	3	240	YES	2
Macedonia	0	3	-3	NO	0
Norway	1.068	253	814	YES	7
Switzerland	36	161	-125	NO	1
Yugoslavia	108	19	89	YES	1

* (part of eastern countries in other tables, and in the World Metal Statistics not included under Europe)

From the table above we can conclude that almost all EU member states including the new member states are net importers of primary aluminium except for the Netherlands and Slovakia. Both have relatively small production surpluses. There is no net export capacity for the enlarged EU at present.

As indicated in previous table, the production of primary aluminium in the EU candidate countries is rather limited. There is no comparative advantage identified in energy supply or production between the smelters in the candidate countries and the European smelters. This draws to the conclusion that at present there are no reasons for delocalisation of European smelters towards the EU candidate countries

The GCC, on the contrary, has a surplus of 763,000 tonnes of primary aluminium spread between the UAE and Bahrain.

In the UAE there is a production surplus of 503,000 tonnes in 2001. It effectively exported 452,754 tonnes of aluminium in 2001. Of these exports the EU represents 20 per cent or 91,269 tonnes. It has only one producer, called Dubal. The UAE also imported a limited amount of aluminium and aluminium alloys, 23,385 tonnes in 2001.¹⁸⁸

¹⁸⁸ World Metal Statistics 2001

Bahrain has also only one producer, Aluminium Bahrain (ALBA). ALBA produced 522,749 metric tonnes in 2001, of which 51.0 per cent was exported (264,651 tonnes).¹⁸⁹ No data is available on specific exports to the EU but if we assume similar shares as in the UAE, Bahrain's exports to the EU would be approximately 52,930 tonnes.

We can estimate the total export from GCC to Europe to be approximately 144,199 tonnes (52,930 tonnes from Bahrain and 91,269 tonnes from the UAE), or 9 % of total estimated¹⁹⁰ European primary aluminium imports (1,658,000 tonnes) in 2001.

In monetary terms these exports flows can also be observed (see below). The EU exports very small quantities of aluminium products in all stages of the production cycle to the GCC. Instead the GCC has a large trade surplus in primary aluminium (143 million € in 2001). Furthermore in the market for semi-finished products the GCC has also a trade surplus, albeit a modest one. Note that almost all exports of semi-finished products out of the GCC into the EU stem from Bahrain (see annex XII.MM).

¹⁸⁹ Bahrain Monetary Agency, Annual Report 2002, <http://www.bma.gov.bh/cms/media/BMAEng.pdf>

¹⁹⁰ see Table market structure of primary aluminium production industry

Figure 9: Comparison aluminium production cycles EU – GCC

	Unwrought primary aluminium			Wrought secondary aluminium	
	Bauxite mining	Alumina production	Aluminium production (smelting)	Semi-finished products	Recycling ^a
Quantity (million tonnes)					
World market shares (%)					
<i>GCC</i>	0	0	1,06	0,12 ^b	0,001
	0 %	0 %	4,4 %	<i>n.a.</i>	0,01 %
<i>EU</i>	2,24	5,88	2,58	5,82	2,38
	1,6 %	11,0 %	10,7 %	<i>n.a.</i>	33 %
Number of plants (#)^c					
<i>GCC</i>	0	0	2	1 (<i>Garmco</i>)	(1 ?)
<i>EU</i>	3	7	22	279	273
Trade Values (Million €) between GCC and Europe 2001 (source Eurostat 2003)					
<i>EU to GCC</i>	0,05	2,01	2,29	8,69	/
<i>GCC to EU</i>	0	0	145,65	9,38	/
<i>Trade-balance EU</i>	0,05	0	-143,37	-0,69	/

^a Recycling quantities and world share estimates based on aluminium scrap recovery data from World Metal Statistics 2001 ^b Estimates from European Aluminium Association and website Garmco ^c Source: European Aluminium Association (data 2002) combined with data from the World aluminium Association

IX.C.4 Primary aluminium production: the focus for the SIA

When one compares the production cycles between the EU and the GCC it appears that EU companies are active in all stages of the aluminium production cycle with a strong presence in the final stage of the aluminium production, i.e. the smelting of aluminium, and the secondary stages where the semi-finished products are produced. The GCC for its part, has only major activities in the smelting of aluminium and some activity in the secondary phase of aluminium production (see).

It seems logical that the GCC, having an abundant supply of energy resources, has a potential comparative advantage in the energy intensive production step of aluminium smelting. It clearly has made an effort in the last decade to seize this advantage and has aggressively increased its production. On the other hand, within the EU the aluminium sector is not the only potential consumer of the -already scarce- energy sources. Competition of other sectors for this scarce resource, have decreased the competitiveness position of the aluminium-smelting sector in the EU. This has caused a fall in the share of the EU in the worldwide production. The importance of energy decreases in the secondary stages of aluminium production. However, proximity to customers can improve competitiveness in this stage of production. Therefore EU producers of

semi-finished products have faced less competition from the GCC than aluminium alloy producers as can be seen in the trade statistics between the EU and the GCC.

The EU is a major producer of primary aluminium and semi-finished aluminium products. Nevertheless its consumption exceeds production, making the EU a net importer. On the other hand, the GCC is a small consumer and a sizable exporter of primary aluminium. We estimated the total volume of primary aluminium exported from the GCC to Europe in 2002 to account for 9 % of total European primary aluminium import.

Therefore it is likely that an FTA between the GCC and the EU has the most impact on those production stages of the aluminium sector where both are competitive. This is clearly the case for the production of primary aluminium and to a much smaller extent for the secondary phase of semi-finished products. Therefore our sustainability impact assessment will focus predominantly on the primary aluminium production industry, i.e. the melting of alumina into unwrought aluminium.

IX.C.5 Environmental aspects of primary Aluminium production

With regard to the environmental aspects of the aluminium sector all stages of the life cycle of aluminium should be considered. From the mining of bauxite mining, the production process, to the final consumption and recycling. In the following paragraphs we discuss the major environmental aspects related to the production of primary aluminium because they will probably be treated by the FTA (see discussion above).

IX.C.5.1 Greenhouse gas emissions from primary aluminium production

Anthropogenic greenhouse gas emissions are considered to be the main cause for climate change. The UN considers this a sustainability issue of global scale. The aluminium industry, due to its energy intensity is identified as one of the global contributors to this sustainability problem¹⁹¹.

The smelting process to convert alumina into aluminium requires electrolysis at very high temperatures, in a way that producing one kilogram of aluminium requires an average of 15 kWh of electricity.¹⁹² Through the production of electricity greenhouse gases can be emitted. Furthermore, smelter during the melting process, i.e. the consumption of the carbon anodes¹⁹³, can also cause emissions of two types of greenhouse gases, i.e. CO₂ and perfluorocarbons (PFCs).

The industry has a long tradition of improving the efficiency of its energy consumption. Average energy consumption has fallen by 70% over the past hundred years. In the 1950's the average electricity consumption for the conversion of alumina in aluminium was of about 21 kWh per kilogram. In 1999 the energy need was reduced with 40% in the newest smelters. A European example of improved energy efficiency is the world largest aluminium rolling mill in Germany¹⁹⁴.

¹⁹¹ Combustion of fossil fuels causes emissions of CO₂, the most common anthropogenic emitted greenhouse gas.

¹⁹² European Aluminium Association, Aluminium for future generation – Progress through dialogue, 2003, Brussels, p.23

¹⁹³ During the electrolysis electrical current passes from the anode to a cathode at a temperature of approximately 950 C° which reduces alumina molecules into aluminium and oxygen and other waste.

¹⁹⁴ EAA Environmental issues in the Aluminium industry, 33 p., 1998

The surplus heat from the waste cleaning system is used for heating neighbouring houses. In The GCC, the Dubal smelter utilises exhaust heat from the gas turbines to generate steam, which is used to produce additional fuel free electrical power via a cogeneration system. The residual steam is then transferred to a seawater desalination plant¹⁹⁵.

IX.C.5.1.1 Emissions from electricity production

49 % of the world's primary aluminium produced in 2001 used electricity stemming from hydro-electrical power (see annex XII.NN). Due to the large quantities of electricity necessary for the production of primary aluminium some companies are located near remote hydro-electrical power stations where alternative customers for the electricity are limited¹⁹⁶. Hydro-power is a clean, CO₂ free and renewable energy source¹⁹⁷ but one should not forget that hydro-electric power can have other negative environmental and social impacts, in particular those regarding the construction of large hydro-electric dams, as identified by the World Commission on Dams¹⁹⁸.

Other typical energy sources for the production of electricity are the traditional fossil fuels, i.e. coal, oil and natural gas that all emit CO₂ and other polluting emissions (e.g. Sulphur, NO_x, etc.). They represent respectively 36%, 1% and 9% of the energy sources for the production of electricity used in the global primary aluminium sector.

Finally electricity can also be produced with nuclear energy. Just as hydro-power this is a clean and CO₂ free energy sources but also in this regard several other issues related to sustainability can be raised such as safety and long-term waste problems. Just 5 % of electricity used in the global primary aluminium sector stems from nuclear energy.

IX.C.5.1.2 Emissions from electricity production in Europe

Electricity used by the European smelters comes from specific dedicated power stations or from the national grid. Taking both types of electricity supply into account the major energy sources for the electricity supplied to the European primary aluminium industry are Hydro-electricity with 40,5 per cent and Nuclear electricity with 23,6 Per cent This implicates that in Europe more than 60 per cent of the electricity is produced with greenhouse gas emissions-free energy sources. On average, CO₂ emissions from electricity generation for the primary aluminium industry in Europe were estimated to be 0,367 kg CO₂ per kWh of electricity produced.¹⁹⁹ In Europe, aluminium smelters use an average of 15 kWh to produce one kilogram of primary aluminium. The combination of these figures, gives us an average emission of 5,5 kg CO₂ per kilogram of aluminium produced in European smelters. According to the data of The World Metal Statistics, the EU-15 produced 2,58 million tonnes of primary aluminium in 2001,

Table 41: Electricity production distributed by energy source

Hydro-electricity	40.5%
Nuclear-electricity	23.6%
Hard Coal	17.5%
Brown Coal	7.7%
Natural Gas	5.5%
Crude Oil	5.1%

Source: EAA 2000

¹⁹⁵ <http://www.dubal.co.ae>

¹⁹⁶ See for instance the plans for the construction of a 322,000 ton aluminium smeltersmelter by Alcoa in East Iceland, <http://www.alcoa.com/iceland/en/home.asp>.

¹⁹⁷ EAA Environmental issues in the Aluminium industry, 33 p., 1998

¹⁹⁸ Final report of the World Commission on Dams: *Dams and Development: A New Framework for Decision-Making*, November 2000.

¹⁹⁹ EEA, 2000

which represents a total amount of emissions from electricity production just over 14 million tonnes of CO₂ in 2001.

However, the previous analysis is based on the production in Europe as a whole, including important production countries as Norway and Iceland. These two countries represented respectively 2,4 % and 23,4 % of the European production in 1990 and increased to respectively 5,9 % and 26,0 % in 2001. Important to note is that most of the electricity production used as input for the aluminium sector in these countries is generated by renewable energy sources without any greenhouse gas emissions. For instance, electricity production in Norway is largely based on hydropower (over 90 %) ²⁰⁰. In Iceland the combination of hydropower and geothermal power brings the total of electricity production based on renewable energy sources close to a 100 % ²⁰¹. Also future planned increases in production in these countries will be largely based on electricity produced in the same manner ²⁰².

If one would exclude primary aluminium production based in these two European countries, the energy sources used to produce electricity within Europe and thus the EU for this industry would certainly tilt a lot more towards fossil fuel based energy sources with consequently higher CO₂ emissions per ton aluminium produced. Therefore the above numbers of an average emission of 5,5 kg CO₂ per kg aluminium produced in European does underestimate CO₂ emissions per kg aluminium produced in the EU. Regretfully no precise data could be found with regard to CO₂ emissions from electricity generation for the primary aluminium industry in the EU itself.

IX.C.5.1.3 Emissions from electricity production GCC

Within the GCC there is an abundant supply of natural gas in Bahrain and the United Arab Emirates. Due to limited capacity for natural gas exports (not enough Liquefied Natural Gas terminals) natural gas becomes a relatively cheap input for electricity production. Natural Gas is the energy source for electricity production within both countries, also for the primary aluminium industry.

The CO₂ emissions from electricity production with natural gas are estimated to be between 0,36 kg and 0,58 kg per kWh of produced electricity ²⁰³. Assuming that the smelters in the GCC operate as efficient as the ones in Europe and use on average 15 kWh of energy to produce one kg of primary aluminium we get average emissions from electricity consumption of between 5,4 kg and 8,7 kg CO₂ per kg of aluminium produced in the GCC smelters.

According to the data of The World Metal Statistics, the GCC produced 1,058,000 tonnes of primary aluminium in 2001. With both data, we can estimate the total GCC CO₂ emissions by electricity generation to be between 5,7 and 9,2 million tonnes of CO₂ in 2001.

IX.C.5.1.4 Process emissions in Europe

²⁰⁰ Source: Web-site from the Norwegian government, <http://odin.dep.no>

²⁰¹ Source: Web-site from the Icelandic government, <http://government.is>

²⁰² See for instance the plans for the construction of a 322,000 ton aluminium smeltersmelter by Alcoa in East Iceland which will use electricity produced by hydropower, <http://www.alcoa.com/iceland/en/home.asp>.

²⁰³ Gas-Turbine Cycle power stations emit 0,58 kg CO₂ per kWh electricity produced. The most efficient natural gas based power stations, i.e. Gas + Steam Combined Cycle power stations, emit 0,36 kg CO₂ per kWh electricity produced. Source: Eurelectric 2003.

The PFCs that are emitted through the electrolysis process have been reduced in the European aluminium industry from 16 million tonnes of CO₂ equivalent in 1990 to 4 million tonnes in 2000. PFC emissions were estimated in Europe to be 0,67 tonne of CO₂ equivalent per tonne of primary aluminium in 2000²⁰⁴. Note that these emissions are well below the 1,2 tonnes estimated globally. With a production volume of 2,58 million tonnes of primary aluminium in the EU in 2001, we can estimate the PFCs emissions to be an equivalent of 1,74 million tonnes of CO₂.

The average CO₂ that is emitted through the electrolysis process in the European smelters was reported to be equal to 1,74 tonne of CO₂ per tonne of primary aluminium produced. This is equal to the reported global average of 1,7 tonnes. Again, by the extrapolation of this last figure with the total production volume a total amount of emissions of 4,49 million tonnes of CO₂ can be estimated.

IX.C.5.1.5 Process emissions in the GCC

Data about PFCs emissions in the GCC are not available. However, the millennium review of Dubal mentions significant reductions of PFCs emissions over the last decade. Global average PFCs emissions are equal to 1,2 tonnes of CO₂-equivalent²⁰⁵. One could assume that the investments by the GCC to reduce its PFCs emissions have resulted in PFC emissions somewhere between the European average and the global average, resulting in global PFCs emissions equivalent to between 0,7 and 1,3 million tonnes CO₂ equivalent.

No data has been found on CO₂ emissions through the electrolysis process itself in the the GCC smelters. But when one assumes identical numbers as the European and Global average one gets total emissions of 1,8 million tonnes CO₂.

IX.C.5.1.6 Comparison of total Greenhouse gas emissions between the EU and the GCC

When one compares the greenhouse gas emissions from primary electricity production between the two regions it becomes clear that aluminium production within the GCC does not necessarily need to be more polluting than in the EU. There is even the possibility that it is higher within the EU than the GCC because there are higher CO₂ emissions from the production of electricity within the EU than in overall Europe (see chapter IX.C.5.1.2) On the other hand, CO₂ and PFC emissions in the GCC depend on to what extent they utilise the most efficient natural gas powered power stations and operate state of the art electrolysis process that limit PFCs emissions efficiently. If this is not the case one can estimate that in the worst-case scenario the GCC's primary aluminium industry emits 47% more greenhouse gas emission per tonne of produced aluminium than the EU's industry (see Table 42). Note that both in the GCC and the EU over 69 per cent of the greenhouse gas emissions stem from the electricity consumed during the electrolysis process.

Table 42: Greenhouse gas emissions from primary aluminium production EU - GCC

Average emissions (tonne CO ₂ /tonne aluminium)	EU (Europe)	GCC
CO ₂ emissions from the production of electricity consumed	5,5	5,4 - 8,7

²⁰⁴ Source: European Aluminium Association: GHG emissions

²⁰⁵ Presentation by Jerry Marks of the International Aluminium Institute, 'The aluminium sector story - Industry Partnerships - From Generic Standards to Sector Specific Tools', for the WBCSD-WRI side event during the 18th sessions of the subsidiary bodies of the United Nations Framework Convention on Climate Change, 12/06/2003, Bonn

CO2 emissions from the electrolysis process	1,7	1,7
PFCs emissions from the electrolysis process (CO2-equivalent)	0,67	0,67 – 1,2
Total Average emissions (tonne CO2 equivalent /tonne aluminium)	7,9	7,8 – 11,6
Total production (million tonnes of primary aluminium)	2,58	1,06
Total CO2 emissions from the production of electricity consumed	14,2	5,7 - 9,2
Total CO2 emissions from the electrolysis process	4,4	1,8
Total PFCs emissions from electrolysis process (CO2-equivalent)	1,7	0,7 - 1,3
Total greenhouse gas emissions (million tonnes CO2-equivalent)	20,3	8,2 – 12,3

Even though greenhouse gas emissions might be higher within the EU than in the GCC, one should take into account the fact that the EU will commence with internalising the external costs of these emissions within all its industries with large greenhouse gas emissions by the implementation of the EU emission trading system that will commence in 2005²⁰⁶ and will include most large point sources of CO₂ emissions including electricity production. Implicitly this emission trading system will constitute a market based mechanism that will reallocate CO₂ emissions to those industries that can generate most value added and will be a further impulse for innovating in technologies that reduce these emissions. This system is created within the EU in order to contribute to the targets of reduction of CO₂ emission set for the EU in the Kyoto Protocol. However, the reduction targets of the Kyoto Protocol do not bound the GCC countries²⁰⁷ and apparently no mechanisms have been foreseen within the GCC to internalise the externalities caused by emitting greenhouse gases by its industries. Hence, one could argue that increases in the production of primary aluminium in the EU have less impact on the environment because such increases in production and thus greenhouse gas emissions can only happen if this would lead to similar reductions of greenhouse gas emissions in other industries within the EU.

In this context, when we compare the greenhouse gas emissions between the GCC and the EU, we should consider the impacts of the above-mentioned EU legislation on the competitiveness of the EU aluminium smelters. This bilateral comparison reveals the unequal market conditions between the GCC smelters and the EU smelters, due to the different commitments by the aluminium producing countries under the international conventions on Climate Change. The EU smelters will have higher costs (and lower margins) in their production of aluminium, due to the higher cost of energy production under the EU legislation. Trade liberalisation between the GCC and EU should consider this and take measures to create level playing field market conditions for both actors.

IX.C.5.2 Other air emissions

Fluro-polycyclic hydrocarbon (PAH) emissions and fluoride emissions are considered to be the single most important direct pollutants from aluminium smelters.

²⁰⁶ This EU emission trading system is foreseen in Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC.

²⁰⁷ On 29 September 2003 none of the GCC countries had even ratified the Kyoto Protocol.

In Europe, process and technological improvement over the years resulted in a major reduction of air emissions. Latest anode production techniques limited the PAH emissions to approximately 0,05 kg per tonne. All European smelters today are equipped with gas cleaning systems, and nowadays fluoride control systems achieve emission levels of less than 0,5 kg F per ton of Aluminium.²⁰⁸

Exact data of air emission reductions in the GCC are not available. Investments to improve their installations and related emissions are mentioned in the websites of the GCC.

One of the most important environmental aspects of the production of primary aluminium is its intensive energy use and the related greenhouse gas emissions. Most of these emissions stem from the production of the electricity that is required in the electrolysis process used to produce primary aluminium. The EU's primary aluminium industry consumes electricity produced from a combination of energy sources, some which have no greenhouse gas emissions, i.e. hydro-electricity and nuclear-electricity. On the other hand, the GCC industry uses basically electricity produced from natural gas, which does emit greenhouse gases. Depending on the type of power stations used within the GCC and the amount of non-CO₂ emissions emitted in the electrolysis process, the GCC's average emissions per tonne of aluminium produced are equal or 47% higher than those in the EU.

IX.C.6 Social aspects of aluminium industry

IX.C.6.1 Health and safety aspects in Europe

Health and safety are top priorities for the European aluminium industry, which compares favourably to other manufacturing industries. This is reflected in accident statistics, which have declined in aluminium production sites. In 2002, the European Aluminium Association reported 5 Lost Time Incidents (LTI) per million hours worked in the primary aluminium production industry.

IX.C.6.2 Health and safety aspects in the GCC

Both smelters in the GCC have reporting systems with regard to health and safety aspects. As part of Alba's new safety programme, Alba has set the goal to reduce the number of Lost Time Incidents on the plant by 20 per cent each year. In 2002 there was a reduction of LTI from 14 to 9. The objective for 2003 was exceeded by one incident. In 2000, Dubal registered less than one lost time accident per 200,000 hours worked.

Comparison of data between the GCC and Europe is difficult because the GCC accounts for 2 sites, where Europe accounts for 34 sites. Nevertheless the comparison between 5 LTI in the whole European industry and 9 at Alba does indicate that the safety aspects are still ahead in Europe compared to the GCC.

IX.C.6.3 Employment in Europe

Total European aluminium industry directly employs 237,000 people in the European Union, Norway, Switzerland and Turkey.

²⁰⁸ IAI International Aluminium Institute, The aluminium industry's sustainable development report,

According to a study in Greece²⁰⁹ on the aluminium cycle from the metal production to the final products used in buildings, the human factor plays a significant role in the value of an aluminium product. In fact an installed window has eight times the value of the primary metal used, taking the same quantity as a reference. The last aluminium transformation stage employs 75 times more manpower in relation to the production of the same quantity primary metal.

In order to estimate the employment in the primary aluminium industry, we take the data from the company Alcan as the basis. In 2002, there were 11,900 employees working at 16 smelters of Alcan. Together they produced 2,238 million tonnes of primary aluminium. At the Alcan smelters, an average of 188 ton of aluminium was produced per employee in 2002.²¹⁰ Extrapolating this figure to the total aluminium production of the EU (according to the World Metal Statistics there were 4,113 million tonnes produced in 2001), the estimated work force in European primary aluminium industry was 22,000 people in 2001. Applying a similar estimate to the EU-15 and the New Member results in respectively 13,740 and 1,400 employees.

IX.C.6.4 Employment in the GCC

At Dubal in the United Arab Emirates, there were 2,712 people employed in 2000²¹¹. At Dubal smelter, an average of 198 ton of aluminium was produced per employee in 2000. Dubal smelter accounts for 50,7% of total aluminium production in the GCC 2001. Assuming that the Alba smelter works as efficient, we estimate the total work force in the GCC's primary aluminium industry at 5,349 people.

The human resources website of Dubal indicates a specific procedure to job applications for UAE citizens. In 2000, only 388 of the 2,712 employees or 14 % of the workforce at Dubal were UAE nationals. The firm continues to implement hiring policies and programmes that aims at further expanding the proportion of nationals in the company in the future. Again by the extrapolation of the data on both ALBA and Dubal we estimate that of the total workforce of 5,349 employees only 765 are GCC citizens.

The FTA could have on a limited scale an impact on health and safety aspects of the workforce in Europe and the GCC, more important will be the impact on employment within the industry and than specifically for the GCC the share of own citizens within this workforce.

IX.C.7 Trade issues

IX.C.7.1 Market protection and tariffs

When discussing tariff issues for aluminium one needs to encompass the full range of processing, from the ore that is mined and refined up to the semi-finished products. Globally speaking, the market access issues affect different countries at each stage of the market chain and the current situation is in general one of tariff escalation. Tariff rates increase with the degree of processing, from bauxite to refined alumina to smelted primary aluminium to semi-finished products. The

²⁰⁹ Aluminium Association of Greece, The aluminium cycle in Greece, 2002.

²¹⁰ Alcan facts, 2003, <http://www.alcan.com>

²¹¹ Millennium review Dubal, p. 13

demand for the ore and concentrates, from which the metal is made, is derived from the demand for the metal, which in turn is a derived demand from the semi-manufactures using the metal.²¹²

Tariffs on aluminium and semi-finished products vary between 6 and 7,5 per cent in the EU²¹³. The EU tariff on primary refined aluminium is 6 per cent. On the other hand, the basic raw material bauxite enters the EU free of duty. Within the GCC tariffs on aluminium and semi-finished products are on average 5 per cent, also in the UAE and Bahrain.

Prices in the primary aluminium industry are not very elastic. For instance, the aluminium price in Europe is composed of several elements: the London Metal Exchange (LME) reference price, a local premium (for transport and insurance) and a special EU premium "DDP" (reflecting the current 6 per cent duty).

As such, prices are set on the world market (LME). This implies that the liberalisation of trade in primary aluminium requires multilateral world negotiations and not bilateral as to enable win-win situations for all market players involved.

IX.C.7.2 Pricing of energy input

The GCC has large reserves of natural gas, estimated at 29 % of proven global reserves (see Table 134 in annex XII.OO). At the moment it only produces 6,5 % of global production, representing 164 billion cubic meters of the natural gas production in 2002. Of this production only a limited amount is exported outside of the GCC. Transportation of natural gas involves pipelines or liquefying natural gas at a LNG (Liquefied Natural Gas) Terminal and transportation with an LNG tanker. Due to the long distance to the main world market for natural gas the only viable option for GCC exports is transportation through LNG terminals and tankers. LNG terminals and tankers are very capital intensive and require substantial investments. At the moment only 3 countries in the GCC have LNG terminals, i.e. Oman, Qatar and the UAE (see Table 135 in annex XII.OO). Those three countries exported in 2002 a total of 33,4 billion cubic meter natural gas, accounting for only 20 % of the GCC's production.

Due to this logistical constraint on the exports of natural gas from the GCC, demand of natural gas is oriented to the local demand. Given the fixed export capacity, sufficient production capacity of natural gas results in low prices on the local market. This gives the local aluminium industry a comparative cost advantage because it has at their disposal a low cost energy resource to produce the necessary electricity. For instance, in Bahrain there is a sizable production of natural gas of 9,4 billion cubic meters in 2002 (see Table 136 in annex XII.OO)²¹⁴. But Bahrain has no exports at all of natural gas. Of this local supply Alba consumes on its own a whopping 34 %.

European producers of aluminium are concerned that these local prices of natural gas are kept artificially low by the local governments, as such constituting an unfair trade advantage.

²¹² Sustainability impact assessment of proposed WTO negotiations: sector studies for market access, environmental services and competition, mid term report, Institute for Development Policy and Management university of Manchester, December 2002

²¹³ Source: EC Market Access Data Base

²¹⁴ Table 136 lists production in cubic feet. The conversion rate to cubic meter is: 35,31 cubic feet = 1 cubic meter. This gives a production for Bahrain in 2002 of 9,4 billion cubic meters. Note that Table 134, with data from another data source, lists a production of 9,2 billion cubic meters.

Nevertheless, due to the logistical constraints related to the export of natural gas through LNG terminals (the absence of these terminals in Bahrain and Dubai), it is difficult to require local natural gas prices to be as high as the international market prices. A possible solution could be found by increasing the gas export capacity of the GCC, resulting in a reduction of the price gap between the local GCC markets and the international markets of natural gas. However, this is out of the scope of the EU-GCC FTA negotiations. Chapter V.J.1 on Foreign Direct Investment already discussed the limitations and restrictions on foreign investments that potential foreign investors face within the GCC. Even if they are allowed to invest and get the necessary licences, they still experience different tax and regulatory treatment than local companies (see in chapter V.J.1 for some examples).

Foreign aluminium smelters do not have the same opportunities to invest in the GCC or to benefit from the comparative local advantages as local smelters. With respect to the FTA, foreign investors seek to invest and compete freely and fairly obtaining the same benefits and facing the same restrictions as the local competitors within the GCC.

The aluminium smelting industry was predominantly a state business in the GCC. Both Alba and Dubal are controlled by the state²¹⁵. But apparently the Bahrain government is planning to attract foreign investment in the aluminium sector. They have signed a Memorandum of Understanding with Alcoa, its major alumina supplier that could eventually lead to a 26 % stake by Alcoa in Alba. It would allow Alcoa to participate in the planned expansion of production at Alba²¹⁶. Also in Oman there are plans for the construction of an aluminium smelter, for which foreign co-funding is envisaged.²¹⁷ Even though this exemplifies willingness by the GCC countries to be more open for foreign ownership, it is still clear that foreign investors still need to count on approval and goodwill of the present governments in order to be able to invest in these industries.

IX.C.8 Sustainability impacts assessment for the primary aluminium sector

IX.C.8.1 Economical impacts by free trade agreements between GCC/EU

IX.C.8.1.1 Production

The primary aluminium industry was not included in the economical model as one single industry. Nevertheless, we can use the base metals sector of the economical model to predict impacts for the primary aluminium sector under different trade scenarios. Other products grouped under the base metals sector -such as iron, copper and ferrous products- can be filtered from aluminium. The data used in the economic modelling exercise reported average exports of the base metals and metal products equal to 838,817 million US\$ in the period 1999-2001. According to the data of Intracen, aluminium accounted for over 97 % of these exports in 2000 and 99% in 2001. Therefore it is not unreasonable to assume that the base metals and metal products in the model can be used as a proxy for the primary aluminium sector in the Bahrain. A similar reasoning can be applied to the UAE where exports of aluminium were according to Intracen²¹⁸ in

²¹⁵ At present the shareholders of Alba are the Government of Bahrain (77%), the SABIC Industrial Investments (20%) and Breton Investments (3%).

²¹⁶ Source: <http://www.alcoa.com>.

²¹⁷ Source: <http://www.gulfnews.com>, "ADWEA in Sohar smeltersmelter talks", 05-05-2003.

²¹⁸ The International Trade Centre UNCTAD/WTO (Intracen) reports exports from Bahrain in 2000 / 2001 of base metals and metal products equal to 796,5 / 833,1 million US \$, of which aluminium represented 776,8 / 825,2 million US \$. For the UAE the report an export number for 2001 equal to 777 million US \$, www.intracen.org.

2001 equal to 777 million US\$ whereas in the economic model the base metals sector in United Arab Emirates accounted for an average of 754,3 million US\$ exports in the period 1999-2001.

Of course for the EU this reasoning cannot be applied because the import and export data of the base metals and metal products sector contain also large quantities of other metals such as iron and steel. Nevertheless we will still use the numbers from the economic modelling to assess the direction of impact of any FTA.

The extrapolation of the results the base metals and metal products sector of the economic model to the aluminium sector depicts for the customs union increases in aluminium exports of 9 % in Bahrain and 12 % in the UAE. On the other hand, the FTA between the EU and the GCC, has lower increases of exports for the GCC with 7,5 % for Bahrain and 11,5 % for the UAE. In the CU scenario, local producers can benefit from the margins of preference that they have under their CU and can therefore increase their exports within the GCC at the cost of foreign competitors. Contrary to the FTA, they lose these margins of preference compared to their EU competitors and therefore the impact on exports of the FTA in the GCC is lower than the GCC on its own. But specifically for the aluminium sector this is probably a wrong conclusion.

The economic model probably overestimates the impact on GCC exports in the CU scenario and underestimates the impact in the FTA scenario. This is due to the fact that we extrapolate from the results of the base metal and metal products sector, a sector that is confronted with much higher average tariffs in the GCC and much lower average tariffs in the EU than the aluminium sector²¹⁹. The CU would reduce the internal tariffs to 0% within the GCC but the positive effect on exports of base metals and metal products within the GCC is likely to be an overestimate compared to the aluminium sector which has at present already lower tariffs. Instead when the FTA lowers import tariffs in the EU to 0 % will probably have a much larger positive impact on exports of the GCC to the EU because the aluminium is still relatively higher protected within the EU.

In the modelling exercise the EU Base metals and metal products sector experiences in both the CU and FTA scenario's a decrease of exports and an increase in imports, even though the impact is limited with decreases in exports of 0,2% and less and increases in imports of 0,43% and less. Also here the same reasoning for the aluminium sector can be applied as for the GCC whereby it is likely that the impact on exports and imports is an underestimation leading to higher imports and lower exports for the EU aluminium sector than projected by the modelling exercise.

This results in large increases of producer surplus in both Bahrain and the UAE with an overall beneficial impact on welfare within these countries. Extrapolating from the model, in Bahrain the aluminium sector would be mainly responsible for the increase on average of 1 % of economic welfare under the CU and FTA scenario's, good for between 15 and 20 % of the total improvement of economic welfare for Bahrain under the CU and FTA scenario's. This is a considerable impact mainly due to the large size of the aluminium sector within the relatively small economy of Bahrain. Numbers for the UAE are less spectacular with increases in economic welfare of less than 0,2 %. In the EU, Producers lose and consumers win from trade liberalisation, both in the CU and FTA scenario's but in all cases consumers win more than producers lose leading to an increased overall welfare, albeit negligible on a relative basis.

The conclusion of the modelling exercise for the primary aluminium sector is clearly that both the CU and the FTA will increase exports from the GCC considerably, roughly at 10 %. For the EU

²¹⁹ Average MFN Import tariffs in the EU on base metal and metal products are set at 2,8 %, instead of 6 to 7,5 % for aluminium. Average MFN Import tariffs on base metal and metal products are set at 11,7 % in Bahrain and 11,1 in the UAE instead of an average of 5 % for aluminium.

instead imports will increase and exports decrease albeit at small percentages. But as said these could be underestimates of real impacts in the EU due to the fact that we have to extrapolate our conclusions from numbers for the whole base metal and metal products sector. Within the GCC, the aluminium-smelting sector is clearly in the lift. Several investment projects are being planned (see Box 8) that would increase production in the coming decade from just over a million tonnes per annum to 2,8 million tonnes per annum making the GCC a larger producer of primary aluminium than the EU.

Box 8: Planned production increases in the GCC region

Bahrain: Alba is currently building a fifth production unit that will increase capacity with 307000 tonnes per annum at that should enter production at the end of 2005. Alba envisages a similar investment in a sixth production unit in Partnership with Alcoa (see also **Error! Reference source not found.**) that would bring production well over 1100000 tonnes per annum²²⁰.

UAE: Dubal is currently expanding its capacity from 540000 tonnes per annum to 710000 tonnes per annum²²¹.

Qatar: Dubal from the UAE is planning the start up a joint venture in Qatar with an eventual production capacity of 516000 tonnes.

Oman: Plans are being made to start a new smelter in Oman with a capacity of 500000 tonnes per annum²²².

Although it is difficult to assess the economic viability of all these proposed investments and thus to what extent they will be actually carried out, it is clear that production will continue to increase within the GCC. Note that worldwide consumption is expected to increase from 24 million tonnes in 2002 to over 30 million tonnes²²³ in 2006. GCC increases in capacity already represent a large share of the necessary increased capacity of these 6 million tonnes. At the same time China, which used to be a big net importer and the fastest growing market, is expected to become a net exporter of aluminium in the coming years due to an aggressive expansionary policy.²²⁴ Therefore GCC's exports will need to go to other growth markets and therefore become more present on the EU market, certainly if import tariffs are reduced due to the FTA. To what extent this will have an impact on EU smelters is unknown. Consumption in the EU is forecast to continue to increase. Although EU production has been increasing over the last decade, it has not been able to keep pace with increases in consumption. Probably the same will be the case in the future even though it is not possible to put a number on the amount of consumption increases in the EU that will be covered by import increases from the GCC.

²²⁰ Source: www.alcoa.com

²²¹ Source: www.gulfnews.com, 'Dubal in Qatar smeltersmelter venture', 26/05/2003

²²² Source: www.gulfnews.com, 'Adwea to invest in Sohar aluminium smeltersmelter in Oman', 16/09/2003

²²³ Source <http://www.ame.com.au>.

²²⁴ Potential increases of export to China are limited, because the potential increases of primary aluminium consumption in China is likely to be met by the strong growth of production in China itself.

In the long run, due to production increases in the GCC, market penetration by the GCC in the EU is likely to increase, especially under a system with the FTA, since it more profitable (see further). Hence this increase of import is more likely to be detrimental for other import countries (e.g. Russian imports) without FTA.

Here again, a multilateral approach is to be considered and not a bilateral.

IX.C.8.1.2 Pricing

It is highly unlikely that the abolishment of the 6% tariff of primary aluminium will resort in a change of the price level of primary aluminium in the EU. Thereto, there are several reasons:

- Inelasticity of the price setting: the price is reflecting the world demand and supply for primary aluminium. Changes of trade patterns between EU and GCC would therefore not have a big impact on the LME price. At the moment the volumes of the GCC are too small to influence the world market price. (See also comments in trade issues)
- Approx. 70 per cent of current EU primary aluminium imports are entering the EU already duty free (e.g. ACP, other existing FTA, etc). The above-mentioned DDP premium is applied to all EU consumers. According to the trade statistics, GCC aluminium imports would only add a little to these 70 per cent, and therefore might not have an impact on the DDP premium.
- Tariff reduction will (most probably) increase the profit margin of the GCC aluminium smelters: it will absorb the 6 per cent tariff reduction as extra profit.

The EAA was unable to provide us with information on the impact of the EU smelters. As such we could not compare the shifts in profitability. Hence this is only relevant in the scenario that prices would drop, which is not our observation, nor the position of the European Aluminium industry. Given these considerations, it is unlikely that it will affect the margins of the EU primary aluminium sector in a dramatic way.

Overall, we observe that the FTA will impact the competitiveness on the world market. The GCC aluminium sector will enhance its position when comparing the situation of the EU primary aluminium industry, and this due to:

- The extremely low cost of their energy (see IX.C.7.2 Pricing of energy input)
- The non internalisation of Kyoto-costs (see IX.C.5 Environmental aspects of primary Aluminium production),
- The additional increased profitability margin of 6 %

As such, the European primary Aluminium industry does not see any positive effect for the EU from any tariff reduction, not in the short-term or in the long-term. Consequently, it is the position of the EAA that a bilateral tariff reduction with the GCC is not acceptable, unless mitigation measures are taken to compensate this comparative loss. These might consist of:

- Unconditional foreign direct investment possibilities in the GCC (See IX.C.7.2 Restrictions on Foreign Direct investment in the Aluminium Sector)
- Equal access conditions for EU companies to energy in the Region

Considering the impact of bilateral tariff reduction, we should enlarge our focus to the entire EU aluminium industry, because as previously said, a tariff reduction impacts all sub-sectors of the industry.

As to the question, whether dislocation of production of primary aluminium will occur away from Europe, due to the FTA in re., it is highly unlikely: the existing capacity in Europe is not so easy to migrate and new opportunities in other countries will be taken with capacity retention in the EU. It is not so easy to dislocate these factories for technological and investment reasons.

The secondary industry in Europe, however, is highly vulnerable to bilateral trade changes because the market conditions in Europe vary widely from the market restrictions in other countries, such as the GCC, especially the recycling industry. As stated, recycling quantities of aluminium scrap increased in 1991 from 1,77 million tonnes to a level of more than 2,63 million tonnes of aluminium in 2001^{225,226}. The aluminium recycling industry in Europe accounts for approximately 33% of the world aluminium scrap recovery industry (approx. 8 million tonnes). Most of those companies are SME (employing thousands of people). A FTA on aluminium could put an additional growth burden on this growing sector in the EU, with as well economic, environmental and social externalities: a shift from highly regulated environments (social and environmental) to less regulated environments (e.g. China and GCC) is more than likely.

To mitigate these effects, we would like to emphasize that, together with aforementioned mitigation measures, a step-by-step process of liberalisation is necessary, preferably from a multilateral perspective, given the specific market drivers that mould the pace of development in this sector.

IX.C.8.2 Environmental impacts by free trade agreements between GCC/EU

The main environmental impact of aluminium production lays in the way the electricity needed in the process is generated and the overall environmental emissions during the process. As previously discussed, the environmental impact of the electricity generation is most significant.

Due to the existing environmental legislations and enforcements in the EU, aluminium smelters in Europe invested since year in the cleanest way to produce aluminium, influencing the margins for the aluminium producers. The new EU legislation with regard to greenhouse gases will guarantee a production taking into account global welfare, but will also bring new additional costs for the EU aluminium production. The main environmental impact of the FTA EU _GCC is to be expected from GHG emission changes due to production changes in the EU and the GCC. There will probably be a production increase in the GCC and no decrease of production in the EU (the impact on the European Primary Aluminium will be limited by the price setting mechanism), due to the FTA. The share of the imports from the GCC in the EU will increase to the detriment of the existing importing countries. Note that the planned production increases in the GCC are higher than the expected export increases due to the FTA.

If there is a positive production change in the GCC, the GHG emissions will increase and will be higher than if there was the same increase in the EU, due to the internalisation of GHG emissions in the EU enforced by the EU legislation.

Whatever the changes of production, equal restrictions upon GHG emissions will be required to avoid economical distortions.

²²⁵ World Metal Statistics, 2001

²²⁶ In Europe, total aluminium scrap recycling accounts for 3,5 million tonnes, of which only 2,63 is in aluminium castings.

As said in the previous chapter, the FTA is expected to slow down production increases in the EU and replace EU production increases with imports from the GCC. Planned production increases in the GCC are higher than the expected export increases due to the FTA.

The environmental effect of the FTA will be still an increase in consumption of energy in both regions and thus greenhouse gas emissions. Greenhouse gas emissions of the primary aluminium industry on average could well be higher in the EU than in the GCC (see discussion in chapter IX.C.5.1.6). Every substitution of future production away from the EU to the GCC could lead as such to a decrease in overall greenhouse gas emissions, a global pollutant. But as said before in the EU a mechanism is created, the EU emission trading system, that will balance increases in greenhouse gas emissions due to expansion of the aluminium sector with decreases in other industries, as such having no additional negative effect on the environment.. Therefore the FTA and any subsequent substitution of future production away from the EU to the GCC will probably lead to higher emissions of greenhouse gasses overall.

Although it is widely recognised that greenhouse gas emissions are the primary environmental issue for aluminium production, one should also take into account the potential increases in local pollution due to the increased production in the GCC. Typical local pollutions involve fluor and fluoride emissions, suspended particulates emissions, waste generated from the smelters itself, so called Spent Pot Lining (SPL) that has leachable cyanide and fluoride in it, etc. Even though applying modern production techniques and disposal methods can dramatically reduce the impact of most of these environmental issues, it will be crucially for the local environment that they are effectively introduced in the existing and planned facilities in the GCC. On this aspect both existing producers, Alba and Dubal, post on their websites that they live up to the highest environmental standards. UNEP's Global Environment Outlook 2000 reports the following: *'Another success story is the introduction of cleaner production concepts in the old aluminium smelter and a new extension at the Aluminium Bahrain Company. The new technologies reduced fluoride emissions by 98 per cent, total suspended particulates (including poly-aromatic hydrocarbons) by 95 per cent and energy consumption by 15 per cent (Ameeri 1997).'*

IX.C.8.3 Social impacts by free trade agreements between GCC/EU

The FTA could impact the primary aluminium sector in the EU in two ways:

- Future production increases (and investments) will shift away from the EU towards the GCC.
- The current capacity, is not likely to change its production pattern in the short-term, unless there is a potential to increase profitability (e.g. by unconditional FDI possibilities in the GCC (see comparative advantages in the GCC), together with equal access to energy and other services in the region)

Today, the primary aluminium sector employs roughly 22,000 workers in the EU²²⁷. In the event, shifts should take place; this will lead to a decrease of growth of the labour market in this sector, together with unemployment due to dislocation in the EU.

The FTA will create a positive business environment that could stimulate the effective implementation of production capacity investments in the GCC, of up to 200 % over the next decade.

²²⁷ Chapter IX.C.6.3

In the GCC, the FTA (under condition that the aforementioned mitigation measures are taken) will increase the pressure for privatisation of the industry²²⁸. It will increase the pressure to tackle the restructuring of the workforce in the GCC and increase further involvement of nationals.

Today, the primary aluminium sector in the GCC employs approximately just over 5,000 employees.

Currently expatriates represent 86 % of the workforce at the GCC²²⁹ smelters. Special inclusion programs are being developed as to increase the number of employed citizens. In the UAE the share of the expatriates in the total workforce is already higher at 90 %²³⁰ (see annex XII.J, Table 54) so increase in total employment in the aluminium smelters could lead to increased participation of citizens in the overall work force. But the total workforce in the aluminium smelters is relatively small, even for tiny Bahrain, which means that the impact of an increased number of citizens working in the aluminium smelters will be more of a symbolic nature, demonstrating that locals can be employed in internationally competitive and technologically advanced industries with substantial added value. It are these kind of industries that the GCC will need to attract if it wants to create suitable opportunities for its increasing workforce who up to now have been used to relatively lavish positions in government and other public services.

X. Mitigation and Enhancement Measures to overcome social and environmental externalities in the GCC

X.A GENERAL INTRODUCTION

It is expected that the GCC will benefit from the overall economic impact of the EU-GCC FTA by the welfare increasing effect. Some sectors will experience a clear boost in exports and / or net income on top of the CU such as: petroleum, clothing, petrochemicals and aluminium. An increased demand, especially for the machinery and transport equipment sector are likely to occur.

But at the same time, (pre-existing) social and environmental issues will require additional measures to ensure that the people in the GCC in the end enjoy the full benefits and that environmental externalities (pre-existing and following trade) are managed accordingly as to minimize their impact. The traditional idea behind the fact that Trade automatically leads to an overall increase of welfare has been strongly scrutinized in several reports on “the Labour market

²²⁸ Note that at present the aluminium smelters are still largely government owned, but they operate in a private business environment.

²²⁹ Chapter IX.C.6.4

²³⁰ Note that in the private sector this share is even higher because employment in government authorities is almost totally covered by GCC citizens.

effects under CUFTA/NAFTA²³¹”. As such, any development of any kind of mitigation measures should take into account the different economic, social, and political structures and institutions in each country and the strategies and actions of the main actors (see X.C.).

The aforementioned report shows that the NAFTA, despite the North American Agreement on Labour Cooperation (the “NAALC”), have had a generally adverse effect on employment and income conditions of a majority of working people and their families in all three NAFTA countries. The authors state that it is their conclusion that this is not an unintended consequence of these policies: “Underlying these policies are relations of power and its redistribution: from workers to corporations, from low and median income to high income earners, from wages to profits, from governments to the market”.²³²

It is important to acknowledge that quite some “sustainability dilemmas” which are currently present in the GCC: a.o. the way of usage of some depletable resources in some territories (e.g. natural gas and oil) for internal energy generation; the less optimal social working conditions and practices that some (mainly expatriate) workers are currently faced with (e.g. textile sector)- will not be solved through a FTA without specific Agreements that are not only agreed upon in written but are also enforced and monitored accordingly in the field. This to prevent potential risks of and increase of further ecological and social dumping in the GCC region after the FTA.

When investigating possible mitigation and enhancement measures as to combat negative effects of FTA measures in the GCC it is important (1) to understand the links between stakeholder groups and the interrelationship amongst respective impact domains, (2) to distinguish the several possible impacts of trade on the environment and the social environment and (3) to take into account the dynamic effects of the root causes that give away existing and possible future externalities.

X.B HOW TO CHOOSE THE “RIGHT” / “OPTIMAL” SET OF “MITIGATION AND ENHANCEMENT MEASURES” FOR THE GCC?

There are generally two broad ways to identify mitigation measures in a structural way. These ways originate from the classical way of developing policy instruments to overcome environmental externalities. Broadly speaking we can divide them into a normative analysis and a positive analysis of instrument choice. However, the purpose of this Chapter is not to enter into the theoretical description of “those ways”. Hence we do think it is important for the purpose of this study to pinpoint the most important elements of them and more precisely on the positive analysis for the simple reason that the specific position of the GCC becomes quite straightforward.

The normative analysis is mainly based on economic efficiency benchmarking in choosing the set of instruments to be used. Hence, a number of additional criteria can be deployed in this analytical framework as well, leading to quite different final “best options”. Bohm and Russell (1985) have developed a list of such possible criteria:

²³¹ B. Campbell, A. Jackson, M. Larudee, T. Gutierrez Haces, Labour Market effects under CUFTA.NAFTA, Employment and training papers, ILO, Geneva, 1999, 155p.

²³² B. Campbell, A. Jackson, M. Larudee, T. Gutierrez Haces, Labour Market effects under CUFTA.NAFTA, Employment and training papers, ILO, Geneva, 1999, 155p., p.1

1. static efficiency
2. information intensity
3. ease of monitoring and enforcement
4. flexibility in the face of economic change
5. dynamic incentives
6. political considerations

The so-called positive analysis of instrument choice tries to explain why one instrument or combination of instruments was chosen over another (Kathleen Segerson, 1996). Rather than looking at economic efficiency of the measure as such, it will more look at the impact of interrelations and the process of establishing these instruments.

Here, several dimensions are looked at:

1. Political pressure from interest groups
2. Geographical distribution
3. Social / cultural influences

This way of analysing the dilemma of choice of mitigation measures is in our view far much more interesting for the purpose of this study. When applying the positive analysis onto the GCC in this context, some interesting and important observations can be made, given the specific characteristics of the GCC.

- The current clear imbalance of “political pressure power” between the respective stakeholder groups involved (expatriates, women, environmental groups, NGO...). It is to be expected that any kind of mitigation measure (social / environmental) will only be developed as from the GCC to the extent that they are not detrimental to the interests of the “leading” class. To that extent the supposed “theory of political conflict between producer oriented interests and the interests of the environmental and social communities” will not give away what one might expect as outcome in more Western oriented societal structures.
- The geographical distribution of the impacts of the several alternative mitigation instruments will normally impact the choice of instruments. Strategic behaviour will occur amongst the respective political representatives, especially when the improvements in social or environmental dimensions will take the form of a public good where the benefits are widely dispersed. This is for instance the case for mitigation measures whereas subsidies for investment in cleaner technologies would be allowed under the scope of the FTA as to mitigate environmental impacts, or whereas limitations of access to labour market or foreign direct investment (e.g. in real estate) would be allowed as to mitigate social damage. Hence given the close relationships between the economic and political power in the GCC it is clear that in-depth analysis will be necessary to see who is ultimately benefiting from the mitigation or enhancement measures from a sustainability point of view.
- Last but not least, it is such that the choice of the set of feasible mitigation instruments among policy instruments is strongly influenced by the social or cultural tenets of society. By affecting the distribution of costs and benefits, the choice of an instrument establishes entitlements or rights for different groups within society. It establishes who has the right

to protection from environmental and social damage and who has the right to inflict such damages and to what extent (Bromley, 1991). However, the set of instruments is influenced by public perception regarding the acceptability of certain actions, which in turn is influenced by the culture of the society. When projected onto the GCC region a question can be raised to which extent here as well this process will take place. There is not a broad culture of freedom of press; political and economic power and interests are neatly tied into the system and large groups of for instance the working force (i.e. expatriate and women) are not entitled to social and political rights.

In many cases this situation will not lead to the development and enforcement of regulations leading to the internalization of social and environmental externalities as a consequence of the FTA. As such the FTA might not gear the wanted outcomes in terms of sustainable development. Where demands for change or protection are not expressed or heard, changes in policy leading to changes in social structure, environmental protection and technology innovation may not occur in due time.

All this, provides us with the concern that, unless the EU will act as the “voice” of those stakeholder groups that are lacking “influence power” in the GCC during (1) the negotiations of the FTA and (2) the process of development of the mitigation and enhancement measures in the framework, they will not lead to the optimal mitigation measures from a sustainability point of view.

This is even more true, if we depart from the idea that the EU benchmark is its own social, environmental, CSR and /or sustainability views as presented in several recommendations, directives, regulations, white and green papers. Hence, this understands as well the underlying idea that the EU can take this role, which is not clear to us.

Whatever the stipulations in the FTA and its mitigation measures put forward, there is no chance to any sustainable success without acceptance and adherence to these measures by society in the respective regions. This implies that the EU, whilst pushing forward its own sustainability agenda, will need to get buy-in from the GCC as to enable sustainable development process there as well. The most important source of inspiration and reflection on societal models in the GCC, as it is the case for economic models, is the Shari’ah.

Analysis of the interpretation of the principles of Shari’ah, through research²³³ and the interpretation of the Mufti in a variety of economic topics²³⁴ (mainly services, investments and

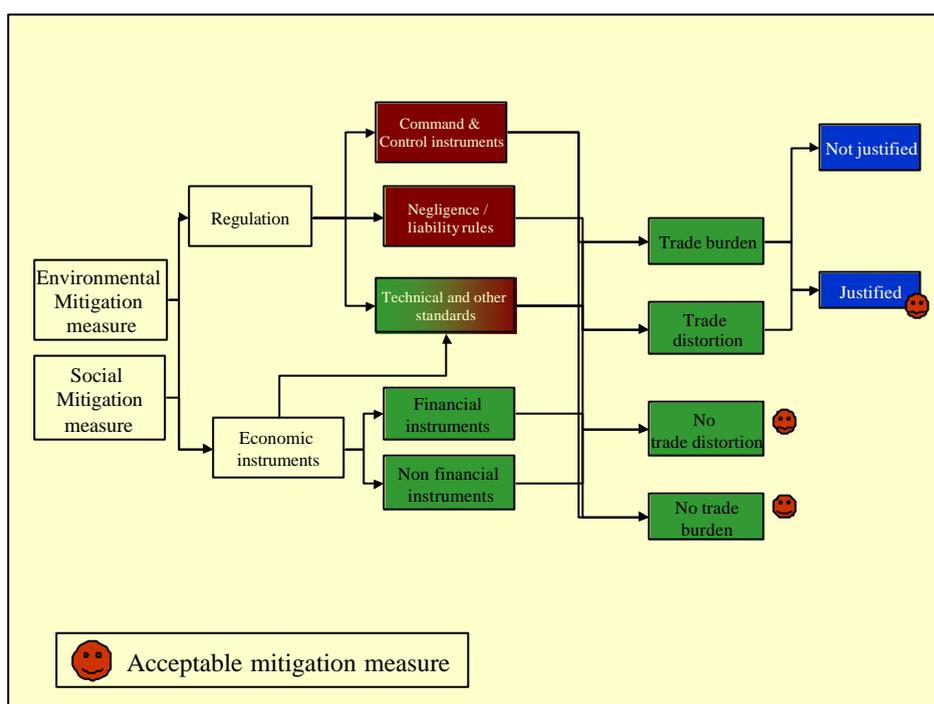
²³³ Julian Arkell, Issues for the Member States of the Islamic Development Bank in the Built-in Services. Negotiations of the General Agreement on Trade in Services (GATS) of the WTO (Synopsis) *Prepared under the joint supervision of the Islamic Development Bank and The United Nations Conference on Trade and Development*, p.79.

²³⁴ Mufti Taqi Usmani, Forward Sales and Manufacturing Contracts: Salam And Istisna, *Source: Al Balagh Webzine*, <http://www.islamic-finance.net/research/taqi4.html>; Mufti Taqi Usmani, How the basic principles of Shari’ah Govern Islamic Investment Funds, *Source: Al Balagh Webzine*, <http://www.islamic-finance.net/research/taqi4.html>, Justice Mufti Taqi Usmani, *The Economic Challenge for the Ummah* [Condensed from a talk by, delivered at the International Conference of the World Muslim Congress.], *Source: Al Balagh Webzine*, <http://www.islamic-finance.net/research/taqi4.html>.

sales of goods) teaches us that there is quite some potential for common ground between the views of the EU and the Shari'ah on sustainable development and social and economic change.

As such, this opportunity deserves further into-depth analysis and comparison. In Figure 10 we depict a general overview of the several mitigation measures that come into the loop. It is such that the respective instruments or measures as depicted have further detailed levels. Each of the actual instruments will in most cases have a legal and / or economic basis. In general, we can state that a mix of instruments deployed will prove to provide the most successful outcome. Hence, the art lays in finding the right balance between the respective instruments and the outputs of them: thereto-detailed information is crucial. One of the most crucial elements that show being difficult in the GCC is accurate information on the respective elements that can influence / are influenced by the trade measures and the instruments that will be deployed.

Figure 10: Overview of mitigation instruments



Not all so-called mitigation measures are acceptable in our view. Only those measures that are 1) not generating a trade burden or trade distortion or 2) those which are generating this burden, but which are justified from a sustainability approach will be acceptable.

It must be said that many environmental and social regulations and economic instruments impose some differential burdens / distortions on free trade. This differential may be relatively easy to see, as when imported foreign products are subjected to obviously different technical (e.g. phyto-sanitarian, environmental) standards compared with domestic products. The same however counts for social standards that are linked to product policies.

As such the challenge for the decision on acceptable mitigation measures resides in developing a decision making framework that will enable parties to decide to which extent some measures are justified nevertheless that they will induce a trade barrier or distort the market which is not justifiable.

In our view, the development of such a framework needs to take place in the specific trade negotiations and on the basis of an agreed upon set of parameters between the contractual parties, on the basis of sufficient and relevant information of the specific problem that needs mitigation or enhancement measures. As we speak of a sustainability framework, it is important to understand that the traditional tools used in economic theories (normative analysis) of analysing the efficiency and effectiveness of measures (e.g. full-cost theory / property rights theory) will fall short in specific areas (such as the discussion of the management of depletable resources).

We provide in section X.F. our view.

X.C THE GCC CHARACTERISTICS

As already briefly mentioned, when analysing the way of getting to enhancement measures for the EU - GCC FTA, there are specific characteristics for the GCC to take into account. The dynamics of these characteristics that some fundamentals that underlie traditional “European thinking” when looking at the “spontaneous” processes that feed and stimulate social and environmental change are not quite fulfilled:

- (1) the lack of presence of powerful “societal” pressure groups and not entirely open freedom for media;
- (2) difficult “democratic” ways to gear, push or generate social change and environmental standards through political decision making;
- (3) the strong “relationship” between political and economic power;
- (4) the repartition between local and expatriate workforce and their distribution over the whole economy (including public services).
- (5) strong governmental interests and control over the economy
- (6) big numbers of the population (local and expatriate) that have no access to specific rights

To that end, the choice of enhancement measures will need to take into account these constraints as these enhancement measures will have other impacts as generally accepted in our Western view of economic policy making theory.

One example to illustrate the specifics of the GCC region is for instance the distribution of labour force in the region. While free trade both in goods and services may encourage greater allocative efficiency (as traditionally / theoretically expected in free trade systems between open economies), we might expect this to lead to a shift from “lower skilled” towards “higher skilled” industries, services and innovation.

Hence, it is clear that the negative scale effects of such economic growth on the social situation of expatriate workers in the GCC (mainly low skilled) will only be offset to a degree largely determined by the regulatory framework (e.g. the development of a social security system). It is up to the political will to impose such discipline on social externalities which ensures that trade liberalization is ultimately welfare / well being –enhancing and that it will mitigate social trade-offs. Given the specific politico-economic and social structure of the GCC region, this is not so evident as one might imagine.

X.D THE MEASURES APPLIED TO THE GCC

In light of what has been said here above, it is such that before entering into discussion of some specific industry related mitigation measures that could be the topic of further investigation we think it being important to analyse the role and function of some mitigation and enhancement measures on the basis of the undertaken GCC sustainability impact assessment and discuss some environmental and social mitigation measures that come to us as interesting

X.D.1 General environmental mitigation and enhancement measures

All of the environmental effects of trade discussed above, whether composition of output, or technology, operate in the context of government policies. Indeed, there is reason to believe that without the increasing stringency of environmental regulation, many of the incentives to alter the character and methods of production so as to reduce waste and pollution would be far weaker.²³⁵

The role of the EU in acting to mitigate the negative sustainability consequences of the EU-GCC FTA could generally be seen as a participant and supporter of efforts already under way in the GCC or as a source of support where new resources are required for those situations where a consensus is still to be built within the GCC.

The increase in externalities can be reduced. Hence one should bear in mind the non-linear relationship between the scale of environmental impact (level of pollution) and growth of trade. This implies that there are other dimensions at work, influencing how growth due in part of trade affects levels of environmental quality. These include the composition of output, technology and policy decisions²³⁶ Environmental technologies can also be accompanied by changes in traditional technologies, such as shifts towards more energy-efficient use of energy sources, which could lower the overall level of residuals and hazards from the manufacturing processes. In these sectors, there is a need for consistent application and policing of industry best practice in environmental regulation. GCC government could develop financial instruments stimulating the innovation processes in these industries or could further develop and enforce environmental regulations. Dependent on the specific industry sector involved different mixes of instruments are possible. Given the focus on reciprocity in the FTA, one might expect a process towards the very same reciprocity on environmental standards.

X.D.2 General social mitigation and enhancement measures

Past public policies in the GCC have provided nationals with ample job opportunities, job security, high salaries and a generous package of fringe benefits that is further supported by an expansive welfare system paid by government. Over the last two decades, this became associated with low participation rates of national manpower in private economy, reduced productivity levels especially in the government sector, underemployment of nationals in the private service sector and, of course, the recent structural, open unemployment of nationals in the midst of having millions of foreign workers meaningfully employed in both the public and the private sectors²³⁷.

²³⁵ Economic Trade and Environmental Protection, C. Ford Runge, in *Environmental policy with Political and Economic Integration*, The European Union and the United States, 1996, Edward Elgar.

²³⁶ Grossman, Gene M. and Alan B Krueger (1991) *Environmental impacts of a North American free Trade Agreement*, Woodrow Wilson Institute for Public Affairs, Princeton University, October 8, 1991

²³⁷ Maurice Girgis, *national versus migrant workers in the GCC: coping with change*, submitted to the Mediterranean Development Forum labour workshop, LTC Techno Economics, Inc. p. 2, 25p

The fundamental challenge the GCC countries are currently facing is excess demand for labor. In brief, the skills shortage in the private sector cannot be met by indigenous labor supply. There are two trends observed in GCC labor markets: (i) for low-level jobs, there is a lack of domestic supply due to high reservation wages among nationals as a result of public sector pay distortions, and (ii) for jobs requiring high skills or expertise, there is little demand for nationals who lack the necessary skills.

It is to be expected that the FTA will generate some incentives and openings as to develop a solid and stable market driven environment in which the local population will get opportunities to develop their professional careers. Hence, we need to be clear that this will not help to solve the whole of the complexity of this long-term problem.

The development of enhancement measures in the framework of social impacts of the FTA will without any doubt be confronted with this major issue for the GCC. To that extent every mitigation measure on the social dimension will finally have to constitute a set of interrelated instruments designed to provide a structural basis to long-term improvement of the social environment.

The apparent skills mismatch can be addressed through education and wage policy, with options ranging from basic education improvements to expanded vocational training to employer-driven training programs, in order to strengthen the skills in particular demand by private firms.

Managing foreign labor not only requires immigration controls but also a conducive macroeconomic environment and mutually reinforcing labor market institutions regarding wage and employment policy, as well as a capacity to enforce immigration rules. As is demonstrated by Kuwait's recent experience²³⁸, it is not enough to establish a stable macroeconomic climate with favorable investment incentives (necessary but not sufficient conditions).

Without comprehensive policies that address these related issues, measures to control foreign labor flows are likely to be ineffective. Policy changes must be considered within the context of the theory of second best; i.e. correcting one distortion will not necessarily lead to a welfare improvement if other distortions remain. In the Bahrain context²³⁹ of distorted public employment and pay policies, for example, it may take a large increase in the price of work permits to induce a significant shift in private employment toward Bahraini nationals. The solution to stem the influx of foreigners into GCC countries is complex. Firm- or micro-level data on employment and wages would be useful in estimating labor demand elasticity in order to quantify the likely employment response to various policy measures. Hence as already mentioned this information is not available.

To that end, the most important objective of long-term reform policies is to *reduce the extent of price distortion* in the factor and product markets. Thus, government efforts to liberalize the trade sector, labor market, banking sector, industrial licensing mechanism, rules governing *Kafalas* (sponsorship) and exclusive business agencies, etc. are quite critical to the process of freeing the region's resources. These resources should be allowed to freely search for the highest rates of return, which should in turn increase productivity, cut down on waste and further the process of economic development. This is a *qualitative* growth that can be accomplished with very little additional physical investment. Opening up the economy, eliminating long-established institutional rigidities, allowing competition in the market place and gradually reducing

²³⁸ World Bank. 1995a. Kuwait: Country economic Memorandum”, Report No 13673-KU

²³⁹ World Bank. 1996. Bahrain: Labour markets”, Report No 14911-BH

consumption subsidies will all have a salutary impact on the labor market, without adding new fiscal burdens on government budgets²⁴⁰.

Bans or restrictions and permit fees as mitigation measures will as such not solve the issue. Current restrictions have given rise to evasion through illegal recruitment and forged documents (a thriving industry) as well as informal trading of permits. Firms employing workers on unofficial contracts can pay lower wages and fewer benefits than stipulated by law, and can impose harsh working conditions on illegal workers who are powerless to complain for fear of deportation. Most evidence suggests that employers retain the premium saved by avoiding levy payments and compensate illegal workers below their legal counterparts; there is some countervailing evidence, however, that savings are passed on to the illegal workers, whose wages are effectively higher than their legal counterparts²⁴¹.

Political fall-out from immigration policy could be minimized if the “losers” vis-à-vis policy changes are foreign workers who do not enter into the welfare function of the host country. This approach still risks negative effects on economic growth, however, especially in the highly segmented GCC economies. In Kuwait, for example, raising the cost of foreign labor is likely to affect private sector firms disproportionately, depressing private output and raising the price of domestically-produced non-tradable goods²⁴². Furthermore, opposition is likely to emerge among those engaged in the thriving secondary market in work permits. Whereas foreign labor management policy is largely effective in Singapore and Malaysia for numerous reasons that include both replicable and unique factors, aspects of political economy are nevertheless determinate in implementing and reforming policy.²⁴³

Without labour market institutions that protect workers’ rights such as firing restrictions, collective bargaining and a legal framework to enforce contracts, fluctuations in product demand are passed quickly to labour demand and thence to the expatriate workers in most cases.

In sum, labour market reforms should focus on the following targets:

- Emphasize productivity growth.
- Revive good work ethics and a commitment to high quality work.
- Be market-driven, whenever possible.
- Be transparent and applicable to the public and the private sector with an eye to reducing duality.
- Be implemented with an eye to cost considerations.
- The substitution of national workforce for expatriates where possible;

²⁴⁰ Maurice Girgis, national versus migrant workers in the GCC: coping with change, submitted to the Mediterranean Development Forum labor workshop, LTC Techno Economics, Inc. p. 20, 25p

²⁴¹ Elizabeth Ruppert, Managing Foreign Labour force in Singapore and Malaysia: are there lessons for GCC countries, World Bank, 38p.

²⁴² World Bank. 1995a. Kuwait: Country economic Memorandum”, Report No 13673-KU

²⁴³ Elizabeth Ruppert, Managing Foreign Labour force in Singapore and Malaysia: are there lessons for GCC countries, World Bank, 38p.

X.D.3 Mitigation measures in the case of a negative trade balance

As we have observed in the economic impact analysis one of the consequences of the FTA is a negative trade balance shift for the GCC in several sectors.

As such this does not mean that this will be at the expense of the local industry (e.g. a negative balance can be related to the extent that there was no or very little export as from the GCC in this specific sector; it can be a consequence of rise of domestic consumer demand, without negative impact on the local production and industry). In theory, this might have a negative impact on the current account of the territory. However this is not the case for the GCC, given their positive current account due to the massive amount of export of oil.

Whatever the impact on the local industry (see further), this growth of import will generate a net rise of domestic demand for medium and highly skilled people as to manage / dispatch / distribute / market the import flows accordingly. In such this situation will create labour and have a positive effect on the domestic economy. On the basis of this, it is normally expected that such a shift towards higher levels of services with generate lower levels of pollution. This change in the composition of output may influence total pollution levels, offsetting some of the scale effects of economic growth through trade²⁴⁴. Nevertheless, attention should be paid to the fact that the shift to services could still have a net negative effect on the environment. Since the development of these services, it could harm the environment by implantations of infrastructure and transport facilities.

When looking at social mitigating or enhancing measures with regard to this increase of demand of skilled people, we can envisage training of local nationals as to replace new or existing expatriate workforces to carry out these kind of activities (medium and high skilled mainly (Arab expatriates mainly)). Given the incremental growth of highly educated women in the GCC-region that are under-employed, specific “training packages” could be developed as to provide them access to these new markets. There are however three specific issues to be dealt with at that level:

- a) The program for replacement of foreigners with nationals - while maintaining current efficiency levels - is not simple.
- b) The gap between public and private wages
- c) cultural barriers

The first one is easier to deal with. It requires specialised technical education and on-the-job-training. An additional measure thereto could be the development of *exchange* programs to share and transfer knowledge and experience between the EU and the GCC in the area of logistics, urban development and transport-related environmental problems. This approach could be used more widely for all urbanization related issues.

The second one, is more complex and will need as well structural changes in several domains. Though the wage gap between the public and private sectors was caused by the government intent to improve its nationals’ standard of living, it has contributed to the misallocation of one of the

²⁴⁴ Dean, 1991 Dean, Judith M. (1991), 'Trade and the Environment: A Survey of the Literature', in Patrick Low (ed.), International Trade and the Environment, World Bank Discussion Papers.

GCC's most valuable resource, namely, its manpower. It is one of the major obstacles facing GCC nationals in finding "suitable job" opportunities in the private sector.²⁴⁵

When we use here "suitable", we mean job opportunities that have the same kind salary package (+ fringe benefits) they get in government.

As to determine to which extent this FTA-effect represents a net gain and net growth of welfare in the GCC region, we need to understand the impact of this import increase on the domestic sector involved (production / sales / distribution / transport / etc...). As such we only look into the production for the same good. We assume that part of the supply chain can be integrated in the import related services (excluding suppliers of the production facilities of course).

Prior to start developing as such mitigation or enhancement measures, it is important to analyse the reasons and the consequences for the local sector. This will primarily depend on what has triggered the growth of import of the said product:

- lack of sufficient domestic production (due to rise of consumption demand for these goods);
- replacement of domestic production (for quality / price /... reasons)
- other / combinations of aforementioned

In general one can state that domestic production will suffer when total import of the said goods is higher than the marginal growth of domestic demand for that specific good or service at a stable domestic production level. Assume that this is the case and that part of the sector is under threat. Mitigation measures (e.g. financial support for these companies by government through subsidies / limits of import of goods / import levies / innovation premiums / etc...) as to mitigate the social / environmental externalities could be envisaged, hence should be focused on the root cause and not on the symptom: e.g. in the event that the reduction of local production has to do with lower quality, higher production costs due to inefficiencies (translated into higher prices), mitigation or enhancement measures should not go for remediation of economic and social damage as such, but look for ways of improving the quality of the products developed (investments in R&D, process improvement and innovation).

This means that some mitigation measures in this case might not be justified (eg subsidies to support the underperformance of the industry). As from an environmental point of view, a decrease in production in the GCC for these sectors, the net -effect of the EU-GCC FTA on trade would be positive, because it could reduce the number of heavy manufactures in the GCC with high levels of pollution.

We think that a backbone built around this common ground could serve as a brick stone for discussing sustainable development (economic, social and environmental) and Trade in the GCC Region and getting buy-in for its concerns and vision. This would gear-up the needed socio-economic and structural changes and developments in the region, and at the same time provide a culturally accepted basis for the region in mitigating social and environmental externalities of the current situation (and the potential impacts of the FTA), whilst keeping and respecting each others historical and cultural identity. There are of course quite some differences in the way how to get there, hence in many occasions this is the question of the "instrumentum" and as such key is, that focus should not be put on the road or the used vehicle to get to a sustainable development

²⁴⁵ Maurice Girgis, national versus migrant workers in the GCC: coping with change, submitted to the Mediterranean Development Forum labor workshop, LTC Techno Economics, Inc. pp.15-16, 25p.

of the regions, but the more on the outcome. We know that this will imply quite some constructions as to make the agreements fit into the EU and Islamic structures, hence, we believe the momentum being far much too important not to seize this unique opportunity to start to work from that perspective: as well from a political, social economic and societal point of view.

X.E SPECIFIC SECTOR RELATED MITIGATION AND ENHANCEMENT MEASURES

The sector specific assessment pointed out that two major industries in the GCC, being petrochemicals and aluminium, would experience a positive trade balance and an export growth. A part from the application of the issues and mitigating measures as described above, we would like to make some additional comments on those two sectors below.

The increase in activities in the petrochemical and aluminium industry, due to trade under the FTA, will have a negative net-effect on the environment and social structure, as indicated in our specific industry analysis. Defining mitigation and enhancement measures to reduce this net effect is opportune.

An enhancement measure to reduce the net effect for the activity increase in the above sectors could be investing capital in innovation and technology improvements. E.g. innovation in new environmental techniques could reduce the net impact on the environment of the GHG emissions in these manufacturing processes.

The impact of the FTA will have a significant impact on the output growth for chemicals. Mitigation measures should concentrate on generating more information on environmental damage and on the impact of existing policy measures so as to refine policy reform priorities and design better policy instruments. As an example to chemicals it is such that export to the EU will need to take into account the responsibilities of the New Chemical Policy (once agreed upon).

The social effects of the increasing manufacturing industries, such as the textile industry, could be flanked by setting standards on the working conditions (health and safety, basic social rights, wages policies, training). Enhancement measures to reduce the effect on the environment could be the enforcement of environmental laws (command or control or market based instruments (eg. levies / allocation of pollution rights on the basis of property rights systems)), incentives for companies to invest in cleaner technologies, such as tax exemptions and R&D subsidies or enforcement of regulation for waste water treatments).

X.F INCLUSION OF SOCIAL AND ENVIRONMENTAL CHAPTERS INTO THE FTA

X.F.1 Introduction: relevance of sustainability focus inside the FTA

The recognition that an interdependent world economy requires international social standards dawned over a century ago²⁴⁶. Interdependent economies are shaped through multilateral and

²⁴⁶ See e.g. Leonard Woolf, *International Government* 150 (1916) (noting that the recognition of international interests was the great social discovery of the last 100 years); Ordway Tead, *The People's Part in Peace* (1918).

bilateral Agreements At the end of the day, it is (international) environmental and social issues that are not adequately managed, that will threaten the long-term success of the FTA²⁴⁷.

To the extent that

- environmental and social issues are already well managed in the appropriate regions and,
- the kind of regulations are comparable in terms of objectives, content, standards and enforcement,

there is less likelihood that conflicts will emerge with the Trade Agreement put in place, and consequently negotiation of the integration of these dimensions will be less difficult as well.

The lesser these conditions are fulfilled, the higher the risk that issues will occur and the more difficult it will be to reach a common view, approach and agreement on these other dimensions.

In both cases, an integrated approach and negotiation of the FTA as from an economic, social and environmental perspective will prove to be the best guarantee as to get to the desired final outcome.

Trade policy is but one of several important elements in the architecture of international economic management: some of the others are public regimes (e.g. IMF, World Bank...); or private and public-private regimes, (e.g. the key stock and commodity markets around the globe, the international clearing system for financial transactions and the numerous international product chains that have become veritable regimes in their own rights²⁴⁸). Hence the overall impact of bilateral trade agreements is to be looked at from a multilateral perspective, which will influence other patterns and regions. The overlap between the economic, the environmental and social dimensions is hardly surprising. This relationship between for instance, the environment and the economy is so close that a 1996 assessment of the WTO discovered that virtually every activity undertaken by the WTO has potentially significant implications for sustainable development²⁴⁹.

Environmental and social processes and change have complex economic consequences and vice versa. Much of environmental and social policy can be viewed as a process to promote or gear structural economic change towards economic activities that are more benign ("sustainable") opposed to economic activities that have high environmental and social costs (we understand by social costs externalities)²⁵⁰.

As reported, there are quite some differences in the way environmental and social issues are being approached in the EU and the GCC-region, as well as there are quite some differences in the political, the economic, the social and cultural context of the respective regions.

It is our view that the development of a FTA EU-GCC without any specific agreements on social and environmental dilemmas, will have distort effects in terms of competitiveness amongst the

²⁴⁷ Konrad von Moltke, Whither MEAs? The Role of International Environmental Management in the Trade and Environment Agenda, International Institute for Sustainable Development, July 2001, 26p., p.8

²⁴⁸ Konrad von Moltke, et al., *Global Product Chains: Northern Consumers, Southern Producers, and Sustainability*. Geneva: United Nations Environment Programme, 1998.

²⁴⁹ International Institute for Sustainable Development, The World Trade Organization and Sustainable Development: An Independent Assessment. Winnipeg: IISD, 1996.

²⁵⁰ Konrad von Moltke, Whither MEAs? The Role of International Environmental Management in the Trade and Environment Agenda, International Institute for Sustainable Development, July 2001, 26p.

economic players in both regions in some sectors (micro-level and sector level²⁵¹) and it is unlikely that it will have a positive effect on the sustainable development of both regions (macro-level). We find it also unlikely that there will be a spontaneous evolution in the EU, and, even more in the GCC, that will mitigate the social and environmental externalities (already present and those which will be created by the FTA), that will push forward the sustainable development in aforesaid regions. Examples in other FTA (e.g. Mexico in framework of NAFTA and NAALC) clearly provide evidence of this critical outcome, even in the event of the presence of a side agreement (perceived as toothless and empty)²⁵².

It is not in the interest of the majority of the businesses and the population in as well the EU and the GCC, to have a FTA without social and environmental chapters (an this as well from a EU and Shari'ah perspective in terms of sustainable development). Strong environmental and social agreements are essential to the long-term success of the FTA²⁵³ between the EU and the GCC.

There to it is necessary to explicitly integrate the relationship between trade, social and environmental aspects in the broader context of this FTA.

This being said, we provide below our view on the following questions that are to be addressed whilst developing such an Agreement:

- The structure: integrated or side agreement
- The kind of standards / rules and objectives: domestic or international standards
- The principles for the agreement
- The dispute settlement procedures

We have based our view with regard to these aspects on the basis of our own reflection of our findings in this exercise, and on the analysis of several studies and papers which have been prepared and developed the last years when analyzing the successes and failures of other FTA and their relationship with environmental and social dimensions²⁵⁴.

²⁵¹ See for instance the In-depth analysis on the Aluminium Sector

²⁵² B. Campbell, (...) Labour Market Effects under CUFTA/NAFTA; International Labour Organisation, Geneva, 1999, 153p., p

²⁵³ B. Campbell, (...) Labour Market Effects under CUFTA/NAFTA; International Labour Organisation, Geneva, 1999, 153p.

²⁵⁴ a.o.: B. Campbell, (...) Labour Market Effects under CUFTA/NAFTA; International Labour Organisation, Geneva, 1999, 153p; Julian Arkell, Issues for the Member States of the Islamic Development Bank in the Built-in Services. Negotiations of the General Agreement on Trade in Services (GATS) of the WTO (Synopsis) Prepared under the joint supervision of the Islamic Development Bank and The United Nations Conference on Trade and Development. Justice Mufti Taqi Usmani, The Economic Challenge for the Ummah [Condensed from a talk by, delivered at the International Conference of the World Muslim Congress.], Source: Al Balagh Webzine, <http://www.islamic-finance.net/research/taqi4.html>; Study on Trade and Investment: Issues for the Member States of the Islamic Development Bank in the Built-in Review of the Agreement on Trade-related Investment Measures (TRIMs) of the WTO (Synopsis) Prepared under the joint supervision of the Islamic Development Bank and The United Nations Conference on Trade and Development, 1999, 63p.,

X.F.2 The structure: integrated or side agreement

The inclusions of social and / or environmental agreements in a FTA can broadly speaking take 2 forms:

- (1) They can be integrated into the FTA itself and form as such one Agreement (e.g. the Agreement on the European Economic Area between European Union and European Free Trade Association countries combines the free movement of goods with a number of environmental commitments, including the incorporation of certain regulations into national environmental laws²⁵⁵ and the Free Trade Agreement between the Government of the United States of America and the Government of the Republic of Chile²⁵⁶) or,
- (2) They can take the form of Side Agreements (e.g. the North American Agreement on Environmental Cooperation (NAAEC) and the North American Agreement on Labour Cooperation (NAALC)).

Whereas one might think that this is just a matter of copies, we believe this choice being much more important. Ultimately, the answer to that question resides in the scope of the Agreement: is it a traditional FTA with the focus on Free Trade or is it an Agreement, which tries to develop Sustainable Trade, in which the social, environmental and economic interests and objectives of the Region are jointly considered. In the event the FTA focuses on the sustainable development of both regions through Trade, only an integrated Agreement will do the job. As such, one might talk about a STA (Sustainable Trade Agreement) instead of a FTA.

Everyone knows that there are structural differences between “Trade Agreements” (which in most case tend to operate with a single set of institutions that are replicated in all domains) and “the Environmental and Social Agreements” (that are forced to innovate institutionally to address the highly complex set of issues they confront). As well that, the more you try to achieve in an agreement, the longer it takes, and the more difficult it is to get to an agreement.

At the other side, it is as well the case that the more agreements you develop, the more the risks you generate:

- for discussion & conflict with regard to the internal hierarchy between those agreements; the evaluation and trade-offs between their “perceived-as-contradictory” or constrained contents;
- that agreements will have different levels of pace in terms of deployment and implementation, whereas you were initially aiming for a broad balanced agreement encompassing different dimensions;
- that the agreements will carry a different set of “teeth”.

²⁵⁵ Council on the European Communities, Agreement on the European Economic Area, arts. 1, 73, and 74 (1992)

²⁵⁶ Free Trade Agreement between the Government of the United States of America and the Government of the Republic of Chile, 6 June 2003, Chapter 19, 11p.

Managing these risks is key to the implementation and outcome of the FTA: it therefore outweighs by far the procedural complications (length of negotiations, complexity of issues to be looked at, etc...) that it will generate.

There to, it is our conclusion that the FTA should integrate environmental and social policy agreements into one Agreement, instead of having several Agreements.

X.F.3 Standards and goal setting

The topic we want to highlight in this paragraph is the kind of obligations / standards or goals that should be part of the FTA EU-GCC on the basis of the current SIA. Again, the choice will depend on the kind of Agreement and what we expect from it as outcome. This will ultimately give away the weight and importance, which is allocated to those sections. We distinguish:

- Good intentions and open promises to aim for improvement and compliance with own domestic rules
- A program (of joint cooperation) to get to the achievement of specific objectives (in terms of outcome), together with action plans that are being generated and followed-up by a joint commission / institution
- A measurable set of minimal agreed-upon international standards that are to be met as a condition for opening the market (sequential / incremental or not)

X.F.3.1 Good intentions and compliance of domestic rules:

An obligation based on each government's own good intentions and standards is the weakest conceivable form of international agreement. Simple reference to promises, compliance and enforcement of domestic law has quite some inadequacies:

- (1) The domestic laws of a country may be inadequate for managing its own social and environmental dilemmas (When laws are inadequate, rigorous enforcement will provide little benefit).
- (2) Assuming that the environmental and social standards in all GCC / EU countries were perfect at the moment of signature of the FTA, the laws are unlikely to remain so. A country that mindlessly enforces an inadequate law would maintain conformity with the provisions of the FTA as well as a country that lowered its law to avoid FTA scrutiny, would also remain in conformity.
- (3) Third, the limitation to these provisions generates the perception that environmental and social law and protection in the given countries is substantially equivalent (which is not the case).
- (4) Oversight of a government's compliance with its own law is more difficult than with an international standard. Any government is the expert on its own law, and a dispute system based on second-guessing of a country's own enforcement will be mired in matters of interpretation and judgment, and could be seen as an infringement of the sovereignty of each country.

- (5) Even if the environmental & social dispute mechanism with respect to domestic law would prove to be effective, it may prove to be of little importance to the environmental and social challenges facing GCC / EU.

In the event that the Social and Environmental chapters would limit themselves, to promises and compliance with

- Present and future domestic rules and standards;
- Existing and future multilateral Treaties which the respective countries would ratify,

it is our view that this would not meet the overall objective.

We therefore stress, that a mix of the 4 categories are important elements that should be included, as to get a balanced Agreement between the EU and the GCC.

X.F.3.2 A program of joint cooperation

Assuming that cooperation on social and environmental matters provides enhanced opportunities to advance “common” commitments on sustainable development in the EU and the GCC, the EU and the GCC should agree, through their relevant ministries or agencies, on a number of cooperative projects, which are to be nominated in the FTA. For instance, following activities could be envisaged:

Overall:

Create a Standing Conference on sustainable cooperation and development of the regions.

Create a fund for assessment that can be devoted to specific issues (on a rotating basis), to feed the dialogue and sustainable development of the social, environmental and economic areas of improvement

Establish a common implementation review mechanism

Improve Social and Environmental Enforcement and Compliance Assurance (through training and exchange of information to enhance each one’s capacity to enforce its environmental laws and regulations, and will develop and strengthen their cooperative relationships to promote compliance, enforcement, and environmental performance)

Sharing Private Sector Expertise. to increase innovation and environmental stewardship by inviting enterprises of each Party to share their experiences in developing and implementing programs that have reduced pollution, including, where appropriate, demonstrating the financial benefits of these measures;

Environment:

Improving Agricultural & Fisheries Practices. The Parties could develop and implement customized development programs for GCC officials, farmers, the food processing industry, fisheries (and other relevant sub-sectors in the food chain) to promote to promote sustainable agriculture and fisheries practices (e.g. appropriate handling of chemical pesticides and

fertilizers, water management) and others which impact food provision (eg marine resources management; protection of the marine and coastal zones; monitoring of oil spills (through technology such as GPS), sustainable fishing, ruff protection (e.g. Dubal project)

Reducing Emissions. To mitigate specific risks from emissions the Parties could seek to develop effective alternatives, which GCC and the EU have committed to phase out under several multilateral environmental agreements.

Improving Wildlife Protection and Management (e.g. coastal and marine conservation)

Increasing the use of cleaner fuels and improve energy management

Social:

Development of a communication and awareness program, which highlights the equal social and economic rights for men and women: across both regions (in parallel with EU Treaty and the principles of Shari'ah)

Joint engagement and cooperation to develop mechanisms, awareness campaigns and plans as to change all direct and indirect regulations, standards, practices, measures and / or any other kind of direct or indirect practices that has discrimination as a consequence (which are in conflict with as well Art. 13 of the EU Treaty and K4:1, K2:226)

A measurable set of minimal agreed-upon (international) standards that are to be met as a condition for opening the market

Assistance in restructuring the labour market in the extension of privatisation programs: reducing duality between public and private labour market.

A joint program for enhancing inclusion possibilities of GCC nationals into the private sector (e.g. services): e.g. the development of exchange programs to share and transfer knowledge and experience between the EU and the GCC in the several sectors that are expected to grow in the GCC under the FTA.

Program development and implementation ("train the trainers") to increase and revive increased work ethics and commitment to high quality work.

In our view it is difficult for the EU to admit lower social and environmental standards than those, which are applicable in its own region, and to its own subjects. If the EU would agree to go for less, it would mean that the EU Commission itself is creating an unequal environment for the respective players in the market.

X.F.4 Dispute settlement

The proof is, in many cases, not in having the regulations in place, but to have them enforced accordingly.

Conflicts or disputes revolve mostly

- around the actions of individuals in one country who cause damage in another;

- around the failure of countries to implement their own legislation;
- and around the interpretation of factual information that can itself be in dispute.

There are two levels of dispute settlement procedures to be foreseen:

- Dispute settlement amongst the Parties to the Agreement (category 1)
- Dispute settlement between 3rd parties and 1) one / more Parties to the Agreement / 2) other 3rd parties.(category 2)

Given the fact that it is our proposal to have one FTA, the dispute settlement procedures and penalties/remedies should apply accordingly.

Hereunder we will only highlight some principles we see being of relevance as to ensure last resort resolutions in the case of any conflict with respect to the environmental and social chapters to be included into the FTA, with regard to Category 2 dispute settlement.

Category 2: Each party should ensure that judicial, quasi-judicial, or administrative proceedings are available under its law to sanction or remedy violations of its environmental and social laws.

- (a) Such proceedings should be fair, open, and equitable, and to this end should comply with due process of law, and be open to the public (as laid down in the European Treaty of Human Rights).
- (b) Each Party should provide appropriate and effective remedies or sanctions for a violation of its environmental & social laws that:
 - (i) take into consideration the nature and gravity of the violation, any economic benefit the violator has derived from the violation, the economic condition of the violator, and other relevant factors; and
 - (ii) may include compliance agreements, penalties, fines, imprisonment, injunctions, the closure of facilities, and the cost of containing or cleaning up pollution.

Each Party should ensure that interested persons may request the Party's competent authorities to investigate alleged violations of its environmental laws and that the competent authorities give such requests due consideration in accordance with its law.

Each Party should ensure that persons with a legally recognized interest under its law in a particular matter have appropriate access to judicial, quasi-judicial, or administrative proceedings for the enforcement of the Party's environmental laws, in case pro bono.

Each Party should provide persons appropriate and effective rights of access to remedies in accordance with its laws, which may include the right:

- (a) to sue another person or the Party itself, under that Party's jurisdiction for damages under that Party's environmental laws;
- (b) to seek sanctions or remedies such as monetary penalties, emergency closures, or orders to mitigate the consequences of violations of its environmental laws;

(c) to request the competent authorities to take appropriate action to enforce the Party's environmental laws in order to protect the environment or to avoid environmental harm; or

(d) to seek injunctions where a person suffers, or may suffer, loss, damage, or injury as a result of conduct by another person under that Party's jurisdiction contrary to that Party's environmental laws or from tortuous conduct that harms human health or the environment.

X.G SUGGESTION FOR FURTHER ACTIONS IN THE FRAMEWORK OF THIS FRAMEWORK CONTRACT

We acknowledge the fact that change takes time and that it is expensive. Thereto joint cooperation, development, coordination and monitoring should be put in place (supra).

As stated before, change is only possible to the extent it is accepted by the society itself. Without, you will only get adherence from the top, which might merely serve as window dressing, whereas some fundamental questions and challenges are to be addressed in the GCC.

There are quite some opportunities present in the current setting, when comparing the interpretation of the principles of Shari'ah with the Sustainability agenda of the EU, to come to a joint vision (in terms of final impact or outcome) of the sustainable development of both regions. This does not imply that the operational structure and instruments used will be the same, but this is neither the case in the several EU-member States.

It is therefore suggested to proceed, in the next phase under this Framework contract, with further in-depth analysis, scenario building and the development of a blueprint as common basis for the development of proposals of a sustainable development program (mitigation measures) in the light of the FTA.

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XII. Annexes

XII.A DATA ON GDP PER CAPITA

Table 43: GDP and per capita GDP in GCC, EU and its new Member States		
	GDP 2001	GDP per Capita 2001
	€billions	€
Bahrain	8.2	11946
Kuwait	37	16793
Oman	22	8562
Qatar	18	31158
Saudi	208	9766
UAE	75	21644
GCC	368	16645
EU 15	7894	22520
10 New Member States^e	407	5432

Source: Eurostat

XII.B DATA ON GDP PER SECTOR

	Bahrain	Kuwait	Oman	Qatar	Saudi Ara.	U.A.E.
	%	%	%	%	%	%
Oil	17.8	42.8	42.7	58.4	28.4	28
Agriculture/ fisheries	0.9	0.4	2	0.4	8.6	4
Manufacturing	12	6.4	8.3	5.8	14.9	13.9
Construction	4	2.3	2.2	3.4	6	7
Wholesale/ retail	12.8	5.8	11.4	NA	13	9.2
Restaurants/ hotels	2.3	0.8	NA	NA	NA	2.2
Transportation/ storage/ communication	7.9	4.9	NA	NA	7.4	7.2
Financial Institutions	19	6.1	NA	8	2	6.8
Real Estate/ business services	8.9	6.9	NA	3.4	4.3	8
Community/ social services	1.7	23.6	NA	NA	1.4	1.6

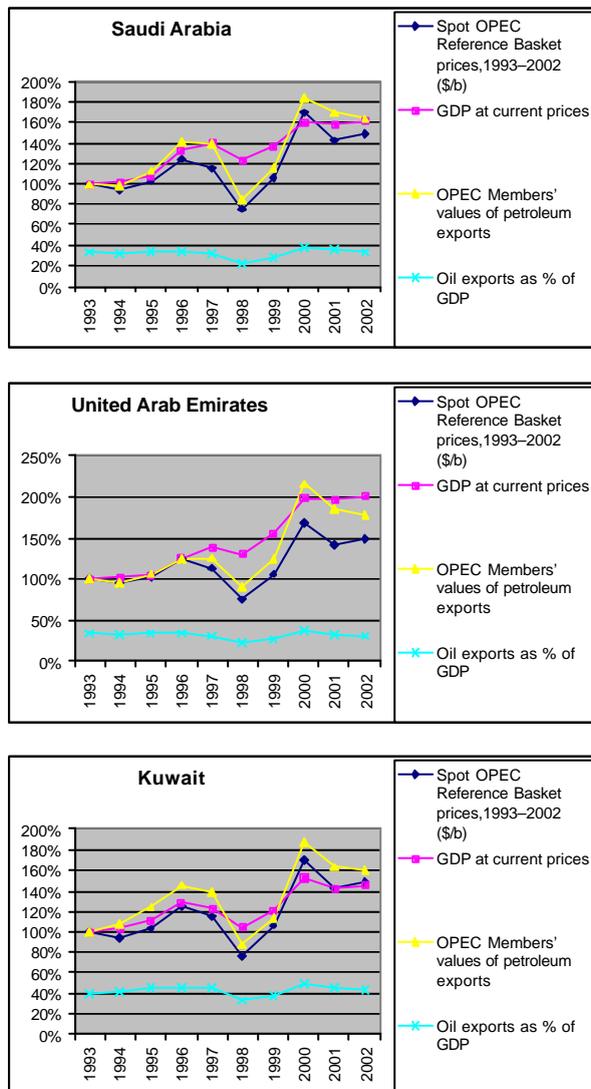
Source: Economist Intelligence Unit, Country Reports, 2002, based on national statistics.

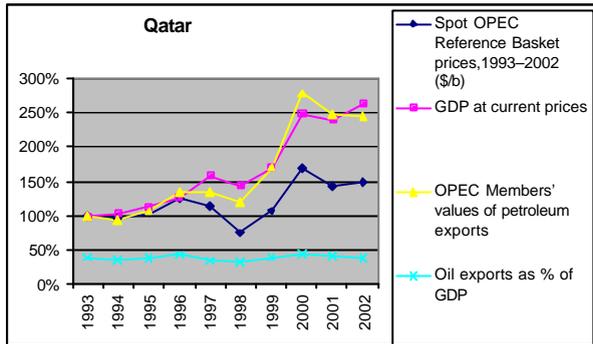
	Bahrain	Kuwait	Oman	Qatar	Saudi Ara.	U.A.E.
	%	%	%	%	%	%
Agriculture/ fisheries	1.1	0.7	3.5	1.0	12.0	5.6
Manufacturing	14.6	11.2	14.5	13.9	20.8	19.3
Construction	4.9	4.0	3.8	8.2	8.4	9.7
Wholesale/ retail	15.6	10.1	19.9	NA	18.2	12.8
Restaurants/ hotels	2.8	1.4	NA	NA	NA	3.1
Transportation/ storage/ communication	9.6	8.6	NA	NA	10.3	10.0
Financial Institutions	23.1	10.7	NA	19.2	2.8	9.4
Real Estate/ business services	10.8	12.1	NA	8.2	6.0	11.1
Community/ social services	2.1	41.3	NA	NA	2.0	2.2
Total services sector	68.8	88.2	23.7	35.5	47.6	58.3

Source: Adapted from the Economist Intelligence Unit, Country Reports, 2002, based on national statistics.

XII.C EVOLUTION GDP, OIL EXPORTS AND OIL PRICES IN GCC MEMBERS OF OPEC

Figure 11: Evolution GDP, Oil Exports and oil prices for the GCC-OPEC members





XII.D TECHNICAL NOTE CONCERNING THE TERMINOLOGY USED IN TABLE 9

(Concerning Freshwater Resources, based on data from Earth Trends 2003, by the World Resources Institute)

Renewable Water Resources

- **Surface Water** produced internally includes the average annual flow of rivers generated from endogenous precipitation and base flow generated by aquifers. Surface water resources are usually computed by measuring or assessing total river flow occurring in a country on a yearly basis.
- **Groundwater Recharge** is the total volume of water entering aquifers within a country's borders from endogenous precipitation and surface water flow. Groundwater resources are estimated by measuring rainfall in arid areas where rainfall is assumed to infiltrate into aquifers. Where data are available, groundwater resources in humid areas have been considered as equivalent to the base flow of rivers.
- **Total** represents the total **Natural Renewable Water Resources**, measured in cubic kilometers per year (km³/year), being the sum of internal renewable water resources (surface and groundwater resources minus overlap) and natural flows to and from other countries. Natural incoming flow is the average amount of water which would flow into the country without human influence.
- **Per Capita** are the Per Capita Natural Renewable Water Resources which are measured in cubic meters per person per year (m³/person/year). Per capita values were calculated by using national population data for 2002.

Withdrawals

- **Total are the total Water Withdrawals (annual)**, measured in million cubic meters, that refer to total water removed for human uses in a single year, not counting evaporative losses from storage basins. Water withdrawals also include water from nonrenewable groundwater sources, river flows from other countries, and desalination plants.
- **Of which Desalinated** is the Desalinated Water Production, expressed in million cubic meters, which refers to the amount of water produced by the removal of salt from saline waters--usually seawater--using a variety of techniques including reverse osmosis. Most desalinated water is used for domestic purposes.
- **Per Capita** are the Per Capita Annual Withdrawals which are calculated using national population data for the year the withdrawal data were collected.
- **As % of Renew. Resources** are the Water Withdrawals as a Percent of Renewable Water Resources. This is the proportion of renewable water resources withdrawn on a per capita basis, expressed in cubic meters per person per year (m³/person/year). The value is calculated by dividing water withdrawals per capita by actual renewable water resources per capita.

Sectoral Shares

Sectoral Shares of water withdrawals are expressed as a percentage. This refers to the proportion of water used for one of three purposes: agriculture, industry, and domestic uses. All water withdrawals are allocated to one of these three categories.

- **Agricultural** uses of water primarily include irrigation and, to a lesser extent, livestock maintenance.
- **Domestic** uses include drinking water plus water withdrawn for homes, municipalities, commercial establishments, and public services (e.g. hospitals).
- **Industrial** uses include cooling machinery and equipment, producing energy, cleaning and washing goods produced as ingredients in manufactured items, and as a solvent.

Most Freshwater resources data were provided by AQUASTAT, a global database of water statistics maintained by the Food and Agriculture Organization of the United Nations. AQUASTAT collects its information from a number of sources--national water resources and irrigation master plans; national yearbooks, statistics and reports; FAO reports and project documents; international surveys; and, results from surveys done by national or international research centers. In most cases, a critical analysis of the information was necessary to ensure consistency among the different data collected for a given country. When possible, cross-checking of information among countries was used to improve assessment in countries where information was limited. When several sources gave different or contradictory figures, preference was always given to information collected at the national or sub-national level. This preference is based on the assumption by FAO that no regional information can be more accurate than studies carried out at the country level. Unless proven to be wrong, official rather than unofficial sources were used. In the case of shared water resources, a comparison among countries was made to ensure consistency at river-basin level.

XII.E DATA ON BIODIVERSITY IN THE GCC

	Mammals				Birds			
	Total number of known species			No. of species per 10,000	Total number of known species			Breeding bird species per
	All species	Endemic species	Threatened species		Breeding species	Endemic species	Threatened species	
Bahrain ^a	17	0	1	41	28	0	1	68
Kuwait	21	0	1	17	20	0	3	17
Oman	56	2	9	20	107	0	5	39
Qatar ^a	11	0	0	11	23	0	1	22
Saudi A.	77	0	9	13	155	0	11	26
U.A.E.	25	0	3	12	67	0	4	33
World	4,629	NA	1,096	NA	9,672	NA	1,107	NA

Source: World Resources Institute 2000-2001 (from World Conservation Monitoring Centre, IUCN-The World Conservation Union, and other sources). Notes: ^a Figures for 1999 from WRI. Earth Trends 2001.

	Reptiles				Freshwater Fish	
	Total number of known species			No. of species per 10,000 km ²	Total number of known species	
	All species	Endemic species	Threatened species		All species	Threatened species
Bahrain ^a	25	0	0	60	0	0
Kuwait	29	0	2	24	NA	0
Oman	64	8	4	23	3	3
Qatar ^a	17	0	2	16	0	0
Saudi A.	84	4	2	14	8	0
U.A.E.	37	1	2	18	5	1
World	6,900	NA	253	NA	25,000	734

Source: World Resources Institute 2000-2001 (from World Conservation Monitoring Centre, IUCN-The World Conservation Union, and other sources) Notes: ^a Figures for 1999 from WRI. Earth Trends 2001.

	Length of coastline (km)	Area of Mangrove forests (km ²)	Number of Mangrove species	Number of Seagrass species	Number of <i>Scleractinia</i> Coral Genera ^a
Bahrain	255	1	1	NA	29
Kuwait	756	NA	NA	2	23
Oman	2,809	20	1	NA	40
Qatar	909	<5	1	NA	27
Saudi	7,472	292	3	5	54
U.A.E.	2,871	30	1	1	28

Notes: ^a *Scleractinia* corals are reef-forming corals (i.e., true or stony corals). Source: WRI. Earth Trends 2001.

XII.F INTERNATIONAL ENVIRONMENTAL COMMITMENTS BY GCC COUNTRIES

Table 49: GCC countries' international commitments related to the environment

	Bahrain	Kuwait	Oman	Qatar	Saudi Arabia	UAE
CBD ¹	ratified	signed/not ratified	Ratified	ratified	ratified	ratified
UN FCC ²	ratified	ratified	Ratified	ratified	ratified	ratified
Montreal Protocol ³	ratified	ratified	Ratified	ratified	ratified	ratified
UN CLOS ⁴	ratified	ratified	Ratified	signed/not ratified	ratified	signed/not ratified
Hazardous waste ⁵	ratified	ratified	Ratified	ratified	ratified	ratified
Environ. Modification ⁶		ratified				
Nuclear Test ban ⁷		ratified				
Desertification ⁸	ratified	ratified	Ratified	ratified	ratified	ratified
Endangered Species ⁹		signed/ ratified	not Ratified	ratified	ratified	ratified
Marine Dumping ¹⁰		signed/ ratified	not Ratified			ratified
Ship pollution ¹¹			Ratified			
Wetland ¹²	ratified					
Whaling ¹³			Ratified			

1. Convention on Biological Diversity (1993)
2. United Nations Framework Convention on Climate Change (1994)
3. The Montreal Protocol on Ozone Depleting Substances (1984)
4. The United Nations Convention on the Law of the Sea (1996)
5. Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (1992)
6. Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (1978)
7. Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space, and Under Water (1963)
8. United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa (1996)
9. Convention on the International Trade in Endangered Species of Wild Flora and Fauna (CITES) (1975)
10. Convention on the Prevention of Marine Pollution by Dumping Wastes and Other Matter (London Convention) (1975)
11. Protocol of 1978 Relating to the International Convention for the Prevention of Pollution From Ships, 1973 (MARPOL)
12. Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar) (1975)
13. International Convention for the Regulation of Whaling (1948)

XII.G DEMOGRAPHIC PROFILES

	Total population (millions)		Urban population (% of total)		Population under age 15		Population age 65 and above	
	2000	2015 ^a	2000	2015	2000	20.5	2000	2015
Bahrain	0.6	0.8	92%	95%	28%	20%	3%	6%
Kuwait	1.9	2.8	96%	97%	31%	26%	2%	7%
Oman	2.5	4.1	76%	83%	44%	42%	3%	4%
Qatar	0.6	0.7	93%	95%	27%	23%	2%	6%
Saudi Ar.	20.3	31.7	86%	91%	43%	39%	3%	4%
U.A.E.	2.6	3.2	87%	92%	26%	21%	3%	9%
GCC	28.5	43.3	86%	91%	40%	36%	3%	5%
Austria	8.1	7.8	67%	71%	17%	12%	16%	20%
Belgium	10.2	10.3	97%	98%	17%	14%	17%	20%
Denmark	5.3	5.4	85%	86%	18%	15%	15%	20%
Finland	5.2	5.2	59%	59%	18%	14%	15%	21%
France	59.2	61.9	75%	78%	19%	17%	16%	19%
Germany	82	80.7	88%	90%	16%	12%	16%	21%
Greece	10.6	10.5	60%	65%	15%	13%	18%	21%
Ireland	3.8	4.4	59%	64%	22%	22%	11%	13%
Italy	57.5	55.2	67%	71%	14%	12%	18%	22%
Luxemb.	0.4	0.5	92%	95%	19%	17%	14%	16%
Netherl.	15.9	16.4	90%	91%	18%	15%	14%	18%
Portugal	10	10	64%	78%	17%	15%	16%	18%
Spain	39.9	39	78%	81%	15%	13%	17%	20%
Sweden	8.2	8.8	83%	84%	18%	12%	17%	22%
UK	59.4	60.6	90%	91%	19%	15%	16%	19%
EU 15	375.7	376.7	79%	82%	17%	14%	16%	20%
Cyprus	0.8	0.9	70%	75%	23%	19%	12%	15%
Czech R.	10.3	10	75%	76%	16%	13%	14%	19%
Estonia	1.4	1.2	69%	71%	18%	14%	14%	17%
Hungary	10	9.3	65%	69%	17%	13%	15%	17%
Latvia	2.4	2.2	60%	60%	17%	13%	15%	18%
Lithuania	3.7	3.5	69%	72%	20%	13%	13%	17%
Malta	0.4	0.4	91%	94%	20%	17%	12%	18%
Poland	38.6	38	62%	67%	19%	15%	12%	15%
Slovakia	5.4	5.4	57%	62%	20%	15%	11%	14%
Slovenia	2	1.9	49%	52%	16%	12%	14%	19%
New MS	75	72.8	64%	68%	18%	14%	13%	16%
EU 25	450.7	449.5	77%	80%	17%	14%	16%	19%

Source: UNDP, Human Development Report 2003.

Table 51: GCC Population between ages 15 and 65				
2000	Males (1000s)	Females (1000s)	Male proportion compared	to the females
Bahrain	248.4	167.9	147.95%	
Kuwait	676.3	591	114.43%	
Oman	745.6	611.3	121.97%	
Qatar	301.3	128.4	234.66%	
Saudi Arabia	7149.0	5,074.4	140.88%	
UAE	1153.8	542	212.88%	

Source: WRI. Earth Trends 2003

XII.H SELECTED INDICATORS FOR EDUCATION IN GCC COUNTRIES

*	Adult literacy rate (% age 15 and above)		Youth literacy rate (% age 15-24)		Net primary enrolment ratio (%)		Net secondary enrolment ratio (%)	
	1985	2000	1985	2000	1985-87 ^a	1998 ^b	1985-87 ^a	1998 ^b
GCC								
Bahrain	82.1	87.9	95.6	98.5	99	85	92	101
Kuwait	76.7	82.4	87.5	92.7	45	66	NA	50
Oman	54.7	73	85.6	98.2	70	65	NA	59
Qatar	77	81.7	90.3	95	87	95	67	78
Saudi Ar.	66.2	77.1	85.4	93.1	59	58	31	51
UAE	71	76.7	84.7	91	94	87	59	67
EU								
Austria	NA	NA	NA	NA	90	91	NA	89
Denmark	NA	NA	NA	NA	98	99	87	89
Finland	NA	NA	NA	NA	99	100	93	95
France	NA	NA	NA	NA	101	100	NA	92
Germany	NA	NA	NA	NA	84	87	NA	88
Greece	94.9	97.3	99.5	99.8	94	97	83	87
Ireland	NA	NA	NA	NA	91	90	80	NA
Italy	97.7	98.5	99.8	99.8	NA	100	NA	91
Luxemb.	NA	NA	NA	NA	NA	97	NA	78
Portugal	87.2	92.5	99.5	99.8	102	NA	NA	85
Spain	96.3	97.7	99.6	99.8	103	102	NA	94
UK	NA	NA	NA	NA	97	99	79	94
Belgium	NA	NA	NA	NA	97	101	88	NA
Netherla.	NA	NA	NA	NA	95	100	84	90
Sweden	NA	NA	NA	NA	100	102	85	96
New Member States								
Cyprus	94.3	97.2	99.7	99.8	87	95	NA	88
Slovenia	99.6	99.6	99.8	99.8	NA	93	NA	NA
Czech R.	NA	NA	NA	NA	NA	90	NA	NA
Malta	88.4	92.3	97.5	98.6	99	99	80	79
Poland	99.6	99.7	99.8	99.8	97	98	76	91
Hungary	99.1	99.3	99.7	99.8	91	90	75	87
Slovakia	NA	NA	NA	NA	NA	89	NA	NA
Estonia	99.8	99.8	99.8	99.7	NA	98	NA	83
Lithuania	99.3	99.6	99.8	99.8	NA	95	NA	89
Latvia	99.8	99.8	99.8	99.8	83	92	NA	74

Notes: * Because data are from different sources and sometimes refer to different year/periods then indicated, comparisons across countries should be made with caution. See for source and more details: UNDP, Human Development Report 2003.

XII. HEALTH RELATED DATA

	Life expectancy at birth (years) 2000	Infant mortality rate (per 1,000 live births)		Under five mortality rate (per 1,000 live births)		Physicians (per 100,000 people) 1990-1999 ^a	Tuberculosis cases (per 100,000 people) ^b 1999	Health expenditure, per capita (PPP US\$) 1998
		1970	2000	1970	2000			
GCC								
Bahrain	73.3	55	13	75	16	100	33	358
Kuwait	76.2	49	9	59	10	189	31 ^c	NA
Oman	71.0	126	12	200	14	133	10	NA
Qatar	69.6	45	12	65	16	126	44	NA
Saudi Ar.	71.6	118	24	185	29	166	17	NA
U.A.E.	75.0	61	8	83	9	181	33 ^c	1,428
EU								
Austria	78.1	26	5	33	5	302	13	2,121 ^d
Belgium	78.4	21	6	29	6	395	11	2,137 ^d
Denmark	76.2	14	4	19	4	290	11	2,785 ^d
Finland	77.6	13	4	16	4	299	11	1,704 ^d
France	78.6	18	4	24	5	303	10	2,288 ^d
Germany	77.7	22	4	26	5	350	12	2,697 ^d
Greece	78.2	38	5	54	6	392	9	965
Ireland	76.6	20	6	26	6	219	12	1,569
Italy	78.5	30	6	33	6	554	8	1,676 ^d
Lux.	77.4	19	5	26	5	272	9	2,731 ^d
Neths.	78.1	13	5	15	5	251	9	2,173 ^d
Portugal	75.7	53	6	62	6	312	47	859
Spain	78.5	27	5	34	5	424	21	1,043
Sweden	79.7	11	3	14	4	311	5	2,145
U.K.	77.7	18	6	23	6	164	11	1,675 ^d
New Member States								
Cyprus	78.0	29	6	33	7	255	5	NA
Czech Rep	74.9	21	5	24	5	303	16	380 ^d
Estonia	70.6	21	17	26	21	297	52	243 ^d
Hungary	71.3	36	8	39	9	357	35	318
Latvia	70.4	21	17	26	21	282	79	166
Lithuania	72.1	23	17	28	21	395	76	183
Malta	78.0	25	5	32	6	261	6	NA
Poland	73.3	32	9	36	10	236	31	248 ^d
Slovakia	73.3	25	8	29	9	353	20	285
Slovenia	75.5	25	4	29	5	228	21	746

Notes: ^a Data refer to the most recent year available during the period specified; ^b Data refer to tuberculosis cases reported to the WHO and may represent only a fraction of the true number in a country because of

incomplete coverage by health services, inaccurate diagnosis or deficient recording and reporting; ^c Data refer to 1998; ^d Data refer to 1999, Source: UNDP, Human Development Report 2002.

XII.J EMPLOYMENT RELATED DATA

	Foreigners (% of total population)	Foreigners (% of total workforce)
Bahrain	40 %	64 %
Kuwait	64 %	81 %
Oman	26 %	55 % ^a
Qatar	80 %	90 % ^a
Saudi Arabia	27 %	55 % ^a
U.A.E.	82 %	90 % ^a

Notes: ^a estimate. Source: Economist, 23 March 2002

<i>Thousands</i>	1997	1998	1999	2000	2001 (Estimate)
Population	2652	2834	3033	3247	3488
Civilian Employment	1366	1437	1632	1737	1853
Of which Government services	147	155	182	204	214

Source: IMF, Staff Report for the 2002 Article IV Consultation United Arab Emirates

1000s	
Oil Sector	23
Agriculture	120
Industry	547
Mining and Quarrying	4
Manufacturing	226
Electricity, gas and water	30
Construction	287
Services	1046
Wholesale en retail trade	336
Restaurants and hotels	72
Transport and communications	108
Finance and insurance	23
Real Estate	42
Government services	204
Social and Personal services	81
Domestic household services	179
Total Civilian Employment	1737

Source: IMF, Staff Report for the 2002 Article IV Consultation United Arab Emirates

XII.K RATIFIED CONVENTIONS OF THE INTERNATIONAL LABOUR ORGANIZATION

Table 57: Ratified conventions of the International Labour Organization										
Key Conventions										
Conventions on the freedom of association and collective bargaining		Freedom of Association and Protection of the Right to Organise Convention (C87), 1948 Right to Organise and Collective Bargaining Convention (C98), 1949								
Conventions on the elimination of forced and compulsory labour		Forced Labour Convention (C29), 1930 Abolition of Forced Labour Convention (C105), 1957								
Conventions on the elimination of discrimination in respect of employment and occupation		Equal Remuneration Convention (C100), 1951 Discrimination (Employment and Occupation) Convention (C111), 1958								
Conventions on the abolition of child labour		Minimum Age Convention (C138), 1973 Worst Forms of Child Labour Convention (C182), 1999								
Conventions on migrant workers rights										
		Migration for Employment Convention (Revised) (C97), 1949 Migrant Workers (Supplementary Provisions) Convention (C143), 1975								
Number of ratified ILO conventions	Conv. 87	Conv. 98	Conv. 29	Conv. 105	Conv. 100	Conv. 111	Conv. 138	Conv. 182	Conv. 97	Conv. 143
Oman	2		1998					2001		
Bahrain	8		1981	1998		2000		2001		
Kuwait	18	1961	1968	1961		1966	1999	2000		
Qatar	4		1998			1976		2000		
UAE	9		1982	1997	1997	2001	1998	2001		
Saudi Ar.	15		1978	1978	1978	1978		2001		
Belgium	93	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	1953
Austria	52	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Finland	99	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
France	116	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	1954
Greece	71	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Germany	77	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	1959
Ireland	73	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Italy	111	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	1952 1981
Luxemb.	76	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Netherlan.	104	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	1952
Portugal	77	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	1978 1978
Sweden	92	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	1982
Spain	128	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	1967
Denmark	70	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
UK	86	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	1951

Source: International Labour Organization, www.ilo.org

XIII.L RATIFIED CONVENTIONS ON HUMAN RIGHTS

Table 58: Status of ratification by GCC countries of principal international human rights treaties						
	Bahrain	Kuwait	Oman	Qatar	Saudi Arabia	UAE
International Convention on Civil and Political Rights		21-May-96				
International Convention on Economic and Social and Cultural Rights		21-May-96				
Convention on the elimination of all forms of torture and other Cruel, Inhuman or Degrading Treatment or Punishment	06 Mar. 1998	21 Mar. 1996		11-Jan-00	23-Sep-97	
International Convention on the elimination of All Forms of Racial Discrimination	27 Mar. 1990	13-Oct-68		22-Jul-76	23-Sep-97	20-Jun-74
Convention on the Elimination of All Forms of Discrimination against Women		02-Sep-94			07-Sep-00	
Convention on the Rights of the Child	13 Feb. 1992	21 Oct. 1991	09-Dec-96	03-Apr-95	26-Jan-96	03-Jan-97

Source: UNDP, Arab Human Development Report, 2002.

XII.M WORLD PRESS FREEDOM RANKING, 2003

Ranking	Country
1	Finland
1	Netherlands
5	Denmark
7	Belgium
8	Germany
9	Sweden
11	Latvia
12	Czech Republic
12	Estonia
12	Slovakia
16	Austria
17	Ireland
17	Lithuania
20	Slovenia
21	Hungary
26	France
27	United Kingdom
28	Portugal
31	Greece
33	Poland
42	Spain
53	Italy
83	Cyprus
102	Kuwait
115	Qatar
117	Bahrain
122	United Arab Emirates
152	Oman
156	Saudi Arabia

Source: Reporters Without Borders

XII.N HUMAN RIGHTS VIOLATIONS IN THE GCC, THE EU AND THE EU'S NEW MEMBER STATES

Amnesty International yearly reports in its Year Report on violations of human rights in all countries of the world. In its 2003 on the year 2002 they reported the following violations in the GCC, EU and the EU's new member states.:

- EXTRAJUDICIAL EXECUTIONS/UNLAWFULL KILLINGS

No reports of continued or possible extrajudicial/unlawful killings in the GCC nor EU

- "DISAPPEARANCES"

People were "disappeared" by state agents, or remained "disappeared" in Kuwait.

- TORTURE AND ILL-TREATMENT

Victims of torture and ill-treatment by security forces, police and other state authorities were reported in: Bahrain, Kuwait, Qatar, Saudi Arabia, United Arab Emirates, Austria, Belgium, France, Germany, Greece, Hungary, Italy, Portugal, Romania, Spain.

- PRISONERS OF CONSCIENCE

Confirmed or possible prisoners of conscience were held in: Kuwait, Qatar, Saudi Arabia, Finland.

- DETENTION WITHOUT CHARGE OR TRIAL

People were arbitrarily arrested and detained without charge or trial in: Kuwait, Saudi Arabia, United Arab Emirates, United Kingdom.

- DEATH PENALTY

People were sentenced to death in: Kuwait, Qatar, Saudi Arabia, United Arab Emirates and executions were carried out in: Kuwait, Saudi Arabia, United Arab Emirates.

- .HUMAN RIGHTS ABUSES BY ARMED OPPOSITION GROUPS

Armed opposition groups committed serious human rights violations, such as deliberate and arbitrary killings of civilians, torture and hostage taking in the United Kingdom and Spain.

XII.O GENDER RELATED DATA

Table 60: Gender-related development indicators in GCC countries								
	Combined primary, secondary and tertiary gross enrolment ration (%) ^a		Estimated earned income (PPP US\$ 2000 ^b)		Seats in parliament held by women (% of total)	Female legislators, senior officials and managers	Female professional and technical workers (% of total)	Ratio of estimated female to male earned income
	Female	Male	Female	Male				
GCC								
Bahrain	83	77	7,010 ^c	21,059 ^c	-- ^e	--	--	--
Kuwait	61	57	6,895 ^d	22,186 ^d	0	--	--	--
Oman	56	59	3,806 ^d	21,804 ^d	-- ^f	--	--	--
Qatar	75	75	6,864 ^d	25,277 ^d	-- ^f	--	--	--
Saudi A	60	62	3,466 ^d	18,252 ^d	-- ⁱ	--	--	--
U.A.E.	71	65	5,329 ^d	24,412 ^d	0	8	25	--
EU								
Austria	89	90	17,914 ^g	36,057 ^g	25.1	28	49	0.50
Belgium	111	107	16,784	38,005	24.9	19 ^j	50 ^j	0.44
Denmark	101	94	22,835	32,518	38	23	50	0.70
Finland	108	99	20,657	29,550	36.5	27	56	0.70
France	96	93	18,715	30,022	17.1	33	45	0.61
Germany	93	95	16,904	33,653	31	27	50	0.50
Greece	81	80	10,185 ^g	22,998 ^g	8.7	25	47	0.44
Ireland	93	89	17,078 ^g	42,815 ^g	13.7	34	50	0.40
Italy	87	81	14,719 ^g	33,084 ^g	9.1	19	44	0.44
Lux.	74 ^h	71 ^h	27,396	73,465	16.7	--	--	--
Netherlan.	100	104	17,635	33,822	32.9	27	46	0.52
Portugal	99	94	12,134	22,850	18.7	32	50	0.53
Spain	99	91	11,791 ^g	27,503 ^g	26.6	32	45	0.43
Sweden	107	95	19,690 ^g	28,961 ^g	42.7	29	49	0.68
U.K.	112	100	17,931	29,264	17.1	33	45	0.61
New Member States								
Cyprus	67	70	13,763	27,908	10.7	14	42	0.49
Czech R.	70	69	10,354	17,833	14.2	26	53	0.58
Estonia	89	84	--	--	17.8	36	67	0.64
Hungary	83	79	9,243	15,893				
Latvia	83	80	5,992	8,276	17	37	67	0.72
Lithuania	83	77	5,789	8,582	10.6	42	70	0.67
Malta	82	79	7,626	27,104	9.2			
Poland	86	83	6,936 ^j	11,288 ^j	20.7	33	61	0.61
Slovakia	77	74	8,903 ^j	13,715 ^j	14	31	62	0.65
Slovenia	85	80	13,327 ^j	21,642 ^j	12.2	31	51	0.62

Source: UNDP. Human Development Indicators, 2002. Notes: ^a Preliminary UNESCO estimates subject to further revision. ^b Because of the lack of gender-disaggregated income data, female and male earned income are crudely estimated on the basis of data on the ratio of female non-agricultural wage, the female and male shares of the economically active population, the total female and male population and GDP per capita (PPP US\$). Unless otherwise specified, estimates are based on data for the latest year available during 1991-2000; ^c Calculated on the basis of GDP per capita (PPP US\$) for 1999; ^d No wage data available. For purposes of calculating the estimated female and male earned income an estimate of 75% was used for the ratio of the female non-agricultural wage to the male non-agricultural wage; ^e The first legislature of Bahrain was dissolved by decree of the emir on 26 August 1975; ^f The country has never had a parliament. ^g No wage data available. For purposes of calculating the estimated female and male earned income an estimate of 75% was used for the ratio of the female non-agricultural wage to the male non-agricultural wage; ^h The ratio is an underestimate as many secondary and tertiary students pursue their studies in nearby countries; ⁱ Data are based on the International Standard Classification of Occupations (ISCO-68) as defined in ILO (2001), j,

Table 61: Estimated earned income in the Arab region, Male and Female, PPP US\$, 2000

	Female	Male
Yemen	405	1384
Syrian Arab Republic	1537	5522
Jordan	1749	6014
Egypt	2003	5227
Lebanon	2013	6704
Morocco	2019	5068
Algeria	2389	8150
Iran, Islamic Rep. Of	2524	9088
Libyan Arab Jamahiriya	2921	11894
Tunisia	3347	9320
Saudi Arabia	3466	18252
Oman	3806	21804
United Arab Emirates	5320	24412
Qatar	6864	25277
Kuwait	6895	22186
Bahrain	7010	21059

Source: UNDP. Human Development Indicators. 2002.

**XII.P SELECTED INDICATORS RELATED TO GENDER AND ECONOMIC ACTIVITY
IN GCC COUNTRIES**

Table 62: Selected indicators related to gender and economic activity in GCC countries											
	Female economic activity rate (age 15 and above)			Employment by economic activity						Contributing family workers (1995-2000)	
	2000			1995-2001						Female (% of total)	Male (% of total)
	Rate (%)	Index (1990=100)	As % male rate	Agriculture		Industry		Services			
				Female	Male	Female	Male	Female	Male		
GCC											
Bahrain	33.5	118	39	--	--	--	--	--	--	--	--
Kuwait	36.6	97	48	--	--	--	--	--	--	--	--
Oman	19.2	151	25	--	--	--	--	--	--	--	--
Qatar	41.0	124	45	--	--	--	--	--	--	--	--
Saudi Ar.	21.2	142	27	--	--	--	--	--	--	--	--
U.A.E.	31.7	108	37	--	--	--	--	--	--	--	--
EU											
Austria	43.9	102	65	7	6	14	43	79	52	67	33
Belgium	39.7	105	66	2	3	13	37	86	60	85	15
Denmark	61.7	100	84	2	5	15	37	83	58	--	--
Finland	57	99	86	4	8	14	40	82	52	47	53
France	48.5	106	76	1	2	13	35	86	63	--	--
Germany	47.9	100	69	2	3	19	46	79	50	75	25
Greece	38	107	58	20	16	12	29	67	54	69	31
Ireland	37.1	115	52	2	12	15	38	82	50	56	44
Italy	38.3	106	58	4	6	21	39	74	55	55	45
Lux.	37.9	104	57	--	--	--	--	--	--	--	--
Netherlands	45.4	105	66	2	4	9	31	84	63	78	22
Portugal	51.2	104	71	14	11	24	44	62	44	66	34
Spain	37.5	111	56	5	8	14	41	81	51	64	36
Sweden	62.5	101	89	1	4	12	38	87	59	64	36
U.K.	52.8	105	74	1	2	12	36	87	61	65	35
New Member States											
Cyprus	49.0	102	62	10	11	18	30	71	58	87	13
Czech R.	61.2	100	83	4	6	28	49	69	48	78	22
Estonia	61	96	82	7	11	22	40	70	49	59	41
Hungary	48.5	102	71	4	9	25	42	71	48	67	33
Latvia	60	95	80	14	17	18	35	69	49	52	48
Lithuania	57.8	97	80	16	24	40	33	63	43	61	39
Malta	25.8	111	37								
Poland	57.1	100	80	19	19	21	41	60	39	60	40
Slovakia	62.7	99	84	5	10	26	49	69	42	70	33
Slovenia	54.6	98	80	11	11	28	46	61	42	58	40

Source: UNDP. Human Development Indicators. 2002.

XII.Q HUMAN DEVELOPMENT INDEX 2003

Table 63: The Human Development Index 2001, GCC (°) & its neighbours (°°), EU (*) & Candidate Member States

High Human Development ³ 0.8		
Country	HDI Rank	HDI value
Sweden*	2	0.941
The Netherlands*	5	0.938
Belgium*	6	0.937
Denmark*	11	0.930
Ireland*	12	0.930
U.K.*	13	0.930
Finland*	14	0.930
Lux.*	15	0.930
Austria*	16	0.929
France*	17	0.925
Germany*	18	0.921
Spain*	19	0.918
Italy*	21	0.916
Portugal*	23	0.896
Greece*	24	0.892
Cyprus**	25	0.891
Slovenia**	29	0.881
Czech R.**	32	0.861
Malta**	33	0.856
Poland**	35	0.841
Bahrain°	37	0.839
Hungary**	38	0.837
Slovakia**	39	0.836
Estonia**	41	0.833
Qatar°	44	0.826
Lithuania**	45	0.824
Kuwait°	46	0.820
U.A.E.°	48	0.816
Latvia**	50	0.811
Medium Human Development < 0.8		
Saudi A°	73	0.769
Oman°	79	0.755
Jordan°°	90	0.743
Occupied Palestinian Territories °°	98	0.731
Iran°°	106	0.719
Syrian Arab Republic °°	110	0.685
Egypt °°	120	0.648

Source: UNDP. Human Development Report. 2003, 237-240

Note: The HDI rank is determined using the HDI values to sixth decimal points

XII.R THE GATS INITIAL OFFER BY THE EUROPEAN COMMUNITY

Substantive liberalisation is offered as follows:

Liberalisation of horizontal limitations

Real estate

The “offer removes three .. restrictions” which “essentially relate to authorisation procedures that foreign nationals have to pursue prior to acquiring and/or renting real estate” – in D, FIN and S.²⁵⁷ (Offer, pages 6 and 7).

General regime for investment

The offer on the “general regime for foreign investment .. improves further its liberal framework by removing prior authorisation in Portugal for investment above 20% of the capital in companies.”²⁵⁸ (Offer, page 8).

Mode 4

The changes which represent further liberalisation are reflected in the three categories of personnel to be used:

1 Intra-corporate transfers

This includes three defined sub-categories: Managers, Specialists and Graduate trainees, the latter being a new feature. Managers and Specialists may stay in the EU for up to three years. (Offer, pages 9-12).

A service company “with a graduate training programme” will be able to transfer management trainees “for up to one year’s work experience with an affiliated company in the EU.” This category is not subject to economic needs tests.

2 Business visitors

This category of personnel will be allowed to stay for up to 90 days, and is not subject to economic needs tests. (Offer, pages 12-13).

3 Contractual service suppliers

(a) Employees of juridical persons

Skilled persons may stay for up to six months (formerly three months) in any 12 month period, if their employing company has “a contract to provide services to a client in the EU” in certain sectors, “including legal, architectural, engineering and computer services”, and eight of those in the ‘Other Business Services’ category. (Offer, pages 13-16).

In ten Member States numerical ceilings are imposed. (Offer, pages 15-16).

²⁵⁷ A Austria, B Belgium, D Germany, DK Denmark, E Spain, F France, FIN Finland, GR Greece, I Italy, IRL Ireland, L Luxembourg, NL the Netherlands, P Portugal, S Sweden, UK the United Kingdom

²⁵⁸ Quotations are taken from the EU public statement of 29 April 2003 – unless otherwise indicated.

(b) Independent professionals

“Self-employed highly skilled people will be able to enter the EU for up to six months to provide certain services, such as engineering, computer services and management consultancy.” Other services included are ‘architectural services, urban planning and landscape architecture’ and ‘translation services’. (Offer, page 17).

This is a new departure, as no such commitments were made for this category in the Uruguay Round. The permitted stay is for a cumulative period of not more than six months in any 12 month period.

The following conditions are set: “The natural person must possess (a) a university degree which is relevant to the sector of activity concerned or a technical qualification demonstrating relevant knowledge of an equivalent level, (b) professional qualification where this is required to exercise an activity in the sector concerned pursuant to the laws, regulations or requirements of the EC or the Member State where the service is supplied and, (c) at least six years professional experience in the sector.” A footnote to part (a) states: “Where the degree or qualification has been obtained in a third country, the EU Member State may evaluate whether this is equivalent to a university degree required in that Member State” (Offer, pages 16-17).

For all categories, in Mode 4 the existing rules continue to apply, such as those “governing working conditions, minimum wage requirements, and any collective wage agreements.” (Offer, page 9: footnote 2 gives more detail).

Note: The introduction of these new categories of workers has necessitated specifying, for every sub-sector in the schedule, how each category will be treated, and the EU has used the following abbreviations: ICT intra-corporate transfers; BV business visitors; CSS contractual service suppliers, being either: CSS-EJP employees of juridical persons or CSS-IP independent professionals.

Liberalisation by sector

1 Business services

A. Professional services

A.a. Legal services

Established lawyers and legal firms may “provide legal services in full respect of the law of any country in which those lawyers are qualified.”

The “provision of legal services is only authorised in respect of public international law, EC law and the law of any jurisdiction where the service supplier or its personnel is qualified to practise as a lawyer, and .. is subject to licensing requirements and procedures applicable in EC Member States. For lawyers providing legal services in respect of public international law and foreign law these may take *inter alia* the form of compliance of local codes of ethics, use of home title (unless recognition with the host title has been obtained), insurance requirements, simple registration with the host country Bar or a simplified admission to the host country Bar through an aptitude test. Legal services in

respect of EC law shall in principle be carried out by or through a fully qualified lawyer admitted to the Bar in that Member State acting personally. Full admission to the Bar in the relevant Member State might therefore be necessary for representation before courts and other competent authorities in the EC since it involves practice of EC and national procedural law.” (Offer, page 18, footnote 1). The EU recommends that this wording be used as standard in the schedules of each WTO Member – with ‘EC’ replaced by the appropriate country name (see EU proposal S/CSC/W/39 of 24 March 2003 § 21).

Note: “Unbound for legal professionals entrusted with public functions.”

(Offer, page 18).

“Admission to the Bar is subject to a nationality condition in A, B, E, F, FIN and GR” and to quotas in B and F. (Offer, page 18).

In DK an examination is required to obtain a Danish licence, and in S there is a residency requirement for admission to the bar under the Swedish title ‘advokat’. (Offer, page 18).

In Mode 3 there are legal form requirements in ten Member States.

(Offer, page 19).

A.b. Accounting services (other than auditing)

“Accountants will be allowed to review and compile financial statements and other accounting information” for EU clients.

In Mode 4:

ICT, BV and CSS-EJP: nationality requirement removed by F, I and DK under market access.

For ICT, BV and CSS-EJP there are residency requirements in DK and I. In all Member States CSS-IP is ‘Unbound’. (Offer, pages 21-22).

A.d, e, f. Architectural and Engineering services

“Architects and engineers will be able to provide plans, designs, projects, specifications, and cost estimates for their clients in the EU, without being discriminated against on the basis of their nationality.” In Mode 4 the nationality requirement is removed by F, GR and P. (Offer, page 27).

The offer does not alter the existing requirements for the “fulfilment of the necessary qualifications required by EU law for consumer protection.”

B. Computer and Related Services

Computer firms are free to establish in the EU, and this extends to “highly-skilled self-employed computer experts.” “Computer experts will .. be allowed to enter temporarily .. to provide maintenance and repair services for computer systems and networks.”

In Modes 1, 2 and 3 ‘None’, but Mode 4 is “Unbound except as indicated in the horizontal section.”²⁵⁹ (Offer, page 36).

D. Real Estate Services

In Modes 3 and 4, citizenship and nationality requirements are removed by E, DK, FIN and GR, and in Mode 4 a commercial presence requirement is removed by A. (Offer pages 41-42).

E. Other Business Services

Some “nationality, residence and commercial presence conditions are .. removed for a number of activities” as follows:

F.a. Advertising services

F.c. Management consulting services

F.d. Services related to management consulting

In Mode 4 the country limitations on market access are removed and replaced by the standard EU horizontal conditions. (Offer, pages 44-45).

F.e. Technical testing and analysis services

In Mode 4 some country limitations on market access are removed. (Offer, pages 45-46).

F.f. Services incidental to agriculture, hunting and fishing

The hunting exclusion is removed by FIN and S. (Offer, page 46)

F.g. Packaging services

Mode 3 is now ‘None’: ie no longer ‘Unbound’ by FIN and S. (Offer, page 51).

F.r. Printing and publishing

Mode 3 is now ‘None’: ie equity cap removed by I. (Offer, page 51).

F.t. Translation services

In Mode 4 the country limitations on market access are removed and replaced by the standard EU horizontal conditions. (Offer, page 52).

2 Communication services

C Telecommunications services

“Full access to the internal market” is guaranteed, “while fully safeguarding the right of the EU, for example, to define its universal service objectives.”

Modes 1, 2 and 3 are now ‘None’: ie limitations removed by E, GR, IRL and P. (Offer, pages 55-58).

²⁵⁹ Except for: “Finland: None for ICT and BV”.

3 Construction and related engineering services

“The offer eliminates some national limitations to market access and national treatment, including all national limitations on commercial presence, such as nationality conditions for managers of construction companies in Greece.”

Mode 3 is now ‘None’: ie limitations removed by GR, I and P. (Offer, page 59).

In Mode 4 limitations are removed by B, D, DK, GR, F NL, S and UK, but note that F and UK impose labour market tests. (Offer, pages 59-60).

4 Distribution services

A. Commission agents’ services

The “offer allows commission agents to provide cross-border services.”

In Mode 1: no longer ‘Unbound’ by I. (Offer, page 61).

D. Franchising

The offer “liberalises franchising in some Member States.”

Modes 1, 2 and 3 are now ‘None’: no longer ‘Unbound’ by S. (Offer, page 63).

6 Environmental services

“The EU offers to open its market to foreign providers on waste water, sanitation and similar services. The EU also offers improved commitments on noise and vibration abatement services and on cross-border advisory services for the protection of biodiversity and landscape.” The EU statement notes that in this sector the horizontal commitments on contractual service suppliers are relevant.

Mode 3 is now ‘None’²⁶⁰: the commercial presence requirement is removed by A; FIN replaces ‘Unbound’ with ‘None’ for all sub-sectors; while A and S do so for 6 E. (Offer, pages 65-68).

7 Financial services

In the insurance, banking and securities sectors the following changes represent additional liberalisation in the Member States indicated:

A. Insurance services

Insurance of air transport is to be allowed by A. (Offer, page 69).

B. Banking and other financial services (excluding insurance)

²⁶⁰ With a small exception in Sweden for 6 C. (Offer, page 67).

Trading of listed securities on stock exchanges: the restrictions on legal form are removed by A, DK, GR and S. (Offer, pages 74-75).

Lead management of Sterling issues, and Inter dealer brokers: the requirement for establishment is removed by the UK. (Offer, pages 74 and 79)

Acquisition of Belgian securities: authorisation requirement is removed by B. (Offer, page 75).

Payments by government entities: the monopoly is removed by FIN. (Offer, page 76).

Central securities depositaries: the Bank of Italy monopoly is removed by I. (Offer, page 77).

Banks: the economic needs test for establishment is removed by P. (Offer, page 78).

Investment services and advice: the legal form requirement is removed by IRL. (Offer, page 78).

Venture capital services and brokers and dealers: the legal form requirements are removed by P. (Offer, page 79).

9 Tourism and travel-related services

A. Hotels and restaurants (including catering)

In Mode 4: the nationality requirement is removed by F. (Offer, page 82).

B. Travel agencies and tour operators services

National treatment is extended to “non-EU nationals wishing to establish travel agencies in the territory of the EU .. the nationality of the companies or of their managers will not be taken into account for the authorisation of new travel agencies.”

In Mode 3: the nationality requirement is removed by B; the economic needs test is removed by I; the establishment requirement is removed by S; and the citizenship requirement is removed by FIN. (Offer, pages 82-83).

10 Recreational, cultural and sporting services

B. News agency services

The “offer improves the commitments .. by lifting a number of limitations in place.”

In Mode 3, market access: the equity cap is removed by I and P, and in Mode 4: the nationality requirement is removed by P, and the residency requirement is removed by S. (Offer, page 85).

D. Sporting and other recreational services

In Mode 4: the economic needs test is removed by I. (Offer, page 86).

11 Transport services

The EU offer includes maritime transport, with an additional commitment on Port Services, on the basis of a draft model schedule. It also adds two more lines to the air transport sector.

A. Maritime Transport Services

The 1996 offer is put back on the table.

In addition “the EU offer guarantees access to feeder of international cargo and movement of empty containers in accordance with existing EU and Member States’ legislation.” This offer enables non-EU ships to move their containers between the ports in different EU Member States, and to transport international cargo between the ports likewise.

C. Air Transport Services

The “offer includes new commitments on ground handling and airport management services.”

Groundhandling

Mode 3 is ‘None’, “except that categories of activities depend on size of airport, the number of providers in each airport can be limited due to available-space constraints and to not less than two suppliers for other reasons, and non-discriminatory pre-approval procedures may apply.” (Offer, page 90).

Airport management (for operators of airports)

The commitment for airport management services is by Italy, which requires that establishment be in the legal form of a public limited company, with the foreign equity holding subject to a cap of 49%. Modes 1, 2, 3 and 4 are ‘Unbound’ for the other Member States. (Offer, page 90).

Note:

There are a number of other changes which reflect either superficial liberalisation or are technicalities

Annex A notes sectors that have not been included in the EU offer. Annex B briefly summarises the EU treaty provisions on establishment.

Annex A: sectors which are not included in the EU offer

The EU offer does not inscribe, or most Member States leave ‘Unbound’, the following sectors, in which there are consequently no market access commitments:

- 1 C Research and development services
 - a R&D services on natural sciences
 - c Interdisciplinary R&D services

Note: the commitment is ‘None’ in Modes 1, 2 and 3 by A; these modes are ‘Unbound’ in the other Member States.

- 1 F Other business services
 - i Services incidental to manufacturing

j Services incidental to energy distribution

2 D Audiovisual services

The “current regime is unchanged: no commitment in this sector, and maintenance of all exemptions to the Most-Favoured Nation clause listed by the EU during the Uruguay Round to cover cultural policies, such as co-production agreements and privileged treatment accorded to audio-visual works originating from the EU and other European countries.”

2 E Other communication services

8 B Human health services (other than hospital services under 8A)

Note: the commitment is ‘None’ in Modes 1, 2 and 3 by A; these modes are ‘Unbound’ in the other Member States.

10 C Libraries, archives, museums and other cultural services

Note: the commitment is ‘None’ in Modes 1, 2 and 3 by A; these modes are ‘Unbound’ in the other Member States.

10 D Sporting and other recreational services: betting and gambling

11 B Internal waterways transport (except for: c. Rental of vessels with crew)

11 C Air transport services (except for:

d. Maintenance and repair of aircraft and

e. Supporting services for air transport)

11 D Space transport

11 G Pipeline transport

11 H Services auxiliary to all modes of transport

a. Cargo-handling services

Annex B: background note on the EU provisions for establishment

Article 48 of the Treaty of the European Union, provides that: “Companies or firms formed in accordance with the law of a Member State and having their registered office, central administration, or principal place of business within the Community shall, for the purposes of this Chapter, be treated in the same way as natural persons who are nationals of Member States.” This means that once established in one of the Member States they can operate thereafter in any other Member State under conditions of national treatment for whichever Member State they operate in, which can vary from state to state.

Branches of foreign affiliates are only authorised to operate in the host Member State where they are located, which is a limitation on national treatment.

In the case of the regulated professions, the recognition of a qualification and registration of a non-EU national by one Member State does not confer recognition in any other Member State.

The transport sector is omitted from the provisions of Article 48, for which Title V applies (Articles 70-80). Under Article 72 national treatment must be granted by each Member State to the carriers of any of the others for road, rail and inland waterway transport providers, and common rules apply for the “international transport to or from the territory of a Member State or passing across the territory of one or more Member States.” (Article 71:1(a)). Separate conditions are laid down “under which non-resident carriers may operate transport services within a Member State.” (Article 71:1(b))

XII.S SELECTED INDICATORS FOR THE SERVICES SECTORS IN THE GCC

	Bahrain	Kuwait	Oman	Qatar	Saudi A	UAE	Totals
Services: Exports/Imports							
Service exports US \$ mn 2000	n/a	1,793	283	n/a	4,785	n/a	6,861
% in transport	n/a	90	6	n/a	n/a	n/a	
% in travel	n/a	6	78	n/a	n/a	n/a	
% in Others	n/a	5	16	n/a	n/a	n/a	
Service imports US \$ mn 2000	n/a	4,078	1,501	n/a	10,942	n/a	16,521
% in transport	n/a	38	32	n/a	21	n/a	
% in travel	n/a	60	23	n/a	0	n/a	
% in Others	n/a	2	45	n/a	79	n/a	
Service exports US \$ mn 2001	830	1,523	283	n/a	5,182	n/a	7,818
Service imports US \$ mn 2001	683	4,505	1,501	n/a	7,165	n/a	13,854
Telecommunications							
Tel lines 1997 (1000s)	152	412	201	142	3900	915	5722
Mobile phones 1997 (1000s)	59	210	60	43	2900	1000	4272
Fixed line per 1000 inhabitants	n/a	244	89	n/a	137	391	861
Mobile phones per 1000 inhabitants	n/a	249	65	n/a	64	16	394
Internet Service Providers in 2000	1	3	1	1	22	1	29
PCs per 1000 inhabitants in 2000	n/a	131	32	n/a	60	154	
Secure servers in 2001	n/a	4	2	n/a	11	31	48
Transport							
Railways Km	0	0	0	0	1,392	0	1,392
Waterways Km	0	0	0	0	0	0	0
Airports over 3047 m	2	1	1	2	31	8	45
No. of Seaports	3	6	3	3	11	10	36
Merchant ships	7	39	3	23	71	61	204
Total fleet in DWT '000	450	3,633	15	1,040	1,386	938	7,462
of which general cargo & container	198	367	6	362	678	410	2,021
Tourism							
Tourism: Inbound in thousands in 2000	n/a	77	502	n/a	3,700	2,481	6,760
Outbound in '000s	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Receipts US\$ Mn	n/a	243	104	n/a	1,462	607	2,416
Expenditure US\$ Mn	n/a	2,510	47	n/a	n/a	n/a	2,557
Insurance							
Insurance premiums (\$ Mn '01)	156	259	201	n/a	992	801	2,409
Per capita \$ '01 Life	49	30	14	n/a	1	56	
Per capita \$ '01 Non-Life	171	101	64	n/a	47	246	

Sources: World Bank, World Development Indicators, 2002 ;WTO, International Trade Statistics 2002 ; CIA, The World Factbook, Swiss Re publication Sigma No. 6.2002 ; UNCTAD, World Investment Report 2002 ; UNCYAD, Review of Maritime Transport 2002.

XII.T ASSESSMENT OF THE ECONOMIC IMPACT OF THE CU AND FTA: TABLES

Table 65: Economic Indicators for Middle East and North Africa Countries, 2000											
Per Capita GDP							International Trade and Foreign Investment				
Avg.											
Annual							Structure of Output		Average		
Growth							Merch.	Merch.	Import		
Country	Population	Level	1990-00	Agriculture	Industry	Services	Exports	Imports	Tariff		
	(Mill.)	(US \$)	(Percent)	(Percent GDP)			(US \$ Mill.)			(% GP)	
							(Percent)				
Algeria	30.4	1,758	-0.1	8.8	59.7	31.5	22,031	9,152	8.3	..	
Bahrain	0.6	13,284	2.2	..	..	..	5,703	4,633	16.3	11.6
Egypt	64.0	1,554	2.6	16.7	33.1	50.2	4,689	14,010	20.1	1.3	
Iran	63.7	1,594	1.2	17.7	33.3	49.0	28,345	14,296	6.6	0.0	
Iraq	23.3	..	..	2.2	24.8	73.0	20,603	11,153	14.3	..
Israel	6.2	17,804	2.0	..	..	..	31,404	37,686	6.5	6.7
Jordan	4.9	1,728	0.7	11.9	22.0	66.1	1,897	4,539	16.9	9.4	
Kuwait	2.0	17,915	6.5	..	..	..	19,420	7,157	3.4	0.9
Lebanon	4.3	3,834	3.3	13.5	32.2	54.3	715	6,230	7.4	..	
Libya	5.3	6,441	..	..	..	..	12,687	3,751	13.3	1.5
Morocco	28.7	1,161	0.4	..	..	..	7,432	11,534	35.8	0.4
Oman	2.4	8,278	..	22.8	28.7	48.5	10,852	5,040	9.6	1.0	
Qatar	0.6	27,424	..	12.3	28.8	58.9	11,594	3,252	4.4	1.5	
Saudi Arabia	20.7	9,117	-1.2	15.4	25.3	59.4	77,583	30,238	11.5	3.9	
Syria	16.2	1,105	3.1	..	..	..	4,634	3,815	14.5	0.9
Tunisia	9.6	2,027	3.1	14.0	47.9	38.0	5,850	8,567	36.2	2.2	
Turkey	67.4	2,956	1.2	8.8	59.7	31.5	27,485	54,150	9.7	..	
UAE	2.9	..	0.2	..	..	..	41,262	38,139	14.3	11.6
Yemen	17.5	531	1.1	16.7	33.1	50.2	4,079	2,324	14.9	1.3	
GCC	29.2	11,472	0.1	13.2	21.6	48.9	166,414	88,459	9.9	3.4	
MENA	370.7	6,635	1.1	10.3	30.4	34.7	338,265	269,666	13.9	2.0	
Dev. Ctrys.	5,099.7	1,200	3.0	12.2	34.6	53.2	1,565,387	1,444,005	..	3.6	
World	6,052.8	5,204	1.2	3.9	29.8	66.3	6,430,630	6,633,562	..	9.0	

Sources: UNCTAD, *Handbook of Statistics*, 2003; UNCTAD, *Trade Information and Analysis System*, 2003; and World Bank, *World Development Indicators*, 2003. Notes: GCC denotes Gulf Cooperation Council countries: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and UAE.

Table 66: Trade in Services, 2000								
Exports					Imports			
Of which					Of which			
Country	Total	Transp.	Travel	Other	Total	Transp.	Travel	Other
	(\$ Mn)		(Percent)		(\$ Mn)		(Percent)	
Algeria	..	..	..	..	..	..	..	..
Bahrain	830	33.9	56.6	9.5	683	60.9	24.8	14.3
Egypt	9,803	27.0	44.3	28.7	7,513	29.4	14.3	56.3
Iran	1,382	48.6	36.3	15.2	2,296	49.7	8.9	41.3
Iraq	..	..	..	..	..	..	..	..
Israel	15,181	16.3	25.4	58.2	12,529	39.0	22.4	38.6
Jordan	..	..	..	..	..	..	..	..
Kuwait	1,822	75.9	5.4	18.8	4,923	31.3	50.7	18.1
Lebanon	..	..	..	..	..	..	..	..
Libya	..	..	..	..	..	..	..	..
Morocco	3,034	16.0	67.2	16.8	1,884	32.9	22.6	44.5
Oman	283	6.4	78.0	15.6	1,501	32.4	22.7	44.9
Qatar	..	..	..	..	..	..	..	..
Saudi Arabia	4,785	..	..	100.0	25,262	8.9	..	91.1
Syria	1,700	14.5	63.6	21.9	1,667	41.9	40.1	18.0
Tunisia	2,767	21.5	60.8	17.7	1,219	44.9	21.5	33.6
Turkey	19,484	15.2	39.2	45.6	8,149	33.7	21.0	45.3
UAE	..	..	..	..	..	..	..	..
Yemen	211	10.2	34.5	55.3	809	42.0	8.6	49.4

Source: UNCTAD, *Handbook of Statistics*, 2003.

Table 67: Directions of Merchandise Trade, 2000												
Exports to					Imports from							
Developed		Of which		Developing	Of which	Developed		Of which		Developing	Of which	
Country	Countries	EU	US	Countries	Middle East	Countries	EU	US	Countries	Middle East		
(Percent)												
Algeria	83.6	66.3	16.3	15.9	5.3	77.6	61.3	13.2	16.6	6.2		
Bahrain	12.0	4.6	4.0	28.6	5.5	45.9	25.4	12.9	53.5	34.9		
Egypt	64.6	48.2	13.5	24.5	9.8	62.1	36.6	17.6	25.7	7.0		
Iran	44.6	25.6	0.9	42.7	10.4	44.3	32.3	3.1	37.7	7.9		
Iraq	84.0	35.0	44.2	16.0	4.4	61.8	41.1	2.5	31.0	7.2		
Israel	70.5	26.8	37.7	21.1	2.0	70.9	42.0	19.0	13.8	1.8		
Jordan	16.4	3.9	5.0	80.8	39.4	51.4	31.6	10.8	44.3	24.9		
Kuwait	55.7	14.5	15.1	44.3	2.2	73.7	40.8	15.9	25.3	4.1		
Lebanon	37.8	19.9	7.9	60.6	44.7	63.0	44.0	7.8	28.2	12.7		
Libya	88.5	85.3	0.0	11.5	6.0	68.7	62.2	0.9	29.4	6.1		
Morocco	73.9	62.1	5.9	16.5	2.2	72.0	63.0	6.1	14.5	4.2		
Oman	23.4	1.7	2.5	76.6	11.5	45.1	21.2	4.3	54.6	38.7		
Qatar	51.0	0.9	3.7	39.2	6.2	62.1	35.6	11.2	37.7	17.6		
Saudi A.	56.1	17.6	18.1	43.9	6.9	66.8	30.1	20.2	20.5	5.0		
Syria	65.1	61.0	3.7	31.3	25.4	41.2	32.9	4.5	32.0	10.1		
Tunisia	80.4	78.2	0.8	15.3	3.4	78.9	70.6	4.9	16.5	3.7		
Turkey	66.9	49.9	11.9	17.8	5.6	60.4	45.8	7.6	21.1	4.8		
UAE	42.4	4.9	2.4	44.1	9.0	48.8	31.3	6.8	48.7	14.8		
Yemen	13.0	1.2	6.2	84.3	4.1	33.5	18.0	4.7	63.1	35.2		

Sources: UNCTAD, *Handbook of Statistics*, 2003.

Table 68: Structure of Merchandise Trade, 2000

Country	Exports					Imports				
	Foods	Ag. Raw Materials	Fuels	Ores & Metals	Manu- factures	Foods	Ag. Raw Materials	Fuels	Ores & Metals	Manu- factures
	(Percent)									
Algeria	0.2	0.0	98.1	0.3	1.4	28.2	2.6	1.4	1.2	66.6
Bahrain	0.7	0.0	71.0	17.6	10.7	9.7	0.8	45.7	6.8	37.0
Egypt 1/	8.9	7.9	36.9	4.4	37.1	22.8	4.4	6.1	3.0	58.8
Iran	2.9	0.4	88.6	0.8	7.1	19.0	2.6	2.4	2.5	73.2
Iraq	..	..	..	..	..	..	..	..	..	..
Israel	2.6	1.1	0.7	1.2	94.2	5.4	1.0	10.1	1.8	81.2
Jordan	15.9	0.5	0.0	14.6	69.0	21.2	2.3	4.8	2.5	65.9
Kuwait 1/	0.5	0.1	90.6	0.3	8.5	16.8	0.9	0.6	1.9	78.2
Lebanon	18.4	1.8	0.2	6.9	66.0	17.8	1.7	16.5	2.1	56.0
Libya	..	..	..	..	..	..	..	..	..	..
Morocco	21.5	2.0	3.7	8.7	64.1	13.7	3.1	17.7	2.5	62.9
Oman	3.6	0.0	82.5	0.9	12.4	22.2	0.7	1.7	3.0	68.7
Qatar 1/	0.1	0.0	90.1	0.1	9.7	15.3	0.7	0.6	3.2	79.9
Saudi Arabia	0.6	0.1	92.1	0.1	7.1	17.7	1.0	0.2	3.0	73.2
Syria	8.8	4.6	76.3	0.7	7.8	19.0	3.3	3.7	1.8	64.7
Tunisia	8.7	0.7	12.1	1.5	77.0	8.2	3.0	10.6	2.5	75.4
Turkey	12.8	1.1	1.1	2.6	81.2	3.9	3.7	14.0	4.0	70.5
UAE	..	..	..	..	..	..	..	..	..	..
Yemen	..	..	..	..	..	..	..	..	..	..

Sources: UNCTAD, *Handbook of Statistics*, 2003.

Table 69: The Trade simulation model: Country and Product Coverage

Countries	Product Categories	Model Code
1	Algeria	AL
2	Bahrain	BH
3	Egypt	EG
4	Iran	IR
5	Iraq	IQ
6	Israel	IS
7	Jordan	JO
8	Kuwait	KW
9	Lebanon	LN
10	Libya	LY
11	Morocco	MO
12	Oman	OM
13	Qatar	QA
14	Saudi Arabia	SA
15	Syria	SY
16	Tunisia	TN
17	Turkey	TR
18	United Arab Emirates	UA
19	Yemen	YE
20	EU15	EU
21	Japan	JP
22	United States	US
23	Other Developed Countries	OD
24	Other Less Developed Countries	OL
<hr/>		
HS Sections		
I	Live animals and animal products	AN
II	Vegetable products	VE
III	Fats and oils	FA
IV	Manufactured foodstuffs	FS
V	Mineral products	MN
VI	Chemical	CH
VII	Rubber and plastics	RP
VIII	Hides and leather products	HL
IX	Cork and wood articles	CW
X	Pulp and paper products	PP
XI	Textiles and apparel	TA
XII	Footwear and other made-up articles	FW
XIII	Stone and mineral products	SP
XIV	Precious stones and jewellery	PS
XV	Base metals and metal products	MT
XVI	Machinery	MA
XVII	Transport equipment	TE
XVIII	Professional equipment	PE
XIX	Arms and ammunition	AA
XX	Miscellaneous manufactures	MM
XXI	Works of art	WA

Table 70: Average MFN Import Tariff Rates (Percent)

HS Section	Algeria	Bahrain	Egypt	Iran	Iraq	Israel	Jordan	Kuwait	Lebanon	Libya	Morocco
Live animals & animal products	4.9	16.0	13.6	4.6	19.5	3.0	13.6	0.8	8.3	2.0	80.7
Vegetable products	4.4	14.7	14.8	4.4	16.3	6.8	15.9	0.9	12.6	9.7	39.5
Fats & oils	7.3	26.3	13.7	5.2	13.8	3.4	15.6	0.0	10.9	12.1	31.8
Manufactured foodstuffs	23.4	23.3	28.9	9.3	25.0	9.4	35.0	8.9	13.9	24.3	42.8
Mineral products	5.1	5.8	7.0	3.3	8.4	0.9	11.2	4.0	6.2	10.8	22.3
Chemical	5.6	17.4	16.9	2.5	11.3	7.4	10.9	4.0	5.5	15.2	27.7
Rubber & plastics	7.6	18.1	18.0	6.3	13.5	6.6	15.1	4.0	4.2	21.0	40.8
Hides & leather products	9.6	0.0	21.6	11.2	13.4	4.4	21.7	2.7	16.5	8.8	40.5
Cork & wood articles	7.7	9.8	21.5	10.2	13.2	9.7	14.0	4.0	3.6	3.3	42.3
Pulp & paper products	4.9	16.0	14.2	3.4	10.9	4.5	14.1	3.4	5.3	9.2	33.9
Textiles & apparel	9.8	18.0	22.8	12.0	15.7	15.8	13.8	4.0	2.6	9.1	38.2
Footwear & other made-up articles	10.0	21.6	39.5	11.7	17.9	9.4	28.2	3.0	12.9	1.3	42.2
Stone & mineral products	6.3	22.3	28.2	9.2	16.9	7.9	23.6	4.0	9.4	20.0	38.6
Precious stones & jewellery	9.1	30.0	26.7	0.0	15.5	3.5	18.1	4.0	3.6	35.0	36.7
Base metals & metal products	5.4	11.7	17.7	4.9	11.1	4.1	14.3	3.6	3.6	7.4	31.3
Machinery	9.3	14.2	14.9	6.2	11.1	6.2	13.2	4.0	4.2	20.9	15.9
Transport equipment	10.9	8.5	14.2	4.8	10.6	1.8	9.9	4.0	3.4	15.9	17.1
Professional equipment	9.8	13.1	19.5	5.7	13.1	7.0	21.1	4.0	4.9	20.7	14.4
Arms & ammunition	6.0	15.0	23.6	10.0	11.7	0.0	0.0	0.0	5.0	0.0	47.9
Miscellaneous manufactures	8.7	30.0	24.6	10.7	18.4	14.1	26.5	4.0	11.1	20.8	34.3
Works of art	8.1	10.6	20.3	3.5	13.7	11.0	19.5	3.7	7.8	13.1	33.2
All Products	8.3	16.3	20.1	6.6	14.3	6.5	16.9	3.4	7.4	13.3	35.8
HS Section	Oman	Qatar	S. Arabia	Syria	Tunisia	Turkey	UAE	Yemen	EU15	Japan	US
Live animals & animal products	10.1	4.0	9.5	6.3	69.9	50.4	19.5	17.7	4.4	9.8	3.7
Vegetable products	5.1	4.0	11.2	5.6	77.7	25.7	16.3	14.3	5.1	6.7	3.6
Fats & oils	5.7	4.0	12.0	9.0	40.5	14.7	13.8	12.7	5.3	6.6	3.4
Manufactured foodstuffs	26.0	11.3	10.7	28.1	62.0	36.0	25.0	16.0	13.0	15.0	26.9
Mineral products	5.0	4.0	12.1	5.4	19.3	0.3	8.4	11.9	0.3	0.3	0.1
Chemical	7.3	4.0	11.4	11.0	25.8	4.9	11.3	10.4	4.2	3.4	2.2
Rubber & plastics	6.2	4.0	12.1	13.6	27.4	4.8	13.5	13.2	4.7	3.0	3.2
Hides & leather products	11.7	4.0	12.1	0.0	37.8	5.3	13.4	11.4	2.4	15.3	3.7
Cork & wood articles	8.5	4.0	12.3	13.8	35.6	2.9	13.2	18.5	2.8	3.2	1.8
Pulp & paper products	4.2	4.0	11.2	11.0	26.6	2.0	10.9	11.3	1.3	0.8	0.2
Textiles & apparel	8.3	4.0	12.4	32.9	33.0	18.9	15.7	11.5	7.5	7.8	7.3
Footwear & other made-up articles	11.9	4.0	12.0	18.8	40.9	7.1	17.9	21.5	5.2	10.8	5.7
Stone & mineral products	7.8	4.0	12.2	30.9	32.7	4.3	16.9	17.2	3.6	1.6	3.6
Precious stones & jewellery	14.4	4.0	11.6	1.0	38.3	0.7	15.5	14.7	0.7	1.2	2.2
Base metals & metal products	6.2	4.2	12.5	8.4	27.7	3.4	11.1	15.2	2.8	3.1	2.3
Machinery	8.1	4.0	12.0	16.8	20.5	2.3	11.1	11.5	2.2	0.1	1.5
Transport equipment	6.6	4.0	10.1	20.0	21.7	2.7	10.6	16.3	2.7	0.0	2.2
Professional equipment	12.2	4.0	11.5	23.2	30.8	3.1	13.1	12.1	3.1	0.2	2.8
Arms & ammunition	15.0	4.0	7.1	0.0	25.4	2.6	11.7	25.0	2.7	9.6	0.9
Miscellaneous manufactures	12.4	4.0	13.7	31.9	38.8	4.7	18.4	17.4	2.7	2.5	2.6
Works of art	9.0	4.2	12.1	16.7	27.8	6.3	13.7	13.5	3.0	3.0	2.6
All Products	9.6	4.4	11.5	14.5	36.2	9.7	14.3	14.9	3.8	5.0	3.9

Source: UNCTAD, *Trade Information and Analysis System*, 2003.

Table 71: Price Elasticities of Import Demand and Export Supply

	HS Section	Import Demand	Export Supply
I	Live animals & animal products	-0.93	0.75
II	Vegetable products	-0.68	0.75
III	Fats & oils	-1.10	0.75
IV	Manufactured foodstuffs	-1.08	0.75
V	Mineral products	-0.81	0.50
VI	Chemical	-1.59	1.00
VII	Rubber & plastics	-1.60	1.00
VIII	Hides & leather products	-1.32	1.00
IX	Cork & wood articles	-1.18	1.00
X	Pulp & paper products	-1.35	1.00
XI	Textiles & apparel	-1.53	1.00
XII	Footwear & other made-up articles	-1.88	1.00
XIII	Stone & mineral products	-2.03	1.00
XIV	Precious stones & jewellery	-2.25	1.00
XV	Base metals & metal products	-2.09	1.00
XVI	Machinery	-2.63	1.00
XVII	Transport equipment	-2.50	1.00
XVIII	Professional equipment	-2.10	1.00
XIX	Arms & ammunition	-0.80	1.00
XX	Miscellaneous manufactures	-1.38	1.00
XXI	Works of art	-1.00	1.00

Sources: Based on econometric estimates compiled by Stern et al. (1976), Goldstein and Khan (1985), and Republic of Uganda (1997).

Note: Elasticity estimates are averages computed from elasticity values by HS chapters.

Table 72: EU-GCC Trade Liberalization Scenarios

Scenario	Notes	Internationally Competitive Sectors
<u>GCC Customs Union</u>		
1. GCC Customs Union [CU (5% CET)]	GCC members adopt a common external tariff set at 5 percent in each commodity Category.	Mineral products
2. GCC Customs Union [CU (Min CET)]	GCC members adopt a common external tariff set at the minimum tariff level in each commodity category, across member countries.	Mineral products
<u>EU-GCC FTA</u>		
3. EU-GCC FTA [FTA (5% CET)]	GCC countries maintain 5 percent common external tariff in Scenario 1.	Manuf. foodstuffs Mineral products Chemicals Rubber and plastics Pulp, paper prods. Stone, mineral prods. Metals, metal prods. Machinery Transport equipment Arms, ammunition Works of art
4. EU-GCC FTA	GCC countries maintain common external [FTA (Min CET)] tariff in Scenario 2.	Manuf. foodstuffs Mineral products Chemicals Rubber and plastics Pulp, paper prods. Stone, mineral prods. Metals, metal prods. Machinery Transport equipment Arms, ammunition Works of art
<u>Open Regionalism</u>		
5. MFN-based EU-GCC FTA	EU and GCC jointly pursue free trade to an MFN basis	Not applicable

Notes: EU denotes European Union 15: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, and United Kingdom. GCC denotes Gulf Cooperation Council countries: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates. In each of the trade liberalization scenarios, countries are assumed additionally to eliminate non-tariff barriers, which are not explicitly represented in the Trade simulation model.

Table 73: GCC Countries: Trade and Welfare Impacts of EU-GCC Trade Arrangements (Millions of US Dollars, at 2000 Prices)

Scenario	CU (5% CET)	CU (Min CET)	FTA (5% CET)	FTA (Min CET)	MFN
Percent Change in Real Exchange Rate (US\$/LC) All products	-3.4	-4.2	-6.5	-6.7	-7.4
Change in Real Exports					
Agriculture	56	34	70	61	53
Minerals	1,563	1,946	3,207	3,325	3,405
Manufacturing	991	973	877	904	932
All products	2,610	2,953	4,153	4,290	4,390
Trade Creation = Change in Real Imports					
Agriculture	181	454	-7	268	213
Minerals	64	47	-42	-39	-14
Manufacturing	2,082	2,097	2,978	2,903	2,805
All products	2,326	2,597	2,929	3,131	3,003
Trade Diversion					
Agriculture	56	34	212	140	0
Minerals	0	0	0	0	0
Manufacturing	991	973	410	411	0
All products	1,047	1,007	622	551	0
Net Trade Creation					
Agriculture	125	419	-219	128	213
Minerals	64	47	-42	-39	-14
Manufacturing	1,090	1,125	2,568	2,491	2,805
All products	1,279	1,591	2,307	2,580	3,003
Change in Consumer Surplus					
Agriculture	-41	-87	0	-59	-48
Minerals	-15	-11	12	11	4
Manufacturing	902	1,031	1,495	1,429	1,417
All products	846	933	1,507	1,380	1,374
Change in Producer Surplus					
Agriculture	78	47	99	86	74
Minerals	3,201	3,992	6,635	6,887	7,056
Manufacturing	1,048	1,035	925	955	987
All products	4,327	5,074	7,659	7,929	8,118

Forgone Tariff Revenue Agriculture	43	6	387	57	0
Minerals	0	0	0	0	0
Manufacturing	637	523	562	439	0
All products	680	529	949	497	0
Change in Economic Welfare Agriculture	-6	-46	-288	-31	27
Minerals	3,186	3,981	6,647	6,898	7,060
Manufacturing	1,313	1,542	1,858	1,945	2,405
All products	4,493	5,478	8,217	8,812	9,492
(% GDP)	1.5	1.8	2.7	2.9	3.2
Change in Tariff Revenue Agriculture	-773	-1,146	-1,131	-1,200	-1,213
Minerals	-48	-79	-53	-83	-200
Manufacturing	-4,762	-5,009	-4,643	-4,871	-7,296
All products	-5,583	-6,234	-5,827	-6,154	-8,710
(% GDP)	-1.9	-2.1	-1.9	-2.1	-2.9

Table 74: European Union: Trade and Welfare Impacts of EU-GCC Trade Arrangements (Millions of US Dollars, at 2000 Prices)

CU (5% CET)		CU (Min CET)	FTA CET	(5% FTA (Min CET)	MFN
Percent Change in Real Exchange Rate (US\$/LC) All products					
	0.0	0.0	0.3	0.2	-1.9
Change in Real Exports					
Agriculture	17	70	2,792	1,799	1,742
Minerals	-99	-125	-309	-308	352
Manufacturing	71	39	8,154	8,181	40,805
All products	-11	-16	10,636	9,672	42,900
Trade Creation = Change in Real Imports					
Agriculture	-22	-89	1,059	655	2,360
Minerals	363	458	1,137	1,133	-888
Manufacturing	-101	-83	10,202	9,516	42,256
All products	241	286	12,397	11,304	43,729
Trade Diversion					
Agriculture	0	0	2,650	1,720	0
Minerals	0	0	0	0	0
Manufacturing	0	0	10,787	10,582	0
All products	0	0	13,437	12,302	0
Net Trade Creation					
Agriculture	-22	-89	-1,591	-1,065	2,360
Minerals	363	458	1,137	1,133	-888
Manufacturing	-101	-83	-585	-1,066	42,256
All products	241	286	-1,040	-998	43,729
Change in Consumer Surplus					
Agriculture	5	18	-241	-203	-545
Minerals	-88	-110	-271	-270	219
Manufacturing	10	-24	4,957	4,621	16,359
All products	-73	-117	4,445	4,149	16,033
Change in Producer Surplus					
Agriculture	23	93	3,790	2,435	2,350
Minerals	-198	-250	-617	-615	708
Manufacturing	116	59	8,442	8,471	42,335
All products	-59	-98	11,616	10,291	45,393

Forgone Tariff Revenue

Agriculture	0	0	4,674	4,637	0
Minerals	0	0	0	0	0
Manufacturing	0	0	13,010	13,005	0
All products	0	0	17,684	17,642	0
Change in Economic Welfare					
Agriculture	28	111	-1,125	-2,405	1,805
Minerals	-285	-360	-887	-884	927
Manufacturing	126	34	388	87	58,694
All products	-131	-215	-1,624	-3,202	61,426
(% GDP)	0.0	0.0	0.0	0.0	0.8
Change in Tariff Revenue					
Agriculture	0	1	-4,670	-4,652	-5,655
Minerals	0	0	1	1	-491
Manufacturing	-2	-3	-12,665	-12,680	-66,062
All products	-2	-3	-17,335	-17,331	-72,208
(% GDP)	0.0	0.0	-0.2	-0.2	-0.9

Table 75: Bahrain: Trade and Welfare Impacts of EU-GCC Trade Arrangements (Millions of US Dollars, at 2000 Prices) Scenario

CU (5% CET)		CU (Min CET)	FTA CET	(5% FTA (Min CET)	MFN
Percent Change in Real Exchange Rate					
(US\$/LC) All products	-4.2	-4.9	-6.8	-7.0	-7.9
Change in Real Exports					
Agriculture	1	1	2	1	1
Minerals	86	102	143	147	156
Manufacturing	141	136	137	140	131
All products	229	239	281	288	288
Trade Creation = Change in Real Imports					
Agriculture	14	22	9	18	15
Minerals	27	15	-14	-17	-23
Manufacturing	230	229	273	277	264
All products	270	266	268	278	256
Trade Diversion					
Agriculture	2	1	7	4	0
Minerals	0	0	0	0	0
Manufacturing	52	51	18	18	0
All products	54	52	25	23	0
Net Trade Creation					
Agriculture	12	21	2	13	15
Minerals	27	15	-14	-17	-23
Manufacturing	178	179	255	258	264
All products	217	214	244	255	256
Change in Consumer Surplus					
Agriculture	-2	-4	-1	-3	-3
Minerals	-7	-4	4	4	6
Manufacturing	117	121	146	147	140
All products	108	114	148	148	144
Change in Producer Surplus					
Agriculture	2	1	2	2	2
Minerals	176	210	295	303	323
Manufacturing	149	143	144	148	137
All products	327	354	441	453	462

Forgone Tariff Revenue

Agriculture	1	0	12	2	0
Minerals	0	0	0	0	0
Manufacturing	33	27	21	16	0
All products	35	27	33	18	0
Change in Economic Welfare					
Agriculture	-2	-3	-11	-3	-1
Minerals	170	206	298	308	329
Manufacturing	233	237	269	278	278
All products	400	440	556	583	606
(% GDP)	5.0	5.5	7.0	7.3	7.6
Change in Tariff Revenue					
Agriculture	-32	-43	-43	-45	-46
Minerals	-15	-36	-17	-37	-114
Manufacturing	-267	-277	-253	-264	-356
All products	-314	-356	-313	-346	-515
(% GDP)	-3.9	-4.5	-3.9	-4.3	-6.5

Table 76: Kuwait: Trade and Welfare Impacts of EU-GCC Trade Arrangements (Millions of US Dollars, at 2000 Prices) Scenario

CU (5% CET)		CU (Min CET)	FTA CET	(5% FTA (Min CET)	MFN
Percent Change in Real Exchange Rate (US\$/LC) All products 0.4					
		-0.3	-2.5	-2.7	-3.4
Change in Real Exports					
Agriculture	0	0	0	0	0
Minerals	-42	-3	137	145	158
Manufacturing	29	27	19	20	24
All products	-12	25	156	166	182
Trade Creation = Change in Real Imports					
Agriculture	-11	-1	-16	-7	-8
Minerals	2	2	-1	-1	1
Manufacturing	-44	-24	69	69	40
All products	-53	-23	51	62	32
Trade Diversion					
Agriculture	2	1	7	4	0
Minerals	0	0	0	0	0
Manufacturing	62	61	26	26	0
All products	64	62	33	30	0
Net Trade Creation					
Agriculture	-13	-2	-23	-11	-8
Minerals	2	2	-1	-1	1
Manufacturing	-106	-84	43	43	40
All products	-117	-85	18	31	32
Change in Consumer Surplus					
Agriculture	2	0	3	1	2
Minerals	0	0	0	0	0
Manufacturing	-27	-13	41	39	22
All products	-26	-13	45	40	23
Change in Producer Surplus					
Agriculture	0	0	1	0	0
Minerals	-83	-5	276	293	320
Manufacturing	30	28	20	21	24

All products	-52	23	296	314	345
Forgone Tariff Revenue					
Agriculture	2	0	13	2	0
Minerals	0	0	0	0	0
Manufacturing	40	32	32	25	0
All products	42	33	45	27	0
Change in Economic Welfare					
Agriculture	1	0	-9	-1	2
Minerals	-83	-6	276	294	320
Manufacturing	-38	-17	29	35	46
All products	-120	-23	296	328	368
(% GDP)	-0.3	-0.1	0.8	0.9	1.0
Change in Tariff Revenue					
Agriculture	12	0	0	-2	-3
Minerals	1	0	0	0	-2
Manufacturing	-8	-34	6	-22	-179
All products	4	-34	6	-24	-184
(% GDP)	0.0	-0.1	0.0	-0.1	-0.5

Table 77: Oman: Trade and Welfare Impacts of EU-GCC Trade Arrangements (Millions of US Dollars, at 2000 Prices) Scenario

CU (5% CET)		CU (Min CET)	FTA CET	(5% FTA (Min CET)	MFN
Percent Change in Real Exchange Rate					
(US\$/LC) All products	-1.5	-2.2	-5.0	-5.2	-5.8
Change in Real Exports					
Agriculture	11	5	15	13	11
Minerals	51	76	185	192	196
Manufacturing	105	109	97	100	104
All products	167	190	297	306	311
Trade Creation = Change in Real Imports					
Agriculture	5	23	-8	9	6
Minerals	6	5	-8	-6	0
Manufacturing	189	185	255	246	210
All products	200	213	239	249	216
Trade Diversion					
Agriculture	4	2	13	8	0
Minerals	0	0	0	0	0
Manufacturing	65	64	17	17	0
All products	69	67	30	25	0
Net Trade Creation					
Agriculture	2	21	-22	1	6
Minerals	6	5	-8	-6	0
Manufacturing	124	121	238	229	210
All products	131	146	209	224	216
Change in Consumer Surplus					
Agriculture	1	-2	3	0	0
Minerals	-1	-1	2	2	0
Manufacturing	61	68	100	95	79
All products	60	65	106	96	80
Change in Producer Surplus					
Agriculture	15	7	21	18	15
Minerals	102	153	378	394	402
Manufacturing	113	121	104	108	114

All products	231	280	504	520	530
Forgone Tariff Revenue					
Agriculture	3	0	24	4	0
Minerals	0	0	0	0	0
Manufacturing	43	36	23	18	0
All products	46	37	48	22	0
Change in Economic Welfare					
Agriculture	13	4	0	14	15
Minerals	101	152	381	396	402
Manufacturing	131	153	181	184	193
All products	245	309	562	594	610
(% GDP)	1.2	1.6	2.8	3.0	3.1
Change in Tariff Revenue					
Agriculture	-18	-40	-40	-44	-45
Minerals	0	-2	0	-2	-10
Manufacturing	-255	-265	-231	-242	-440
All products	-272	-307	-272	-288	-494
(% GDP)	-1.4	-1.5	-1.4	-1.5	-2.5

Table 78: Qatar: Trade and Welfare Impacts of EU-GCC Trade Arrangements (Millions of US Dollars, at 2000 Prices) Scenario

CU (5% CET)		CU (Min CET)	FTA CET	(5% FTA (Min CET)	MFN
Percent Change in Real Exchange Rate (US\$/LC) All products 0.5					
		-0.2	-2.5	-2.6	-3.4
Change in Real Exports					
Agriculture	0	0	0	0	0
Minerals	-38	-5	101	107	121
Manufacturing	35	33	30	31	31
All products	-2	28	132	139	151
Trade Creation = Change in Real Imports					
Agriculture	-1	7	-7	2	0
Minerals	3	3	-2	-1	1
Manufacturing	-22	-7	73	71	42
All products	-20	3	64	72	43
Trade Diversion					
Agriculture	2	1	7	4	0
Minerals	0	0	0	0	0
Manufacturing	52	51	15	15	0
All products	54	52	22	20	0
Net Trade Creation					
Agriculture	-3	6	-13	-2	0
Minerals	3	3	-2	-1	1
Manufacturing	-74	-58	58	56	42
All products	-74	-49	42	52	43
Change in Consumer Surplus					
Agriculture	0	-1	2	-1	0
Minerals	-1	-1	1	0	0
Manufacturing	-16	-6	43	41	22
All products	-17	-8	45	41	22
Change in Producer Surplus					
Agriculture	0	0	0	0	0
Minerals	-75	-9	205	217	244
Manufacturing	36	33	31	32	31

All products	-39	24	236	249	276
Forgone Tariff Revenue					
Agriculture	1	0	13	2	0
Minerals	0	0	0	0	0
Manufacturing	33	26	21	17	0
All products	34	26	34	19	0
Change in Economic Welfare					
Agriculture	-1	-2	-11	-2	0
Minerals	-76	-10	205	217	244
Manufacturing	-13	2	53	56	53
All products	-90	-10	248	271	297
(% GDP)	-0.6	-0.1	1.7	1.9	2.1
Change in Tariff Revenue					
Agriculture	2	-10	-10	-12	-12
Minerals	1	0	1	0	-3
Manufacturing	-10	-32	6	-19	-144
All products	-8	-42	-3	-31	-160
(% GDP)	-0.1	-0.3	0.0	-0.2	-1.1

Table 79: Saudi Arabia: Trade and Welfare Impacts of EU-GCC Trade Arrangements (Millions of US Dollars, at 2000 Prices) Scenario

CU (5% CET)		CU (Min CET)	FTA CET	(5% FTA (Min CET)	MFN
Percent Change in Real Exchange Rate (US\$/LC) All products -3.5					
		-4.3	-6.6	-6.8	-7.4
Change in Real Exports					
Agriculture	20	12	25	22	19
Minerals	1,004	1,227	1,920	1,979	2,014
Manufacturing	508	499	425	437	475
All products	1,532	1,737	2,370	2,437	2,507
Trade Creation = Change in Real Imports					
Agriculture	44	142	-27	78	58
Minerals	23	21	1	3	13
Manufacturing	1,334	1,403	1,822	1,798	1,741
All products	1,401	1,565	1,795	1,879	1,813
Trade Diversion					
Agriculture	20	12	80	57	0
Minerals	0	0	0	0	0
Manufacturing	458	444	149	149	0
All products	478	456	229	206	0
Net Trade Creation					
Agriculture	24	129	-107	21	58
Minerals	23	21	1	3	13
Manufacturing	876	959	1,673	1,649	1,741
All products	923	1,109	1,567	1,673	1,813
Change in Consumer Surplus					
Agriculture	-15	-37	4	-24	-19
Minerals	-5	-5	0	-1	-3
Manufacturing	785	849	1,115	1,089	1,056
All products	765	808	1,119	1,065	1,034
Change in Producer Surplus					
Agriculture	28	17	35	31	26
Minerals	2,043	2,504	3,965	4,090	4,165
Manufacturing	534	526	444	457	499
All products	2,604	3,046	4,443	4,577	4,689

Forgone Tariff Revenue Agriculture	16	2	147	24	0
Minerals	0	0	0	0	0
Manufacturing	292	232	219	171	0
All products	308	234	366	195	0
Change in Economic Welfare					
Agriculture	-3	-23	-108	-17	7
Minerals	2,038	2,499	3,965	4,089	4,162
Manufacturing	1,026	1,143	1,339	1,375	1,554
All products	3,060	3,619	5,196	5,447	5,723
(% GDP)	1.8	2.1	3.0	3.1	3.3
Change in Tariff Revenue Agriculture	-218	-359	-354	-381	-387
Minerals	-23	-27	-24	-28	-41
Manufacturing	-1,905	-2,081	-1,807	-2,000	-2,972
All products	-2,145	-2,467	-2,185	-2,408	-3,400
(% GDP)	-1.2	-1.4	-1.3	-1.4	-2.0

Table 80: United Arab Emirates: Trade and Welfare Impacts of EU-GCC Trade Arrangements (Millions of US Dollars, at 2000 Prices) Scenario

CU (5% CET)	CU (Min CET)	FTA CET	(5% FTA (Min CET)	MFN
Percent Change in Real Exchange Rate (US\$/LC)				
All products -6.8	-7.5	-9.7	-10.1	-10.7
Change in Real Exports				
Agriculture	23	16	27	22
Minerals	501	549	722	760
Manufacturing	172	169	168	167
All products	696	734	917	950
Trade Creation = Change in Real Imports				
Agriculture	129	261	42	168
Minerals	3	2	-18	-17
Manufacturing	395	311	487	509
All products	527	574	511	644
Trade Diversion				
Agriculture	26	16	98	62
Minerals	0	0	0	0
Manufacturing	301	302	186	186
All products	328	318	284	248
Net Trade Creation				
Agriculture	103	245	-56	106
Minerals	3	2	-18	-17
Manufacturing	93	9	301	255
All products	200	255	227	344
Change in Consumer Surplus				
Agriculture	-26	-43	-11	-33
Minerals	-1	0	6	5
Manufacturing	-17	11	49	18
All products	-45	-33	44	-9
Change in Producer Surplus				
Agriculture	33	22	39	32
Minerals	1,037	1,140	1,516	1,602

Manufacturing	187	184	182	190	182
All products	1,256	1,347	1,738	1,815	1,816
Forgone Tariff Revenue					
Agriculture	20	2	178	24	0
Minerals	0	0	0	0	0
Manufacturing	195	169	246	192	0
All products	214	172	423	216	0
Change in Economic Welfare					
Agriculture	-13	-23	-149	-21	3
Minerals	1,036	1,140	1,522	1,594	1,604
Manufacturing	-25	26	-14	17	280
All products	998	1,142	1,359	1,590	1,887
(% GDP)	2.1	2.5	2.9	3.4	4.1
Change in Tariff Revenue					
Agriculture	-520	-693	-684	-716	-721
Minerals	-11	-15	-13	-16	-29
Manufacturing	-2,317	-2,321	-2,364	-2,325	-3,206
All products	-2,848	-3,029	-3,061	-3,056	-3,956
(% GDP)	-6.1	-6.5	-6.6	-6.6	-8.5

Table 81: Exports by HS Section in the Trade simulation model, Average 1999-2001 (US\$ Th)

HS Section	Algeria	Bahrain	Egypt	Iran	Iraq	Israel	Jordan	Kuwait	Lebanon	Libya	Morocco
Live animals & animal products	3,874	10,708	20,057	72,221	135	37,232	22,619	8,170	4,587	7,900	685,327
Vegetable products	16,509	1,193	298,008	626,780	22,543	756,578	112,005	745	50,180	27	574,016
Fats & oils	4,718	6,580	23,270	19,332	213	2,131	48,303	709	8,630	92	16,556
Manufactured foodstuffs	8,414	17,652	50,969	178,486	1,492	354,659	46,825	2,987	82,039	3,252	372,567
Mineral products	16,915,742	4,285,617	1,531,223	20,538,690	12,331,957	256,934	147,245	13,115,153	26,441	10,759,957	788,589
Chemical	72,730	131,249	254,665	309,922	2,047	3,162,657	525,058	195,160	87,148	266,772	921,100
Rubber & plastics	72,733	25,898	118,487	136,826	238	1,250,842	50,154	235,122	20,485	20,061	48,500
Hides & leather products	11,126	1,222	19,164	75,824	215	12,695	13,261	2,327	17,297	7,289	68,999
Cork & wood articles	13,905	270	4,759	6,865	0	10,378	872	371	5,699	95	61,680
Pulp & paper products	3,531	29,576	30,351	7,116	71	122,988	69,589	3,389	56,013	175	72,893
Textiles & apparel	665	377,593	802,803	870,006	1,646	1,262,951	179,950	22,007	57,725	602	2,558,252
Footwear & other made-up articles	246	2,704	2,250	67,689	0	37,260	4,507	193	11,258	0	159,053
Stone & mineral products	104	2,566	100,395	74,715	69	83,132	16,710	2,795	18,951	116	46,194
Precious stones & jewellery	24	7,172	5,771	3,390	20	9,150,398	12,075	10,454	121,103	323	46,698
Base metals & metal products	90,678	838,817	270,422	400,137	8,343	954,187	64,415	16,703	68,942	64,610	142,404
Machinery	28,687	26,819	38,017	60,998	7,869	8,464,674	90,166	67,682	87,291	11,215	782,619
Transport equipment	26,825	13,002	5,497	73,696	3,057	947,424	24,653	7,805	10,959	1,071	30,243
Professional equipment	7,863	108	1,996	3,308	1,642	1,603,541	2,159	9,090	5,379	1,147	58,883
Arms & ammunition	0	0	0	15,445	0	1,364	0	591	276	0	0
Miscellaneous manufactures	1,227	12,465	25,241	27,886	1,165	77,194	15,586	1,001	19,078	217	31,218
Works of art	0	74	229,480	96,659	160	74,382	395	66,442	567	1,022	2,229
All products	17,279,596	5,791,280	3,832,821	23,665,990	12,382,881	28,623,594	1,446,547	13,768,897	760,047	11,145,942	7,468,016
	Oman	Qatar	S. Arabia	Syria	Tunisia	Turkey	UAE	Yemen	EU15	Japan	US
Live animals & animal products	142,482	4,253	189,977	21,121	94,424	158,630	87,374	42,612	51,616,288	555,090	11,030,296
Vegetable products	53,970	178	90,348	126,015	95,521	1,890,158	75,468	6,633	43,435,629	628,270	22,836,953
Fats & oils	25,060	461	20,546	3,799	279,627	250,467	82,244	0	8,014,709	99,970	1,769,367
Manufactured foodstuffs	250,950	605	146,523	17,881	116,845	1,657,591	98,993	660	85,809,119	1,361,089	18,127,880
Mineral products	7,838,770	9,906,204	59,700,078	3,566,082	650,832	887,118	14,452,648	2,387,829	80,106,504	1,748,647	14,501,214
Chemical	76,262	239,408	3,092,808	10,150	628,841	857,009	62,724	603	239,762,905	27,281,378	61,561,068
Rubber & plastics	53,970	221,509	1,208,016	7,351	68,419	903,029	24,390	95	103,581,335	15,954,584	31,842,827
Hides & leather products	774	1,794	25,554	50,218	59,239	448,292	4,095	6,296	15,172,201	225,733	3,046,596
Cork & wood articles	1,204	0	6,105	2,130	18,125	80,315	1,253	2	18,630,141	74,940	5,832,889
Pulp & paper products	8,218	410	156,834	4,840	48,263	211,993	28,894	233	70,162,908	2,817,893	18,898,671
Textiles & apparel	134,634	136,640	135,013	368,828	2,442,207	10,096,310	267,433	1,082	99,572,706	7,707,246	19,676,971
Footwear & other made-up articles	2,553	316	1,445	1,313	270,992	121,602	3,262	0	17,876,172	161,333	818,597
Stone & mineral products	25,961	89	137,670	5,389	49,247	860,110	66,881	0	34,424,628	4,462,120	5,581,640
Precious stones & jewellery	7,925	2,116	27,398	630	7,888	389,867	39,731	4,219	34,830,444	1,770,072	9,840,804
Base metals & metal products	122,949	190,671	551,940	13,220	111,376	3,116,003	754,324	2,376	149,555,133	25,065,462	27,616,096
Machinery	212,541	172	255,116	15,564	740,870	3,421,777	16,333	8,447	616,007,851	193,882,405	241,590,016
Transport equipment	650,524	221	18,507	1,984	54,920	2,564,663	5,588	260	320,748,226	96,600,350	103,436,887
Professional equipment	20,462	0	3,118	2,901	35,273	72,022	75	1,039	69,064,934	31,528,368	40,467,111
Arms & ammunition	57	0	279	0	0	21,314	0	0	1,480,041	167,989	2,144,489
Miscellaneous manufactures	36,415	51	27,884	3,399	46,011	271,919	9,418	4	46,957,500	5,850,781	10,085,842
Works of art	41,397	427	278	39,434	66	279,581	0	5,463	78,345,640	15,463,410	22,751,722
All products	9,707,076	10,705,525	65,795,436	4,262,247	5,818,982	28,559,770	16,081,128	2,467,851	2,185,155,012	433,407,131	673,457,934

Source: UN Statistics Division, *Personal Computer Trade Analysis System*, 2003.

Table 82: Imports by HS Section in the Trade simulation model, Average 1999-2001 (US\$ Th)

HS Section	Algeria	Bahrain	Egypt	Iran	Iraq	Israel	Jordan	Kuwait	Lebanon	Libya	Morocco
Live animals & animal products	501,481	134,814	647,546	116,855	112,107	278,549	164,456	190,560	348,408	105,265	98,626
Vegetable products	1,345,671	141,261	1,745,367	1,644,748	182,324	818,057	382,343	112,727	348,697	212,177	949,290
Fats & oils	247,182	12,571	297,021	443,124	93,355	95,144	59,317	27,589	52,626	95,549	158,380
Manufactured foodstuffs	471,822	192,532	833,643	421,136	146,749	802,885	243,269	242,852	460,507	133,852	338,295
Mineral products	211,827	1,959,359	1,098,191	500,319	5,114	2,972,993	484,345	50,922	1,016,528	332,393	1,838,102
Chemical	929,966	385,218	1,235,426	1,675,762	157,378	2,407,207	386,326	311,622	564,131	215,470	767,512
Rubber & plastics	373,764	85,345	761,974	656,942	35,992	1,137,695	175,717	146,159	236,796	65,084	441,088
Hides & leather products	14,474	6,883	13,816	901	535	68,560	3,873	22,339	26,366	2,582	69,653
Cork & wood articles	201,688	35,486	586,187	42,423	11,280	307,424	51,936	51,439	96,892	23,454	204,200
Pulp & paper products	224,878	69,843	440,638	418,150	19,200	677,772	129,459	96,621	186,396	40,448	235,671
Textiles & apparel	214,889	242,379	348,457	502,366	29,851	1,188,459	282,577	350,509	401,300	140,046	1,722,389
Footwear & other made-up articles	29,413	15,884	34,651	329	15,030	208,675	12,585	43,508	60,458	16,986	35,689
Stone & mineral products	128,260	79,324	149,932	122,664	14,408	412,618	56,322	127,193	139,537	36,035	93,077
Precious stones & jewellery	2,951	14,473	40,904	2,978	167	6,583,106	30,003	15,691	415,441	66,822	6,978
Base metals & metal products	909,848	170,519	1,388,472	1,902,153	141,050	1,726,540	319,093	308,649	405,383	218,307	680,352
Machinery	2,295,542	520,712	2,986,887	4,245,720	745,841	8,816,972	644,533	1,196,527	903,197	812,715	2,469,335
Transport equipment	792,374	254,998	522,860	1,068,849	346,871	2,929,859	563,710	978,963	627,701	349,593	737,504
Professional equipment	185,472	49,944	289,622	360,636	116,869	1,309,155	83,939	146,062	122,657	96,667	169,507
Arms & ammunition	0	0	1,312	25,790	0	0	0	26,611	7,620	440	1,456
Miscellaneous manufactures	74,226	75,746	124,266	24,175	14,835	531,701	52,980	145,165	151,020	61,425	143,169
Works of art	1,247	486	811,722	0	23,140	140,434	90,346	62,055	2,674	68,580	234
All products	9,156,970	4,447,772	14,358,890	14,176,018	2,212,096	33,413,800	4,217,128	4,653,761	6,574,335	3,093,888	11,160,503
	Oman	Qatar	S. Arabia	Syria	Tunisia	Turkey	UAE	Yemen	EU15	Japan	US
Live animals & animal products	285,725	161,562	1,435,148	24,234	44,156	103,451	1,352,087	125,724	53,375,759	21,164,837	15,348,513
Vegetable products	240,311	132,409	1,999,322	223,708	350,525	762,306	2,044,420	222,985	56,281,283	13,082,828	14,847,151
Fats & oils	63,519	12,851	222,373	76,400	99,688	384,883	902,277	53,046	8,245,122	680,800	1,623,699
Manufactured foodstuffs	572,742	124,063	1,369,760	206,828	221,124	729,597	3,954,951	182,667	78,008,647	14,058,051	22,211,482
Mineral products	206,808	85,558	340,610	108,650	838,351	6,604,220	346,921	15,534	181,878,157	73,889,586	120,553,043
Chemical	284,754	243,217	2,550,123	283,402	520,992	5,165,001	1,336,641	108,604	199,524,915	22,257,799	66,606,067
Rubber & plastics	165,457	97,219	1,057,836	178,844	363,154	2,340,907	763,349	62,369	95,450,688	7,005,416	29,588,455
Hides & leather products	8,447	8,829	99,531	2,236	128,224	445,419	120,213	1,510	15,336,984	3,960,451	8,653,827
Cork & wood articles	53,926	39,816	363,082	24,651	109,581	248,217	210,414	34,367	25,625,735	10,943,772	16,964,604
Pulp & paper products	92,150	49,503	592,258	96,460	176,728	1,029,391	286,398	31,472	62,036,125	4,344,448	21,894,425
Textiles & apparel	197,403	171,146	1,755,764	278,531	1,819,412	3,065,402	2,630,452	124,761	121,628,133	22,968,809	74,742,014
Footwear & other made-up articles	32,359	20,114	249,134	946	77,784	112,127	227,446	12,472	20,596,821	3,544,593	18,226,523
Stone & mineral products	77,069	67,408	486,194	26,263	62,682	334,063	424,737	11,654	25,508,346	2,842,804	12,388,725
Precious stones & jewellery	74,308	9,907	1,179,273	1,826	28,915	413,260	1,250,569	393	38,148,704	6,587,089	26,811,168
Base metals & metal products	357,468	424,676	2,424,399	247,592	528,653	4,148,692	1,364,501	128,436	145,589,638	14,343,461	55,033,584
Machinery	1,076,969	1,272,702	6,607,097	847,668	1,843,224	11,752,022	4,599,456	332,421	569,275,211	81,833,584	338,274,923
Transport equipment	1,062,126	575,566	5,389,687	362,182	981,420	4,478,387	2,775,086	126,986	279,764,968	13,629,150	181,115,449
Professional equipment	91,137	144,864	857,992	75,971	173,685	1,160,760	574,512	30,086	70,807,936	15,169,494	39,418,257
Arms & ammunition	1,075	342	273,431	427	798	142,694	6,585	1,700	991,255	173,554	814,863
Miscellaneous manufactures	79,595	109,002	562,220	20,690	81,097	449,921	738,079	17,541	50,457,356	8,159,096	47,872,755
Works of art	146,962	7,031	35,210	39,949	2,247	2,290,156	2,188	9,139	78,430,559	5,679,637	52,801,783
All products	5,170,309	3,757,785	29,850,445	3,127,458	8,452,436	46,160,874	25,911,282	1,633,867	2,176,962,342	346,319,258	1,165,791,308

Source: UN Statistics Division, *Personal Computer Trade Analysis System*, 2003

Table 83: GCC Countries: Impacts of EU-GCC Trade arrangement by HS Section (\$m 2000 prices)

	Scenario				
	CU (5% CET)	CU (Min CET)	FTA (5% CET)	FTA (Min CET)	MFN
Percent Change in Real Exchange Rate					
(US\$/LC) All products	-3.4	-4.2	-6.5	-6.7	-7.4
Change in Real Exports					
Live animals, animal prods.	28.9	17.5	36.1	30.1	27.5
Vegetable prods.	15.8	10.2	20.3	20.5	15.2
Fats, oils	10.8	6.5	13.6	10.5	10.6
Manufactured foodstuffs	33.5	51.3	28.1	29.1	42.1
Mineral prods.	1,563.4	1946.4	3,206.8	3,324.6	3,404.5
Chemicals	317.4	310.3	254.5	262.4	294.2
Rubber, plastics	136.2	132.6	106.2	109.7	127.7
Hides, leather prods.	3.1	1.6	3.3	2.8	2.8
Cork, wood articles	0.8	0.8	1.0	1.0	0.7
Pulp, paper prods.	21.0	19.1	17.2	17.7	17.7
Textiles, apparel	98.0	95.6	153.7	157.4	100.7
Footwear, made-up articles	1.0	0.9	1.3	1.4	1.0
Stone, mineral prods.	22.8	22.3	19.0	19.7	21.3
Precious stones, jewellery	9.3	9.1	8.8	8.9	8.1
Base metals, metal prods.	241.5	226.6	195.3	202.6	219.7
Machinery	44.4	43.1	35.3	36.5	39.4
Transport equip.	47.0	45.1	38.3	39.7	43.4
Professional equip.	2.1	2.0	2.5	2.6	1.9
Arms, ammunition	0.1	0.0	0.0	0.0	0.0
Miscellaneous manufs.	7.3	7.1	8.2	8.4	6.6
Works of art	5.8	5.2	4.1	4.3	4.7
All products	2,610.4	2953.2	4,153.4	4,290.1	4,389.9
Trade Creation = ? in					
Imports					
Live animals, animal prods.	91.4	203.9	11.6	120.2	107.5
Vegetable prods.	71.9	175.8	-2.9	111.7	85.2
Fats, oils	17.3	73.9	-15.5	36.3	20.0
Manufactured foodstuffs	638.7	320.6	754.9	728.4	487.6
Mineral prods.	64.0	46.6	-42.2	-39.4	-14.5
Chemicals	115.5	132.1	247.3	225.7	159.8
Rubber, plastics	68.4	76.3	129.0	118.3	82.3
Hides, leather prods.	4.1	19.2	-5.9	9.3	7.4
Cork, wood articles	15.5	17.3	-9.6	-3.8	22.9
Pulp, paper prods.	12.6	25.5	38.1	34.0	34.5
Textiles, apparel	227.8	246.4	35.8	88.3	204.2
Footwear, made-up articles	38.8	52.8	8.4	27.0	40.9
Stone, mineral prods.	82.7	88.5	126.2	118.5	99.7
Precious stones, jewellery	157.7	170.3	-23.9	10.8	229.2
Base metals, metal prods.	128.4	188.8	152.2	163.5	213.0
Machinery	412.2	498.1	1,085.6	973.3	774.5
Transport equip.	9.4	66.4	445.4	373.9	225.1
Professional equip.	59.2	67.6	-54.4	-28.3	87.1
Arms, ammunition	-4.2	5.6	-0.4	-0.9	-1.6
Miscellaneous manufs.	111.1	116.7	42.1	57.6	132.4
Works of art	3.8	5.1	7.3	6.8	6.0
All products	2,326.4	2,597.5	2,929.1	3,131.4	3,003.1

Table 83 (cont'd) GCC Countries: Impacts of EU-GCC Trade arrangement by HS Section (\$m 2000 prices)

Trade Diversion					
Live animals, animal prods.	28.9	17.5	82.8	36.9	0.0
Vegetable prods.	15.8	10.2	97.4	95.8	0.0
Fats, oils	10.8	6.5	31.8	7.5	0.0
Manufactured foodstuffs	33.5	51.3	0.0	0.0	0.0
Mineral prods.	0.0	0.0	0.0	0.0	0.0
Chemicals	317.4	310.3	0.0	0.0	0.0
Rubber, plastics	136.2	132.6	0.0	0.0	0.0
Hides, leather prods.	3.1	1.6	4.5	0.9	0.0
Cork, wood articles	0.8	0.8	14.2	13.2	0.0
Pulp, paper prods.	21.0	19.1	0.0	0.0	0.0
Textiles, apparel	98.0	95.6	270.4	275.8	0.0
Footwear, made-up articles	1.0	0.9	21.5	23.4	0.0
Stone, mineral prods.	22.8	22.3	0.0	0.0	0.0
Precious stones, jewellery	9.3	9.1	21.0	19.1	0.0
Base metals, metal prods.	241.5	226.6	0.0	0.0	0.0
Machinery	44.4	43.1	0.0	0.0	0.0
Transport equip.	47.0	45.1	0.0	0.0	0.0
Professional equip.	2.1	2.0	43.0	43.7	0.0
Arms, ammunition	0.1	0.0	0.0	0.0	0.0
Miscellaneous manufs.	7.3	7.1	35.5	35.2	0.0
Works of art	5.8	5.2	0.0	0.0	0.0
All products	1,047.0	1,006.8	622.2	551.4	0.0
Net Trade Creation					
Live animals, animal prods.	62.4	186.4	-71.2	83.3	107.5
Vegetable prods.	56.1	165.6	-100.4	16.0	85.2
Fats, oils	6.5	67.5	-47.3	28.8	20.0
Manufactured foodstuffs	605.2	269.3	754.9	728.4	487.6
Mineral prods.	64.0	46.6	-42.2	-39.4	-14.5
Chemicals	-201.9	-178.2	247.3	225.7	159.8
Rubber, plastics	-67.8	-56.3	129.0	118.3	82.3
Hides, leather prods.	1.0	17.7	-10.4	8.4	7.4
Cork, wood articles	14.6	16.5	-23.8	-17.0	22.9
Pulp, paper prods.	-8.5	6.4	38.1	34.0	34.5
Textiles, apparel	129.8	150.8	-234.6	-187.5	204.2
Footwear, made-up articles	37.8	51.9	-13.1	3.7	40.9
Stone, mineral prods.	59.9	66.2	126.2	118.5	99.7
Precious stones, jewellery	148.4	161.2	-44.9	-8.3	229.2
Base metals, metal prods.	-113.1	-37.8	152.2	163.5	213.0
Machinery	367.8	455.0	1,085.6	973.3	774.5
Transport equip.	-37.6	21.3	445.4	373.9	225.1
Professional equip.	57.1	65.6	-97.5	-72.0	87.1
Arms, ammunition	-4.2	5.6	-0.4	-0.9	-1.6
Miscellaneous manufs.	103.8	109.5	6.6	22.5	132.4
Works of art	-2.1	-0.1	7.3	6.8	6.0
All products	1,279.4	1,590.7	2,306.9	2,580.0	3,003.1

Table 83 (cont'd) GCC Countries: Impacts of EU-GCC Trade arrangement by HS Section (\$m 2000

Change in Consumer Surplus

Live animals, animal prods.	-5.4	-9.8	0.3	-7.0	-6.4
Vegetable prods.	-37.4	-86.7	1.4	-56.9	-44.0
Fats, oils	2.2	9.8	-1.2	4.5	2.5
Manufactured foodstuffs	97.1	46.4	118.3	113.1	71.1
Mineral prods.	-14.9	-10.9	12.1	11.2	4.3
Chemicals	50.8	57.7	107.0	97.8	69.5
Rubber, plastics	29.9	33.3	56.3	51.6	36.0
Hides, leather prods.	1.3	5.7	-1.4	2.7	2.2
Cork, wood articles	2.8	3.2	-1.4	-0.5	4.2
Pulp, paper prods.	4.1	7.9	11.8	10.5	10.7
Textiles, apparel	93.3	100.9	15.9	36.7	83.6
Footwear, made-up articles	21.6	29.3	5.1	15.1	22.7
Stone, mineral prods.	50.1	53.5	75.9	71.3	60.1
Precious stones, jewellery	101.4	109.5	-14.2	7.6	147.5
Base metals, metal prods.	77.7	112.8	94.0	99.8	127.1
Machinery	292.2	350.7	755.9	678.2	541.1
Transport equip.	7.6	44.8	293.9	246.7	148.9
Professional equip.	35.2	40.2	-30.9	-15.9	51.6
Arms, ammunition	1.2	-1.4	0.1	0.2	0.4
Miscellaneous manufs.	39.7	41.6	16.0	21.2	47.2
Works of art	-4.0	-5.4	-7.7	-7.2	-6.3
All products	846.3	932.9	1,507.0	1,380.5	1,373.8

Change in Producer Surplus

Live animals, animal prods.	40.4	24.0	50.9	42.1	38.3
Vegetable prods.	22.2	14.0	28.8	29.1	21.2
Fats, oils	15.2	8.9	19.3	14.8	14.9
Manufactured foodstuffs	46.7	73.1	38.9	40.3	59.4
Mineral prods.	3,200.7	3,992.3	6,635.0	6,887.3	7,055.9
Chemicals	331.1	323.4	263.5	272.0	306.0
Rubber, plastics	141.8	137.9	109.8	113.5	132.7
Hides, leather prods.	3.3	1.6	3.4	2.9	2.9
Cork, wood articles	0.9	0.8	1.0	1.0	0.8
Pulp, paper prods.	22.0	20.0	17.8	18.4	18.4
Textiles, apparel	102.9	100.3	165.1	169.4	105.9
Footwear, made-up articles	1.0	0.9	1.4	1.5	1.0
Stone, mineral prods.	24.0	23.4	19.8	20.6	22.4
Precious stones, jewellery	9.8	9.5	9.2	9.4	8.4
Base metals, metal prods.	254.0	237.7	203.7	211.7	230.2
Machinery	46.2	44.7	36.4	37.8	40.8
Transport equip.	48.6	46.6	39.3	40.9	44.8
Professional equip.	2.1	2.0	2.6	2.7	1.9
Arms, ammunition	0.1	0.0	0.0	0.0	0.0
Miscellaneous manufs.	7.7	7.4	8.6	8.8	6.9
Works of art	6.0	5.4	4.2	4.4	4.8
All products	4,326.6	5,074.1	7,658.9	7,928.5	8,117.8

prices)

Table 83 (cont'd) GCC Countries: Impacts of EU-GCC Trade arrangement by HS Section (\$m 2000 prices)

Forgone Tariff Revenue

Live animals, animal prods.	23.6	3.7	164.5	27.0	0.0
Vegetable prods.	11.9	2.0	169.4	30.5	0.0
Fats, oils	7.3	0.0	53.4	0.0	0.0
Manufactured foodstuffs	27.6	50.6	0.0	0.0	0.0
Mineral prods.	0.0	0.0	0.0	0.0	0.0
Chemicals	205.7	164.3	0.0	0.0	0.0
Rubber, plastics	95.2	76.0	0.0	0.0	0.0
Hides, leather prods.	1.9	0.0	12.8	0.0	0.0
Cork, wood articles	0.5	0.4	26.7	21.5	0.0
Pulp, paper prods.	12.4	8.3	0.0	0.0	0.0
Textiles, apparel	58.6	46.8	221.3	178.8	0.0
Footwear, made-up articles	0.6	0.3	25.8	16.0	0.0
Stone, mineral prods.	12.9	10.3	0.0	0.0	0.0
Precious stones, jewellery	5.2	4.2	108.3	87.8	0.0
Base metals, metal prods.	135.8	98.1	0.0	0.0	0.0
Machinery	31.2	24.9	0.0	0.0	0.0
Transport equip.	37.1	29.6	0.0	0.0	0.0
Professional equip.	1.7	1.4	87.0	70.6	0.0
Arms, ammunition	0.0	0.0	0.0	0.0	0.0
Miscellaneous manufs.	4.7	3.8	79.7	64.4	0.0
Works of art	5.7	4.2	0.0	0.0	0.0
All products	679.9	528.9	949.0	496.6	0.0

Change in Economic Welfare

Live animals, animal prods.	11.4	10.5	-113.4	8.1	31.9
Vegetable prods.	-27.2	-74.7	-139.3	-58.3	-22.8
Fats, oils	10.1	18.7	-35.2	19.3	17.4
Manufactured foodstuffs	116.2	68.9	157.2	153.4	130.5
Mineral prods.	3,185.8	3,981.4	6,647.1	6,898.4	7,060.3
Chemicals	176.2	216.8	370.4	369.7	375.6
Rubber, plastics	76.5	95.2	166.1	165.2	168.7
Hides, leather prods.	2.6	7.3	-10.8	5.6	5.0
Cork, wood articles	3.2	3.6	-27.2	-21.0	5.0
Pulp, paper prods.	13.8	19.6	29.6	29.0	29.1
Textiles, apparel	137.6	154.5	-40.3	27.2	189.4
Footwear, made-up articles	22.0	29.8	-19.3	0.6	23.7
Stone, mineral prods.	61.1	66.6	95.7	91.9	82.5
Precious stones, jewellery	106.0	114.9	-113.3	-70.8	155.9
Base metals, metal prods.	195.8	252.4	297.7	311.4	357.3
Machinery	307.2	370.6	792.3	715.9	581.9
Transport equip.	19.1	61.7	333.3	287.6	193.6
Professional equip.	35.6	40.8	-115.3	-83.8	53.5
Arms, ammunition	1.2	-1.4	0.1	0.3	0.5
Miscellaneous manufs.	42.6	45.3	-55.1	-34.4	54.1
Works of art	-3.8	-4.3	-3.6	-2.9	-1.6
All products	4,493.1	5,478.1	8,216.9	8,812.4	9,491.6

Table 83 (cont'd) GCC Countries: Impacts of EU-GCC Trade arrangement by HS Section (\$m 2000 prices)

Change in Tariff Revenue					
Live animals, animal prods.	-299.0	-431.6	-445.4	-455.8	-458.0
Vegetable prods.	-371.2	-555.8	-534.5	-585.2	-596.4
Fats, oils	-103.3	-158.9	-151.5	-158.9	-158.9
Manufactured foodstuffs	-1,036.4	-812.5	-1,002.3	-723.8	-1,364.3
Mineral prods.	-47.8	-79.0	-53.4	-82.7	-200.1
Chemicals	-496.3	-506.5	-283.7	-338.2	-551.9
Rubber, plastics	-242.4	-246.8	-144.0	-168.9	-266.4
Hides, leather prods.	-18.5	-30.1	-29.9	-30.1	-30.1
Cork, wood articles	-46.2	-53.7	-73.8	-75.8	-84.2
Pulp, paper prods.	-70.4	-85.3	-56.6	-76.6	-117.9
Textiles, apparel	-492.7	-535.9	-667.4	-676.2	-712.9
Footwear, made-up articles	-49.2	-61.1	-76.1	-77.6	-80.0
Stone, mineral prods.	-108.3	-118.9	-93.0	-107.3	-162.6
Precious stones, jewellery	-217.1	-242.6	-329.5	-332.7	-347.0
Base metals, metal prods.	-400.8	-431.8	-263.6	-334.5	-523.9
Machinery	-809.2	-956.3	-743.7	-912.0	-1,562.3
Transport equip.	-478.5	-579.2	-418.9	-536.7	-993.6
Professional equip.	-108.6	-127.1	-199.8	-200.4	-203.0
Arms, ammunition	-5.3	-20.4	-5.1	-20.4	-20.4
Miscellaneous manufs.	-169.1	-186.1	-247.9	-249.3	-255.4
Works of art	-13.2	-5,009.1	-7.3	-10.6	-20.4
All products	-5,583.3	-6,234.4	-5,827.4	-6,153.7	-8,709.7

Table 84: European Union: Impacts of EU-GCC Trade Arrangements by HS Section (US\$, 2000)

	Scenario				MFN
	CU (5% CET)	CU (Min CET)	FTA (5% CET)	FTA (Min CET)	
Percent Change in Real Exchange Rate (US\$/LC) All products					
	0.0	0.0	0.3	0.2	-1.9
Change in Real Exports Live					
animals, animal prods.	9.9	34.2	1,296.1	543.9	857.3
Vegetable prods.	7.3	26.3	1,261.0	1,209.7	739.3
Fats, oils	0.3	9.5	234.7	45.8	145.9
Manufactured foodstuffs	134.9	58.8	65.9	68.2	3,144.1
Mineral prods.	-99.1	-125.0	-309.4	-308.4	352.2
Chemicals	-52.0	-47.8	-407.8	-379.1	5,170.0
Rubber, plastics	-16.8	-15.2	-194.3	-180.0	2,391.8
Hides, leather prods.	-1.2	1.0	268.9	49.9	266.8
Cork, wood articles	-0.2	-0.3	505.8	466.2	349.3
Pulp, paper prods.	-4.9	-1.9	-115.8	-106.1	942.7
Textiles, apparel	9.2	11.0	6,334.9	6,397.4	2,969.4
Footwear, made-up articles	2.5	3.8	774.3	816.8	451.3
Stone, mineral prods.	10.6	11.8	-36.1	-32.8	727.6
Precious stones, jewellery	12.5	13.6	332.5	297.1	528.4
Base metals, metal prods.	-25.1	-15.7	-305.8	-280.3	2,846.6
Machinery	17.0	25.7	-1,191.4	-1,091.8	11,249.6
Transport equip.	-24.5	-18.3	-550.6	-509.8	6,122.6
Professional equip.	4.5	5.5	1,744.1	1,744.7	1,395.7
Arms, ammunition	-1.0	1.0	-3.7	-3.5	23.8
Miscellaneous manufs.	9.2	9.3	1,058.3	1,038.7	874.0
Works of art	-3.7	-3.4	-125.0	-114.5	1,351.5
All products	-10.7	-16.2	10,636.5	9,672.2	42,900.0
Trade Creation = Change in Real Imports					
Live animals, animal prods.	-12.6	-43.6	533.0	248.8	1,072.3
Vegetable prods.	-8.5	-30.8	427.3	377.0	1,034.0
Fats, oils	-0.4	-14.3	98.2	29.4	254.0
Manufactured foodstuffs	-176.8	-77.2	-86.4	-89.4	6,565.3
Mineral prods.	362.8	457.8	1,136.9	1,133.2	-887.8
Chemicals	68.8	63.3	540.8	502.7	6,446.8
Rubber, plastics	24.8	22.5	287.2	266.0	3,533.3
Hides, leather prods.	1.6	-1.4	121.4	64.6	121.5
Cork, wood articles	0.3	0.4	202.6	185.4	274.0
Pulp, paper prods.	5.9	2.3	138.5	126.9	-77.3
Textiles, apparel	-17.2	-20.6	2,162.8	2,124.9	8,194.7
Footwear, made-up articles	-5.3	-8.2	316.0	314.0	1,003.9
Stone, mineral prods.	-15.9	-17.8	54.5	49.4	781.4
Precious stones, jewellery	-30.8	-33.5	315.1	278.3	-704.0
Base metals, metal prods.	51.1	32.0	624.3	572.2	2,540.6
Machinery	-41.3	-62.3	2,900.4	2,657.0	4,911.5
Transport equip.	53.3	39.9	1,204.3	1,114.7	5,530.8
Professional equip.	-9.6	-11.9	846.1	809.9	1,523.1
Arms, ammunition	0.5	-0.5	2.0	1.9	8.4
Miscellaneous manufs.	-13.7	-13.8	447.1	422.8	596.3
Works of art	3.7	3.4	125.3	114.8	1,006.1

All products	240.7	285.8	12,397.3	11,304.2	43,728.8
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Table 84 European Union: Impacts of EU-GCC Trade Arrangements by HS Section (US\$, 2000)

Trade Diversion					
Live animals, animal prods.	0.0	0.0	1,249.4	537.2	0.0
Vegetable prods.	0.0	0.0	1,183.8	1,134.5	0.0
Fats, oils	0.0	0.0	216.5	48.8	0.0
Manufactured foodstuffs	0.0	0.0	0.0	0.0	0.0
Mineral prods.	0.0	0.0	0.0	0.0	0.0
Chemicals	0.0	0.0	0.0	0.0	0.0
Rubber, plastics	0.0	0.0	0.0	0.0	0.0
Hides, leather prods.	0.0	0.0	267.6	51.8	0.0
Cork, wood articles	0.0	0.0	492.5	453.9	0.0
Pulp, paper prods.	0.0	0.0	0.0	0.0	0.0
Textiles, apparel	0.0	0.0	6,218.2	6,279.0	0.0
Footwear, made-up articles	0.0	0.0	754.1	794.8	0.0
Stone, mineral prods.	0.0	0.0	0.0	0.0	0.0
Precious stones, jewellery	0.0	0.0	320.3	287.0	0.0
Base metals, metal prods.	0.0	0.0	0.0	0.0	0.0
Machinery	0.0	0.0	0.0	0.0	0.0
Transport equip.	0.0	0.0	0.0	0.0	0.0
Professional equip.	0.0	0.0	1,703.6	1,703.6	0.0
Arms, ammunition	0.0	0.0	0.0	0.0	0.0
Miscellaneous manufs.	0.0	0.0	1,031.0	1,011.9	0.0
Works of art	0.0	0.0	0.0	0.0	0.0
All products	0.0	0.0	13,437.1	12,302.4	0.0
Net Trade Creation					
Live animals, animal prods.	-12.6	-43.6	-716.4	-288.3	1,072.3
Vegetable prods.	-8.5	-30.8	-756.5	-757.5	1,034.0
Fats, oils	-0.4	-14.3	-118.3	-19.5	254.0
Manufactured foodstuffs	-176.8	-77.2	-86.4	-89.4	6,565.3
Mineral prods.	362.8	457.8	1,136.9	1,133.2	-887.8
Chemicals	68.8	63.3	540.8	502.7	6,446.8
Rubber, plastics	24.8	22.5	287.2	266.0	3,533.3
Hides, leather prods.	1.6	-1.4	-146.3	12.8	121.5
Cork, wood articles	0.3	0.4	-289.9	-268.6	274.0
Pulp, paper prods.	5.9	2.3	138.5	126.9	-77.3
Textiles, apparel	-17.2	-20.6	-4,055.4	-4,154.1	8,194.7
Footwear, made-up articles	-5.3	-8.2	-438.2	-480.8	1,003.9
Stone, mineral prods.	-15.9	-17.8	54.5	49.4	781.4
Precious stones, jewellery	-30.8	-33.5	-5.1	-8.7	-704.0
Base metals, metal prods.	51.1	32.0	624.3	572.2	2,540.6
Machinery	-41.3	-62.3	2,900.4	2,657.0	4,911.5
Transport equip.	53.3	39.9	1,204.3	1,114.7	5,530.8
Professional equip.	-9.6	-11.9	-857.5	-893.7	1,523.1
Arms, ammunition	0.5	-0.5	2.0	1.9	8.4
Miscellaneous manufs.	-13.7	-13.8	-583.9	-589.2	596.3
Works of art	3.7	3.4	125.3	114.8	1,006.1
All products	240.7	285.8	-1,039.7	-998.2	43,728.8

Table 84 European Union: Impacts of EU-GCC Trade Arrangements by HS Section (US\$, 2000)**Change in Consumer****Surplus**

Live animals, animal prods.	1.1	3.7	-41.4	-20.1	-76.9
Vegetable prods.	4.2	15.4	-209.8	-185.4	-495.3
Fats, oils	0.0	-1.4	9.9	2.9	27.6
Manufactured foodstuffs	-15.2	-6.7	-7.5	-7.7	810.5
Mineral prods.	-87.6	-110.3	-270.7	-269.9	219.1
Chemicals	26.6	24.5	209.4	194.7	2,534.3
Rubber, plastics	9.7	8.8	112.9	104.5	1,412.2
Hides, leather prods.	0.4	-0.3	30.2	16.0	30.2
Cork, wood articles	0.1	0.1	31.9	29.1	43.4
Pulp, paper prods.	1.5	0.6	36.4	33.4	-20.3
Textiles, apparel	-6.4	-7.7	812.4	798.1	3,161.4
Footwear, made-up articles	-2.6	-4.0	155.8	154.8	499.5
Stone, mineral prods.	-8.4	-9.4	28.7	26.0	414.4
Precious stones, jewellery	-17.2	-18.7	176.5	155.8	-392.5
Base metals, metal prods.	27.4	17.2	335.0	307.0	1,367.1
Machinery	-26.1	-39.4	1,835.4	1,681.2	3,109.2
Transport equip.	32.9	24.6	742.6	687.3	3,417.1
Professional equip.	-5.2	-6.4	457.9	438.3	826.0
Arms, ammunition	-0.1	0.1	-0.5	-0.5	-2.1
Miscellaneous manufs.	-3.9	-3.9	128.3	121.3	171.6
Works of art	-3.9	-3.5	-128.9	-118.1	-1,023.5
All products	-72.7	-116.8	4,444.6	4,148.7	16,033.2

Change in Producer Surplus

Live animals, animal prods.	13.2	45.6	1,757.2	730.3	1,155.7
Vegetable prods.	9.7	35.1	1,713.9	1,643.0	996.9
Fats, oils	0.3	12.6	319.1	61.4	196.9
Manufactured foodstuffs	180.0	78.5	87.9	90.9	4,295.0
Mineral prods.	-197.9	-249.6	-616.5	-614.5	707.6
Chemicals	-52.0	-47.8	-407.4	-378.8	5,225.8
Rubber, plastics	-16.8	-15.2	-194.1	-179.8	2,419.4
Hides, leather prods.	-1.2	1.0	271.2	50.0	269.1
Cork, wood articles	-0.2	-0.3	512.6	472.0	352.6
Pulp, paper prods.	-4.9	-1.9	-115.7	-106.0	949.0
Textiles, apparel	9.2	11.0	6,536.4	6,602.9	3,013.7
Footwear, made-up articles	2.5	3.8	791.1	835.4	457.0
Stone, mineral prods.	10.6	11.8	-36.1	-32.7	735.2
Precious stones, jewellery	12.5	13.6	334.1	298.4	532.4
Base metals, metal prods.	-25.1	-15.7	-305.5	-280.1	2,873.7
Machinery	17.0	25.7	-1,190.3	-1,090.8	11,352.4
Transport equip.	-24.5	-18.3	-550.2	-509.4	6,181.1
Professional equip.	4.5	5.5	1,766.1	1,766.7	1,409.8
Arms, ammunition	-1.0	1.0	-3.7	-3.5	24.0
Miscellaneous manufs.	9.2	9.3	1,070.2	1,050.2	882.1
Works of art	-3.7	-3.4	-124.9	-114.4	1,363.2
All products	-58.5	-97.7	11,615.5	10,291.2	45,392.6

Table 84 European Union: Impacts of EU-GCC Trade Arrangements by HS Section (US\$, 2000)**Forgone Tariff Revenue**

Live animals, animal prods.	0.0	0.0	2,205.6	2,181.3	0.0
Vegetable prods.	0.0	0.0	2,083.3	2,079.2	0.0
Fats, oils	0.0	0.0	385.0	376.5	0.0
Manufactured foodstuffs	0.0	0.0	0.0	0.0	0.0
Mineral prods.	0.0	0.0	0.0	0.0	0.0
Chemicals	0.0	0.0	0.0	0.0	0.0
Rubber, plastics	0.0	0.0	0.0	0.0	0.0
Hides, leather prods.	0.0	0.0	359.6	355.1	0.0
Cork, wood articles	0.0	0.0	519.0	518.0	0.0
Pulp, paper prods.	0.0	0.0	0.0	0.0	0.0
Textiles, apparel	0.0	0.0	7,602.2	7,603.4	0.0
Footwear, made-up articles	0.0	0.0	931.2	932.4	0.0
Stone, mineral prods.	0.0	0.0	0.0	0.0	0.0
Precious stones, jewellery	0.0	0.0	224.9	224.5	0.0
Base metals, metal prods.	0.0	0.0	0.0	0.0	0.0
Machinery	0.0	0.0	0.0	0.0	0.0
Transport equip.	0.0	0.0	0.0	0.0	0.0
Professional equip.	0.0	0.0	2,108.2	2,107.5	0.0
Arms, ammunition	0.0	0.0	0.0	0.0	0.0
Miscellaneous manufs.	0.0	0.0	1,265.1	1,264.3	0.0
Works of art	0.0	0.0	0.0	0.0	0.0
All products	0.0	0.0	17,684.2	17,642.1	0.0

Change in Economic Welfare

Live animals, animal prods.	14.3	49.3	-489.8	-1,471.1	1,078.8
Vegetable prods.	13.9	50.5	-579.2	-621.6	501.6
Fats, oils	0.3	11.3	-56.0	-312.3	224.5
Manufactured foodstuffs	164.8	71.8	80.4	83.2	5,105.5
Mineral prods.	-285.5	-359.9	-887.3	-884.4	926.6
Chemicals	-25.4	-23.3	-198.0	-184.2	7,760.1
Rubber, plastics	-7.1	-6.4	-81.2	-75.3	3,831.7
Hides, leather prods.	-0.8	0.7	-58.2	-289.1	299.3
Cork, wood articles	-0.2	-0.2	25.5	-16.9	396.0
Pulp, paper prods.	-3.4	-1.3	-79.3	-72.7	928.7
Textiles, apparel	2.8	3.4	-253.4	-202.4	6,175.1
Footwear, made-up articles	-0.1	-0.2	15.7	57.9	956.5
Stone, mineral prods.	2.2	2.4	-7.4	-6.7	1,149.7
Precious stones, jewellery	-4.7	-5.1	285.7	229.8	139.9
Base metals, metal prods.	2.3	1.4	29.6	27.0	4,240.8
Machinery	-9.1	-13.7	645.1	590.5	14,461.6
Transport equip.	8.4	6.3	192.4	177.9	9,598.2
Professional equip.	-0.7	-0.9	115.8	97.5	2,235.7
Arms, ammunition	-1.1	1.1	-4.2	-3.9	21.9
Miscellaneous manufs.	5.3	5.3	-66.6	-92.8	1,053.8
Works of art	-7.6	-6.9	-253.8	-232.5	339.7
All products	-131.3	-214.5	-1,624.0	-3,202.2	61,425.7

Table 84 European Union: Impacts of EU-GCC Trade Arrangements by HS Section (US\$,**Change in Tariff Revenue**

Live animals, animal prods.	0.0	0.1	-2,201.0	-2,189.2	-2,369.9
Vegetable prods.	0.1	0.6	-2,085.8	-2,084.2	-2,847.8
Fats, oils	0.0	-0.1	-383.3	-378.5	-437.0
Manufactured foodstuffs	-2.0	-1.2	26.9	26.5	-10,172.3
Mineral prods.	-0.2	-0.3	0.6	0.6	-491.1
Chemicals	0.9	0.6	31.5	29.9	-8,420.0
Rubber, plastics	0.3	0.2	17.2	16.2	-4,448.0
Hides, leather prods.	0.0	0.0	-357.9	-354.7	-363.5
Cork, wood articles	0.0	0.0	-516.2	-515.6	-717.5
Pulp, paper prods.	0.0	0.0	2.6	2.4	-775.5
Textiles, apparel	-0.7	-0.9	-7,521.7	-7,525.7	-9,085.6
Footwear, made-up articles	-0.2	-0.2	-920.7	-922.0	-1,062.8
Stone, mineral prods.	-0.3	-0.4	3.5	3.4	-928.5
Precious stones, jewellery	-0.1	-0.1	-223.0	-222.8	-259.4
Base metals, metal prods.	0.6	0.3	19.9	18.5	-4,003.7
Machinery	-0.8	-1.4	72.4	67.2	-12,296.3
Transport equip.	0.7	0.3	40.3	37.9	-7,581.6
Professional equip.	-0.2	-0.3	-2,088.8	-2,089.1	-2,166.7
Arms, ammunition	0.0	0.0	0.1	0.1	-26.6
Miscellaneous manufs.	-0.1	-0.2	-1,258.0	-1,257.9	-1,377.5
Works of art	-0.1	-0.1	6.5	6.2	-2,376.4
All products	-2.1	-3.2	-17,334.9	-17,331.0	-72,207.8

2000)

XII.U HOW THE LINK THE ECONOMIC MODELLING EXERCISE WITH COUNTRY DATA PER MANUFACTURING INDUSTRY

The economic modelling exercise gives data result per sector in a classification code named the 'Harmonised System', a product classification. In Table 85 the major product groups within the HS classification are presented. It are those groups that are used in the economic modelling exercise. Customs duties are levied at different rates on goods of different description. In order to classify goods by tariff rate, Customs authorities use a standard classification of goods known as a tariff nomenclature. Governments also use this classification when they collect statistical data on imports and exports. Merchandise goods crossing a customs border are classified for customs duty purposes using a system of standardized product descriptions, i.e. the Harmonised Commodity Description and Coding Systems - usually called the Harmonised System or HS²⁶¹.

Table 85: Major product groups in the 'Harmonised System'
1 Live animals & animal products
2 Vegetable products
3 Fats & oils
4 Manufactured foodstuffs
5 Mineral products
6 Chemical
7 Rubber & plastics
8 Hides & leather products
9 Cork & wood articles
10 Pulp & paper products
11 Textiles & apparel
12 Footwear & other made-up articles
13 Stone & mineral products
14 Precious stones & jewellery
15 Base metals & metal products
16 Machinery
17 Transport equipment
18 Professional equipment
19 Arms & ammunition
20 Miscellaneous manufactures
21 Works of art

²⁶¹ Source : International Trade Centre UNCTAD/WTO, <http://www.intracen.org>

Not much employment related data exists for the sectors in the GCC. The UN Economic and Social Commission for Western Asia did publish in 2001 a 'Statistical abstract of the ESCWA region' in which data has been provided for the manufacturing industries. In table Table 86 the major activity groups within the ISIC classification are presented. The ESCWA data only relates to the sub-categories under category '3 – Manufacturing'.

They classify the manufacturing industries according to the ISIC classification codes. These are activity classifications whereby. These are standard classifications of economic activities arranged so that entities can be classified according to the activity they carry out. The major groups and divisions, the successively broader levels of classification, combine the statistical units according to the character, technology, organization and financing of production. Wide use has been made of ISIC, both nationally and internationally, in classifying data according to kind of economic activity in the fields of population, production, employment, gross domestic product and other economic activities²⁶².

Table 86: Major activity groups in the ISIC Rev.2 classification
0 - Activities not Adequately Defined
1 - Agriculture, Hunting, Forestry and Fishing
2 - Mining and Quarrying
3 – Manufacturing
31 - Manufacture of Food, Beverages and Tobacco
32 - Textile, Wearing Apparel and Leather Industries
33 - Manufacture of Wood and Wood Products, Including Furniture
34 - Manufacture of Paper and Paper Products, Printing and Publishing
35 - Manufacture of Chemicals and Chemical, Petroleum, Coal, Rubber and Plastic Products
36 - Manufacture of Non-Metallic Mineral Products, except Products of Petroleum and Coal
37 - Basic Metal Industries
38 - Manufacture of Fabricated Metal Products, Machinery and Equipment
39 - Other Manufacturing Industries
4 - Electricity, Gas and Water
5 – Construction
6 - Wholesale and Retail Trade and Restaurants and Hotels
7 - Transport, Storage and Communication
8 - Financing, Insurance, Real Estate and Business Services
9 - Community, Social and Personal Services
0 - Activities not Adequately Defined

In order to link the results of the economic modelling exercise with the activity data available from ESCWA, one needs to link these two different classification systems. In **Table 87** an

²⁶² Source : UN Statistics Division, <http://unstats.un.org>

attempt is being made to do so. It is important to note that this is not an exact science. It is most probable that some product groups are linked to economic activity sectors that in reality are not produced by these sectors. Nevertheless it should allow to infer some conclusions of the impact of the FTA on the economic activities within the manufacturing industries within the GCC. Note that not all product groups in the HS classification are covered by the activity sectors for which data is provided by ESCWA (only for the shaded ISIC activities is there data). For the GCC there is one HS product group all-important, i.e. '5 Mineral products' because it contains their crude oil and natural gas trade but at the same time also oil and natural gas derivatives. In the ISIC classification the former are produced in the activity sector '2 - Mining and Quarrying' whereas the later are produced in the activity sector '35 - Manufacture of Chemicals and Chemical, Petroleum, Coal, Rubber and Plastic Products'. When one wants to infer conclusions from the economic exercise one needs to keep in mind that possible impacts on the trade of products in the HS product group '5 Mineral products' not only related to activities in the ISIC activity sector '35 - Manufacture of Chemicals and Chemical, Petroleum, Coal, Rubber and Plastic Products', the activity sector for which ESCWA gives data, but also the important activity sector for the GCC '2 - Mining and Quarrying'.

Table 87: Linking the HS and ISIC classification systems

ISIC	HS
11 - Agriculture and Hunting	1 Live animals & animal products 2 Vegetable products
31 - Manufacture of Food, Beverages and Tobacco	3 Fats & oils 4 Manufactured foodstuffs
32 - Textile, Wearing Apparel and Leather Industries	8 Hides & leather products 11 Textiles & apparel 12 Footwear & other made-up articles
33 - Manufacture of Wood and Wood Products, Including Furniture	9 Cork & wood articles
34 - Manufacture of Paper and Paper Products, Printing and Publishing	10 Pulp & paper products
35 - Manufacture of Chemicals and Chemical, Petroleum, Coal, Rubber and Plastic Products + 2 - Mining and Quarrying	6 Chemical 7 Rubber & plastics 5 Mineral products
36 - Manufacture of Non-Metallic Mineral Products, except Products of Petroleum and Coal	13 Stone & mineral products
37 - Basic Metal Industries	15 Base metals & metal products
38 - Manufacture of Fabricated Metal Products, Machinery and Equipment	

16 Machinery

17 Transport equipment

18 Professional equipment

19 Arms & ammunition

39 - Other Manufacturing Industries

14 Precious stones & jewellery

20 Miscellaneous manufactures

94 - Recreational and Cultural Services

21 Works of art

XII.V ESTIMATE OF SOCIAL IMPACT PER COUNTRY OF THE FTA ON THE MANUFACTURING INDUSTRIES, BASED UPON THE ECONOMIC MODELLING EXERCISE

Table 88: Qatar, 2000, Activity data for the industrial manufacturing sectors

	Number of Employees	% of total employees in all manufacturing sectors	Total wage sector, Million Riyalsot	Average wage employee, Riyals	% of the average wage	Total Wages sector Million US \$	Average wage employee US \$ (2000)	number of establishments	Number of employees per establishment
31 - Manufacture of Food, Beverages and Tobacco	2820	8.90%	44	15603	56.52%	12.1	4286	247	11
32 - Textile, Wearing Apparel and Leather Industries	11271	35.56%	103	9138	33.10%	28.3	2511	1237	9
33 - Manufacture of Wood and Wood Products, Including Furniture	437	1.38%	6	13730	49.74%	1.6	3772	60	7
34 - Manufacture of Paper and Paper Products, Printing and Publishing	3036	9.58%	92	30303	109.77%	25.3	8325	23	132
35 - Manufacture of Chemicals and Chemical, Petroleum, Coal, Rubber and Plastic Products	3692	11.65%	396	107259	388.55%	108.8	29467	23	161
36 - Manufacture of Non-Metallic Mineral Products, except Products of Petroleum and Coal	2939	9.27%	51	17353	62.86%	14.0	4767	64	46
37 - Basic Metal Industries	1694	5.34%	91	53719	194.60%	25.0	14758	31	55
38 - Manufacture of Fabricated Metal Products, Machinery and Equipment	3458	10.91%	53	15327	55.52%	14.6	4211	297	12
39 - Other Manufacturing Industries	2349	7.41%	38	16177	58.60%	10.4	4444	205	11
Total	31697	100.00%	875	27605		240	7584	2186	15

Source: adapted from ESCWA 2001

Table 89: Qatar, 2000, results of the economic modelling exercise, adapted for the activity sectors of ISIC

million US\$	Export	% increase Export			Import	% increase Import			Trade balance	% increase Trade Balance		
		GCC CU	EU-GCC FTA	FTA on top of the CU		GCC CU	EU-GCC FTA	FTA on top of the CU		GCC CU	EU-GCC FTA	FTA on top of the CU
31 - Manufacture of Food, Beverages and Tobacco	1.066	0.00%	0.00%	0.00%	136.914	6.21%	7.74%	1.44%	-135.8	-6.26%	-7.80%	-1.45%
32 - Textile, Wearing Apparel and Leather Industries	138.75	4.47%	9.30%	4.62%	200.089	-0.75%	-4.10%	-3.37%	-61.3	12.55%	34.40%	24.98%
33 - Manufacture of Wood and Wood Products, Including Furniture	0	0.00%	0.00%	0.00%	39.816	-0.50%	-3.52%	-3.03%	-39.8	0.50%	3.52%	3.03%
34 - Manufacture of Paper and Paper Products, Printing and Publishing	0.41	0.00%	0.00%	0.00%	49.503	-0.61%	1.82%	2.44%	-49.1	0.61%	-1.83%	-2.46%
35 - Manufacture of Chemicals and Chemical, Petroleum, Coal, Rubber and Plastic Products + 2 - Mining and Quarrying	10367.121	-0.17%	1.10%	1.26%	425.994	0.23%	1.17%	0.94%	9941.1	-0.18%	1.09%	1.28%
36 - Manufacture of Non-Metallic Mineral Products, except Products of Petroleum and	0.089	0.00%	0.00%	0.00%	67.408	-0.89%	2.52%	3.44%	-67.3	0.89%	-2.53%	-3.45%
37 - Basic Metal Industries	190.671	4.46%	2.62%	-1.76%	424.676	-0.54%	3.16%	3.72%	-234.0	4.62%	-3.59%	-8.60%
38 - Manufacture of Fabricated Metal Products, Machinery and Equipment	0.393	0.00%	0.00%	0.00%	1993.474	-1.12%	2.70%	3.87%	-1993.1	1.12%	-2.70%	-3.87%
39 - Other Manufacturing Industries	2.167	4.61%	4.61%	0.00%	118.909	-0.67%	-4.46%	-3.81%	-116.7	0.77%	4.63%	3.88%
Total	10700.67	-0.02%	1.23%	1.25%	3456.783	-0.54%	2.04%	2.59%	7243.9	0.22%	0.84%	0.62%

Source: adapted from the results of the economic modelling exercise, see chapter VI.

Table 90: Oman, 2000, Activity data for the industrial manufacturing sectors

	Number of Employees	% of total employees in all manufacturing sectors	Total wage sector, 1000 Rials Omani	Average wage employee, Rials Omani	% of the average wage	Total Wages sector Million US \$	Average wage employee US \$ (2000)	number of establishments	Number of employees per establishment
31 - Manufacture of Food, Beverages and Tobacco	6751	20.77%	15401	2281	106.60%	40.1	5933	152	44
32 - Textile, Wearing Apparel and Leather Industries	5664	17.43%	5137	907	42.38%	13.4	2359	29	195
33 - Manufacture of Wood and Wood Products, Including Furniture	988	3.04%	1895	1918	89.63%	4.9	4988	67	15
34 - Manufacture of Paper and Paper Products, Printing and Publishing	2321	7.14%	5439	2343	109.50%	14.1	6095	47	49
35 - Manufacture of Chemicals and Chemical, Petroleum, Coal, Rubber and Plastic Products	3127	9.62%	11362	3634	169.79%	29.6	9450	68	46
36 - Manufacture of Non-Metallic Mineral Products, except Products of Petroleum and Coal	5696	17.53%	12530	2200	102.79%	32.6	5721	258	22
37 - Basic Metal Industries	765	2.35%	2812	3676	171.77%	7.3	9560	6	128
38 - Manufacture of Fabricated Metal Products, Machinery and Equipment	5124	15.77%	11594	2263	105.73%	30.2	5885	177	29
39 - Other Manufacturing Industries	2060	6.34%	3371	1636	76.47%	8.8	4256	37	56
Total	32496	100.00%	69541	2140		181	5566	840	39

Source: adapted from ESCWA 2001

Table 91: Oman, 2000, results of the economic modelling exercise, adapted for the activity sectors of ISIC

million US\$	Export	% increase Export			Import	% increase Import			Trade balance	% increase Trade Balance		
		GCC CU	EU-GCC FTA	FTA on top of the CU		GCC CU	EU-GCC FTA	FTA on top of the CU		GCC CU	EU-GCC FTA	FTA on top of the CU
31 - Manufacture of Food, Beverages and Tobacco	276.01	5.07%	4.49%	-0.55%	636.261	17.52%	18.51%	0.84%	-360.3	-27.06%	-29.26%	-1.73%
32 - Textile, Wearing Apparel and Leather Industries	137.961	6.67%	12.32%	5.30%	238.209	3.44%	-0.97%	-4.26%	-100.2	1.00%	19.25%	18.44%
33 - Manufacture of Wood and Wood Products, Including Furniture	1.204	8.31%	8.31%	0.00%	53.926	2.04%	-1.67%	-3.63%	-52.7	-1.90%	1.90%	3.72%
34 - Manufacture of Paper and Paper Products, Printing and Publishing	8.218	6.08%	4.87%	-1.15%	92.15	-3.04%	-1.52%	1.57%	-83.9	3.93%	2.14%	-1.86%
35 - Manufacture of Chemicals and Chemical, Petroleum, Coal, Rubber and Plastic Products + 2 - Mining and Quarrying	7969.002	0.75%	2.41%	1.65%	657.019	1.19%	0.35%	-0.83%	7312.0	0.71%	2.59%	1.87%
36 - Manufacture of Non-Metallic Mineral Products, except Products of Petroleum and	25.961	6.55%	5.39%	-1.08%	77.069	2.21%	4.54%	2.29%	-51.1	0.00%	-4.11%	-4.11%
37 - Basic Metal Industries	122.949	6.59%	5.37%	-1.14%	357.468	-0.90%	1.57%	2.48%	-234.5	4.82%	0.43%	-4.61%
38 - Manufacture of Fabricated Metal Products, Machinery and Equipment	883.584	6.63%	5.46%	-1.10%	2231.307	2.15%	4.80%	2.60%	-1347.7	0.79%	-4.37%	-5.21%
39 - Other Manufacturing Industries	44.34	6.54%	7.67%	1.06%	153.903	12.09%	5.39%	-5.97%	-109.6	-14.33%	-4.47%	8.62%
Total	9469.229	1.63%	2.97%	1.32%	4497.312	4.24%	5.34%	1.05%	4971.9	-0.73%	0.83%	1.57%

Source: adapted from the results of the economic modelling exercise, see chapter VI.

Table 92: Kuwait, 2000, Activity data for the industrial manufacturing sectors

	Number of Employees	% of total employees in all manufacturing sectors	Total wage sector, Million Dinars	Average wage employee, Dinars	% of the average wage	Total Wages sector Million US \$	Average wage employee US \$ (2000)	number of establishments	Number of employees per establishment
31 - Manufacture of Food, Beverages and Tobacco	13309	17.09%	26	1954	72.45%	84.8	6370	317	42
32 - Textile, Wearing Apparel and Leather Industries	14037	18.02%	16	1140	42.27%	52.2	3716	2221	6
33 - Manufacture of Wood and Wood Products, Including Furniture	4890	6.28%	7	1431	53.09%	22.8	4667	438	11
34 - Manufacture of Paper and Paper Products, Printing and Publishing	5164	6.63%	18	3486	129.27%	58.7	11365	80	65
35 - Manufacture of Chemicals and Chemical, Petroleum, Coal, Rubber and Plastic Products	12313	15.81%	91	7391	274.08%	296.7	24097	62	199
36 - Manufacture of Non-Metallic Mineral Products, except Products of Petroleum and Coal	8824	11.33%	17	1927	71.45%	55.4	6282	145	61
37 - Basic Metal Industries	980	1.26%	2	2041	75.68%	6.5	6654	6	163
38 - Manufacture of Fabricated Metal Products, Machinery and Equipment	17014	21.85%	30	1763	65.39%	97.8	5749	700	24
39 - Other Manufacturing Industries	1348	1.73%	3	2226	82.53%	9.8	7256	194	7
Total	77879	100.00%	210	2696		685	8792	4165	19

Source: adapted from ESCWA 2001

Table 93: Kuwait, 2000, results of the economic modelling exercise, adapted for the activity sectors of ISIC

million US\$	Export	% increase Export			Import	% increase Import			Trade balance	% increase Trade Balance		
		GCC CU	EU-GCC FTA	FTA on top of the CU		GCC CU	EU-GCC FTA	FTA on top of the CU		GCC CU	EU-GCC FTA	FTA on top of the CU
31 - Manufacture of Food, Beverages and Tobacco	3.696	2.71%	2.71%	0.00%	270.441	3.29%	4.88%	1.54%	-266.7	-3.30%	-4.91%	-1.56%
32 - Textile, Wearing Apparel and Leather Industries	24.527	4.48%	8.97%	4.29%	416.356	-1.15%	-4.40%	-3.28%	-391.8	1.51%	5.23%	3.78%
33 - Manufacture of Wood and Wood Products, Including Furniture	0.371	0.00%	0.00%	0.00%	51.439	-0.58%	-3.69%	-3.13%	-51.1	0.59%	3.72%	3.15%
34 - Manufacture of Paper and Paper Products, Printing and Publishing	3.389	5.90%	2.95%	-2.79%	96.621	-1.55%	0.83%	2.42%	-93.2	1.82%	-0.75%	-2.62%
35 - Manufacture of Chemicals and Chemical, Petroleum, Coal, Rubber and Plastic Products + 2 - Mining and Quarrying	13545.435	-0.16%	1.09%	1.26%	508.703	-0.41%	1.57%	1.99%	13036.7	-0.15%	1.07%	1.23%
36 - Manufacture of Non-Metallic Mineral Products, except Products of Petroleum and	2.795	3.58%	3.58%	0.00%	127.193	-1.18%	2.44%	3.66%	-124.4	1.29%	-2.41%	-3.75%
37 - Basic Metal Industries	16.703	4.79%	2.39%	-2.29%	308.649	-1.88%	1.94%	3.90%	-291.9	2.26%	-1.92%	-4.28%
38 - Manufacture of Fabricated Metal Products, Machinery and Equipment	85.168	4.58%	2.94%	-1.57%	2348.163	-1.46%	2.62%	4.14%	-2263.0	1.69%	-2.61%	-4.37%
39 - Other Manufacturing Industries	11.455	4.36%	4.36%	0.00%	160.856	-0.87%	-4.60%	-3.76%	-149.4	1.27%	5.29%	4.07%
Total	13693.54	-0.11%	1.12%	1.24%	4288.421	-1.00%	1.52%	2.54%	9405.1	0.29%	0.95%	0.65%

Source: adapted from the results of the economic modelling exercise, see chapter VI.

Table 94: Saudi Arabia, 2000, Activity data for the industrial manufacturing sectors

	Number of Employees	% of total employees in all manufacturing sectors	Total wage sector, Million Riyals	Average wage employee, Riyals	% of the average wage	Total Wages sector Million US \$	Average wage employee US \$ (2000)	number of establishments	Number of employees per establishment
31 - Manufacture of Food, Beverages and Tobacco	45014	14.31%						513	88
32 - Textile, Wearing Apparel and Leather Industries	19629	6.24%						148	133
33 - Manufacture of Wood and Wood Products, Including Furniture	14765	4.69%						143	103
34 - Manufacture of Paper and Paper Products, Printing and Publishing	16749	5.32%						185	91
35 - Manufacture of Chemicals and Chemical, Petroleum, Coal, Rubber and Plastic Products	74113	23.56%						667	111
36 - Manufacture of Non-Metallic Mineral Products, except Products of Petroleum and Coal	50178	15.95%						483	104
37 - Basic Metal Industries	2999	0.95%						30	100
38 - Manufacture of Fabricated Metal Products, Machinery and Equipment	84196	26.76%						883	95
39 - Other Manufacturing Industries	6978	2.22%						77	91
Total	314621	100.00%	9264	29445		2474	7862	3129	101

Source: adapted from ESCWA 2001

Table 95: Saudi Arabia , 2000, results of the economic modelling exercise, adapted for the activity sectors of ISIC

million US\$	Export	% increase Export			Import	% increase Import			Trade balance	% increase Trade Balance		
		GCC CU	EU-GCC FTA	FTA on top of the CU		GCC CU	EU-GCC FTA	FTA on top of the CU		GCC CU	EU-GCC FTA	FTA on top of the CU
31 - Manufacture of Food, Beverages and Tobacco	167.069	6.64%	5.93%	-0.67%	1592.133	1.83%	2.85%	0.99%	-1425.1	-1.27%	-2.48%	-1.20%
32 - Textile, Wearing Apparel and Leather Industries	162.012	8.83%	13.46%	4.25%	2104.429	5.09%	1.19%	-3.71%	-1942.4	-4.78%	-0.16%	4.40%
33 - Manufacture of Wood and Wood Products, Including Furniture	6.105	8.19%	9.83%	1.51%	363.082	3.75%	0.30%	-3.32%	-357.0	-3.67%	-0.14%	3.40%
34 - Manufacture of Paper and Paper Products, Printing and Publishing	156.834	8.80%	7.21%	-1.47%	592.258	2.97%	5.10%	2.07%	-435.4	-0.87%	-4.34%	-3.44%
35 - Manufacture of Chemicals and Chemical, Petroleum, Coal, Rubber and Plastic Products + 2 - Mining and Quarrying	64000.902	2.16%	3.48%	1.29%	3948.569	4.37%	6.13%	1.68%	60052.3	2.02%	3.31%	1.27%
36 - Manufacture of Non-Metallic Mineral Products, except Products of Petroleum and	137.67	8.86%	7.26%	-1.47%	486.194	6.33%	9.61%	3.08%	-348.5	-5.34%	-10.53%	-4.93%
37 - Basic Metal Industries	551.94	8.81%	7.14%	-1.53%	2424.399	7.12%	10.63%	3.28%	-1872.5	-6.62%	-11.66%	-4.73%
38 - Manufacture of Fabricated Metal Products, Machinery and Equipment	277.02	8.81%	7.18%	-1.49%	13128.21	5.45%	8.97%	3.33%	-12851.2	-5.38%	-9.01%	-3.44%
39 - Other Manufacturing Industries	55.282	8.86%	9.04%	0.17%	1741.493	5.96%	-0.23%	-5.84%	-1686.2	-5.87%	0.53%	6.04%
Total	65514.83	2.31%	3.58%	1.24%	26380.76	5.17%	6.90%	1.65%	39134.1	0.38%	1.34%	0.96%

Source: adapted from the results of the economic modelling exercise, see chapter VI.

Table 96: United Arab Emirates, 2000, Activity data for the industrial manufacturing sectors

	Number of Employees	% of total employees in all manufacturing sectors	Total wage sector, Million Dirhams	Average wage employee, Dirhams	% of the average wage	Total Wages sector Million US \$	Average wage employee US \$ (2000)	number of establishments	Number of employees per establishment
31 - Manufacture of Food, Beverages and Tobacco	19602	11.12%						199	99
32 - Textile, Wearing Apparel and Leather Industries	31909	18.10%						218	146
33 - Manufacture of Wood and Wood Products, Including Furniture	3315	1.88%						41	81
34 - Manufacture of Paper and Paper Products, Printing and Publishing	10460	5.93%						144	73
35 - Manufacture of Chemicals and Chemical, Petroleum, Coal, Rubber and Plastic Products	23467	13.31%						383	61
36 - Manufacture of Non-Metallic Mineral Products, except Products of Petroleum and Coal	27600	15.66%						302	91
37 - Basic Metal Industries	5823	3.30%						46	127
38 - Manufacture of Fabricated Metal Products, Machinery and Equipment	43321	24.58%						552	78
39 - Other Manufacturing Industries	10763	6.11%						216	50
Total	176260	100.00%	5269	29893		1435	8140	2101	84

Source: adapted from ESCWA 2001

Table 97: United Arab Emirates, 2000, results of the economic modelling exercise, adapted for the activity sectors of ISIC

million US\$	Export	% increase Export			Import	% increase Import			Trade balance	% increase Trade Balance		
		GCC CU	EU-GCC FTA	FTA on top of the CU		GCC CU	EU-GCC FTA	FTA on top of the CU		GCC CU	EU-GCC FTA	FTA on top of the CU
31 - Manufacture of Food, Beverages and Tobacco	181.237	9.44%	9.71%	0.25%	4857.228	9.67%	10.71%	0.95%	-4676.0	-9.68%	-10.75%	-0.97%
32 - Textile, Wearing Apparel and Leather Industries	274.79	12.70%	18.05%	4.75%	2978.111	4.36%	0.64%	-3.56%	-2703.3	-3.51%	1.12%	4.47%
33 - Manufacture of Wood and Wood Products, Including Furniture	1.253	15.96%	15.96%	0.00%	210.414	0.57%	-2.66%	-3.21%	-209.2	-0.48%	2.77%	3.24%
34 - Manufacture of Paper and Paper Products, Printing and Publishing	28.894	12.81%	11.07%	-1.53%	286.398	-2.09%	0.00%	2.14%	-257.5	3.77%	1.24%	-2.62%
35 - Manufacture of Chemicals and Chemical, Petroleum, Coal, Rubber and Plastic Products + 2 - Mining and Quarrying	14539.762	3.52%	5.03%	1.45%	2446.911	-0.55%	0.75%	1.31%	12092.9	4.35%	5.89%	1.48%
36 - Manufacture of Non-Metallic Mineral Products, except Products of Petroleum and	66.881	12.71%	10.91%	-1.59%	424.737	7.70%	11.18%	3.24%	-357.9	-6.76%	-11.23%	-4.19%
37 - Basic Metal Industries	754.324	12.66%	10.86%	-1.60%	1364.501	-2.92%	-9.33%	-6.60%	-610.2	22.19%	34.29%	15.54%
38 - Manufacture of Fabricated Metal Products, Machinery and Equipment	21.996	12.73%	10.91%	-1.61%	7955.639	-3.61%	-0.27%	3.47%	-7933.6	3.66%	0.30%	-3.49%
39 - Other Manufacturing Industries	49.149	12.82%	12.41%	-0.36%	1988.648	6.11%	0.20%	-5.57%	-1939.5	-5.94%	0.11%	5.71%
Total	15918.29	4.28%	5.65%	1.31%	22512.59	1.81%	2.02%	0.20%	-6594.3	4.14%	6.74%	2.71%

Source: adapted from the results of the economic modelling exercise, see chapter VI.

Table 98: Bahrain, 2000, Activity data for the industrial manufacturing sectors

	Number of Employees	% of total employees in all manufacturing sectors	Total wage sector, 1000 Dinars	Average wage employee, Dinars	% of the average wage	Total Wages sector Million US \$	Average wage employee US \$ (2000)	number of establishments	Number of employees per establishment
31 - Manufacture of Food, Beverages and Tobacco									
32 - Textile, Wearing Apparel and Leather Industries									
33 - Manufacture of Wood and Wood Products, Including Furniture									
34 - Manufacture of Paper and Paper Products, Printing and Publishing									
35 - Manufacture of Chemicals and Chemical, Petroleum, Coal, Rubber and Plastic Products									
36 - Manufacture of Non-Metallic Mineral Products, except Products of Petroleum and Coal									
37 - Basic Metal Industries									
38 - Manufacture of Fabricated Metal Products, Machinery and Equipment									
39 - Other Manufacturing Industries									
Total	51760	100.00%	188392	3640		501	9680	4035	13

Source: adapted from ESCWA 2001

Table 99: Bahrain, 2000, results of the economic modelling exercise, adapted for the activity sectors of ISIC

million US\$	Export	% increase Export			Import	% increase Import			Trade balance	% increase Trade Balance		
		GCC CU	EU-GCC FTA	FTA on top of the CU		GCC CU	EU-GCC FTA	FTA on top of the CU		GCC CU	EU-GCC FTA	FTA on top of the CU
31 - Manufacture of Food, Beverages and Tobacco	24.232	7.43%	6.60%	-0.77%	205.103	13.65%	15.70%	1.80%	-180.9	-14.49%	-16.92%	-2.12%
32 - Textile, Wearing Apparel and Leather Industries	381.519	9.57%	14.39%	4.40%	265.146	11.99%	8.67%	-2.96%	116.4	4.04%	27.41%	22.47%
33 - Manufacture of Wood and Wood Products, Including Furniture	0.27	0.00%	0.00%	0.00%	35.486	0.28%	-2.54%	-2.81%	-35.2	-0.28%	2.56%	2.83%
34 - Manufacture of Paper and Paper Products, Printing and Publishing	29.576	9.47%	7.44%	-1.85%	69.843	8.02%	10.88%	2.65%	-40.3	-6.95%	-13.41%	-6.04%
35 - Manufacture of Chemicals and Chemical, Petroleum, Coal, Rubber and Plastic Products + 2 - Mining and Quarrying	4442.764	2.28%	3.47%	1.16%	2429.922	3.39%	2.41%	-0.95%	2012.8	0.95%	4.75%	3.77%
36 - Manufacture of Non-Metallic Mineral Products, except Products of Petroleum and	2.566	7.79%	7.79%	0.00%	79.324	24.96%	29.88%	3.93%	-76.8	-25.53%	-30.62%	-4.05%
37 - Basic Metal Industries	838.817	9.53%	7.38%	-1.96%	170.519	4.16%	-1.94%	-5.86%	668.3	10.89%	9.76%	-1.03%
38 - Manufacture of Fabricated Metal Products, Machinery and Equipment	39.929	9.52%	7.51%	-1.83%	825.654	6.89%	11.85%	4.63%	-785.7	-6.76%	-12.07%	-4.97%
39 - Other Manufacturing Industries	19.637	9.68%	9.17%	-0.46%	90.219	29.93%	24.94%	-3.84%	-70.6	-35.56%	-29.33%	4.60%
Total	5779.31	3.95%	4.84%	0.86%	4171.216	6.20%	6.26%	0.06%	1608.1	-1.88%	1.16%	3.11%

Source: adapted from the results of the economic modelling exercise, see chapter VI.

XII.W DETAILED DISCUSSION ON TRENDS IN TEXTILES WITH REGARD TO THE LIBERALISATION OF THE MARKETS IN 2005 AND THE IMPLICATIONS OF THE EU ENLARGEMENT

In anticipation both of EU enlargement, in 2004, and of the final dismantling of the Multi Fibre Agreement under WTO rules in 2005, it may be useful to analyse recent trends in the textiles and clothing industry.

The textile and clothing industry accounts for around 6% of production value of world manufacturing output more than 8% of the value of manufactured goods traded and more than 14% of world employment. In the EU, recent figures suggest that there are more than 120,000 textile and clothing companies employing more than 2 million people, and thus accounting for 7.6% of total EU manufacturing industry.

Received wisdom suggests that the textile and clothing industry is one of the most global industries in the world, often providing a basis for smaller countries to participate in the global economy. Participation in the sector requires a more intensive use of labour, relatively cheap in developing compared to developed countries, and does not require massive capital investment by firms or particularly large investments in infrastructure by governments, relative to sectors such as machinery or chemicals.

The increasing fragmentation of clothing production in OECD countries has prompted the outsourcing of low-skilled labour activities, such as the making-up of articles of clothing, to low wage locations offering the opportunity for developing countries to participate effectively in trade. The main comparative advantage in such countries has long been their low labour costs along with their textile and clothing traditions, which can act as a guarantee of quality. Thus the clothing and textiles industries (along with leather and footwear) *could be* a central testing ground in the globalising economy of the 21st century, as long-established barriers to competition in the industry are finally unwound under WTO rules.

The textiles and clothing industry has traditionally been a highly protected sector, where the main importing countries such as Europe or the US have applied a wide range of quantitative restrictions (quotas), while most exporting countries (e.g. East Asia, China or the Indian sub-continent) have protected their own markets by prohibitively high import tariffs and/or numerous non-tariff barriers. This complex set of trade restrictions, most frequently encountered under the rubric of the Multi-Fibre Agreement, is due to end in 2005 when the process of trade liberalisation – started in 1995 with the signing of the WTO Agreement on Textiles and Clothing (ATC) – will finally be completed.

Key issues are as follows. Will the ATC deregulation usher in a harsh new era in world textiles trade, whereby large textile nations like China, India or Indonesia are no longer confronted with quantitative restrictions in exports to the EU or the US? Undoubtedly, to remain a global player European industry will make almost constant improvements to compete – via innovation, the increased use of

information and communication technologies, a clear focus on products with high quality and/or fashion content, and the outsourcing highly labour intensive activities.

However an alternative view, stemming from recent advances in economic geography, is also gaining ground which says that ‘time is money’ and ‘distance matters’. Here, the very competitive and innovation-driven nature of the inventory process implies that outsourcing will be increasingly focus on the closest possible geographical and cultural location clusters.

More in Detail

The textile and clothing industry has been subject to two conflicting forces. This conflict has created differing perceptions and some controversy regarding recent trends and made forecasting especially problematic.

One well known force acting on the industry has been trade liberalization resulting from the Uruguay Round Agreement, which included the Agreement on Textiles and Clothing (ATC). The ACT provided for both tariff reductions and perhaps more important, the end of most quantitative restrictions, i.e., import quotas, that have been maintained by developed countries on imports from developing countries. This trade liberalization appears to have enabled very low wage countries, such as China, India, and Indonesia, to expand their exports at the expense of production in high-wage countries, such as current EU members, and perhaps at the expense of medium-wage countries, such as the EU candidate countries.

A second, less well known, force acting on the industry has been information technology (IT). Contrary to some speculation that improving IT would lead to “the death of distance,” researchers at the Harvard Center for Textiles and Clothing Research take the opposite view. They argue that the combination of the growth of “lean retailing,” which entails minimal stocks of goods at stores; and the proliferation of product varieties, is leading to more frequent replenishment of retail inventories. Both lean retailing and product proliferation have been promoted by improving IT, which improves retailers' knowledge of their sales and reduces the costs of inventory management and reordering. Frequent replenishment increases the premium retailers are willing to pay for quick order fulfilment. Quick replenishment, in turn, increases the importance of physical proximity. This second force does not affect all clothing categories equally. When a product is unchanging in style, its sales can be forecast relatively easily. Such products can be ordered far in advance, without either acquiring excess inventories or losing sales due to depleted inventories. In these cases, goods can safely be sourced from distant locations.

But when a product is characterised by changing styles, sales are relatively difficult to forecast. To keep inventories lean without losing sales, retailers must order frequently, in response to actual sales, and the goods must arrive quickly. In these cases, the physical proximity of manufacturing is important.

Research on the United States' clothing market²⁶³ supports this scenario. It has found that frequently replenished products tend increasingly to be sourced in Mexico and the Caribbean, while infrequently replenished products are increasingly sourced in the low-wage countries, such as China.

The foregoing discussion raises two questions. First, is this second force, lean retailing and a price premium for nearby manufacturing, also at work in Europe? And second, if so, in the future, what will be the balance of the two forces? The first question can be answered with a relatively high degree of certainty. This is because, with the right quantitative analysis, the answer can be extracted from available data. The second question, is more difficult because obviously there is no recorded data on the future, and the future is not a perfectly reliable extension of the past. The future balance of the two, conflicting forces, and the net outcome of this conflict, is uncertain. For this reason, there is no alternative but to resort to multiple scenarios that encompass a range of plausible outcomes.

In the 'pessimistic scenario, the wish for low production costs will dominate and first clothing, and later textile, production will move to very low-wage countries. This scenario is called pessimistic because it bodes ill for the production of textiles and clothing in EU candidate countries. This is because these countries cannot, and do not wish, to match the low wages of many other countries.

In the alternative 'optimistic scenario,' quick replenishment of lean inventories in the currently advanced EU-15 markets could afford an advantage to the EU candidate countries as well as countries in the Mediterranean region and potentially in the Gulf states. Under this scenario, production of textiles and clothing could remain important in the enlarged EU and its peripheral and regional trade partners despite rising real wages, in contrast to the more pessimistic forecasts of some 'globalisation' hypotheses.

XII.X ESTIMATE OF SOCIAL IMPACT PER SECTOR OF THE FTA ON THE MANUFACTURING INDUSTRIES, BASED UPON THE ECONOMIC MODELLING EXERCISE

Table 100: Manufacture of Food, Beverages and Tobacco, 2000, Activity data for the industrial manufacturing sectors							
31 - Manufacture of Food, Beverages and Tobacco	Number of Employees	% of total employees in all manufacturing sectors in that country	Total Wages sector Million US \$	Average wage employee US \$ (2000)	% of the average wage in that country	number of establishments	Number of employees per establishment

²⁶³ Abernathy et al. 2002; Evans and Harrigan, 2003

Qatar	2820	8.90%	12.1	4286	56.52%	247	11
Oman	6751	20.77%	40.1	5933	106.60%	152	44
Kuwait	13309	17.09%	84.8	6370	72.45%	317	42
Saudi Arabia	45014	14.31%				513	88
United Arab Emirates	19602	11.12%				199	99
Bahrain							

Source: adapted from ESCWA 2001

Table 101: Manufacture of Food, Beverages and Tobacco, 2000, results of the economic modelling exercise, adapted for the activity sectors of ISIC

31 - Manufacture of Food, Beverages and Tobacco	Export	% increase Export			Import	% increase Import			Trade balance	% increase Trade Balance		
		GCC CU	EU-GCC FTA	FTA on top of the CU		GCC CU	EU-GCC FTA	FTA on top of the CU		GCC CU	EU-GCC FTA	FTA on top of the CU
million US\$												
Qatar	1.066	0.00%	0.00%	0.00%	136.914	6.21%	7.74%	1.44%	-135.8	-6.26%	-7.80%	-1.45%
Oman	276.01	5.07%	4.49%	-0.55%	636.261	17.52%	18.51%	0.84%	-360.3	-27.06%	-29.26%	-1.73%
Kuwait	3.696	2.71%	2.71%	0.00%	270.441	3.29%	4.88%	1.54%	-266.7	-3.30%	-4.91%	-1.56%
Saudi Arabia	167.069	6.64%	5.93%	-0.67%	1592.133	1.83%	2.85%	0.99%	-1425.1	-1.27%	-2.48%	-1.20%
United Arab Emirates	181.237	9.44%	9.71%	0.25%	4857.228	9.67%	10.71%	0.95%	-4676.0	-9.68%	-10.75%	-0.97%
Bahrain	24.232	7.43%	6.60%	-0.77%	205.103	13.65%	15.70%	1.80%	-180.9	-14.49%	-16.92%	-2.12%

Source: adapted from the results of the economic modelling exercise, see chapter VI.

32 - Textile, Wearing Apparel and Leather Industries	Number of Employees	% of total employees in all manufacturing sectors in that country	Total Wages sector Million US \$	Average wage employee US \$ (2000)	% of the average wage in that country	number of establishments	Number of employees per establishment
Qatar	11271	35.56%	28.3	2511	33.10%	1237	9
Oman	5664	17.43%	13.4	2359	42.38%	29	195
Kuwait	14037	18.02%	52.2	3716	42.27%	2221	6
Saudi Arabia	19629	6.24%				148	133
United Arab Emirates	31909	18.10%				218	146
Bahrain							

Source: adapted from ESCWA 2001

Table 103: Textile, Wearing Apparel and Leather Industries, Beverages and Tobacco, 2000, results of the economic modelling exercise, adapted for the activity sectors of ISIC

32 - Textile, Wearing Apparel and Leather Industries	Export	% increase Export			Import	% increase Import			Trade balance	% increase Trade Balance		
		GCC CU	EU-GCC FTA	FTA on top of the CU		GCC CU	EU-GCC FTA	FTA on top of the CU		GCC CU	EU-GCC FTA	FTA on top of the CU
million US\$												
Qatar	138.75	4.47%	9.30%	4.62%	200.089	-0.75%	-4.10%	-3.37%	-61.3	12.55%	34.40%	24.98%
Oman	137.961	6.67%	12.32%	5.30%	238.209	3.44%	-0.97%	-4.26%	-100.2	1.00%	19.25%	18.44%
Kuwait	24.527	4.48%	8.97%	4.29%	416.356	-1.15%	-4.40%	-3.28%	-391.8	1.51%	5.23%	3.78%
Saudi Arabia	162.012	8.83%	13.46%	4.25%	2104.429	5.09%	1.19%	-3.71%	-1942.4	-4.78%	-0.16%	4.40%
United Arab Emirates	274.79	12.70%	18.05%	4.75%	2978.111	4.36%	0.64%	-3.56%	-2703.3	-3.51%	1.12%	4.47%
Bahrain	381.519	9.57%	14.39%	4.40%	265.146	11.99%	8.67%	-2.96%	116.4	4.04%	27.41%	22.47%

Source: adapted from the results of the economic modelling exercise, see chapter VI.

Table 104: Manufacture of Wood and Wood Products, Including Furniture, 2000, Activity data for the industrial manufacturing

33 - Manufacture of Wood and Wood Products, Including Furniture	Number of Employees	% of total employees in all manufacturing sectors in that country	Total Wages sector Million US \$	Average wage employee US \$ (2000)	% of the average wage in that country	number of establishments	Number of employees per establishment
Qatar	437	1.38%	1.6	3772	49.74%	60	7
Oman	988	3.04%	4.9	4988	89.63%	67	15
Kuwait	4890	6.28%	22.8	4667	53.09%	438	11
Saudi Arabia	14765	4.69%				143	103
United Arab Emirates	3315	1.88%				41	81
Bahrain							

Source: adapted from ESCWA 2001

Table 105: Manufacture of Wood and Wood Products, Including Furniture, 2000, results of the economic modelling exercise, adapted for the activity sectors of ISIC

33 - Manufacture of Wood and Wood Products, Including Furniture million US\$	Export	% increase Export			Import	% increase Import			Trade balance	% increase Trade Balance		
		GCC CU	EU-GCC FTA	FTA on top of the CU		GCC CU	EU-GCC FTA	FTA on top of the CU		GCC CU	EU-GCC FTA	FTA on top of the CU
Qatar	0	0.00%	0.00%	0.00%	39.816	-0.50%	-3.52%	-3.03%	-39.8	0.50%	3.52%	3.03%
Oman	1.204	8.31%	8.31%	0.00%	53.926	2.04%	-1.67%	-3.63%	-52.7	-1.90%	1.90%	3.72%
Kuwait	0.371	0.00%	0.00%	0.00%	51.439	-0.58%	-3.69%	-3.13%	-51.1	0.59%	3.72%	3.15%
Saudi Arabia	6.105	8.19%	9.83%	1.51%	363.082	3.75%	0.30%	-3.32%	-357.0	-3.67%	-0.14%	3.40%
United Arab Emirates	1.253	15.96%	15.96%	0.00%	210.414	0.57%	-2.66%	-3.21%	-209.2	-0.48%	2.77%	3.24%
Bahrain	0.27	0.00%	0.00%	0.00%	35.486	0.28%	-2.54%	-2.81%	-35.2	-0.28%	2.56%	2.83%

Source: adapted from the results of the economic modelling exercise, see chapter VI.

Table 106: Manufacture of Paper and Paper Products, Printing and Publishing, 2000, Activity data for the industrial manufacturing

34 - Manufacture of Paper and Paper Products, Printing and Publishing	Number of Employees	% of total employees in all manufacturing sectors in that country	Total Wages sector Million US \$	Average wage employee US \$ (2000)	% of the average wage in that country	number of establishments	Number of employees per establishment
Qatar	3036	9.58%	25.3	8325	109.77%	23	132
Oman	2321	7.14%	14.1	6095	109.50%	47	49
Kuwait	5164	6.63%	58.7	11365	129.27%	80	65
Saudi Arabia	16749	5.32%				185	91
United Arab Emirates	10460	5.93%				144	73
Bahrain							

Source: adapted from ESCWA 2001

Table 107: Manufacture of Paper and Paper Products, Printing and Publishing, 2000, results of the economic modelling exercise, adapted for the activity sectors of ISIC

34 - Manufacture of Paper and Paper Products, Printing and Publishing	Export	% increase Export			Import	% increase Import			Trade balance	% increase Trade Balance		
		GCC CU	EU-GCC FTA	FTA on top of the CU		GCC CU	EU-GCC FTA	FTA on top of the CU		GCC CU	EU-GCC FTA	FTA on top of the CU
million US\$												
Qatar	0.41	0.00%	0.00%	0.00%	49.503	-0.61%	1.82%	2.44%	-49.1	0.61%	-1.83%	-2.46%
Oman	8.218	6.08%	4.87%	-1.15%	92.15	-3.04%	-1.52%	1.57%	-83.9	3.93%	2.14%	-1.86%
Kuwait	3.389	5.90%	2.95%	-2.79%	96.621	-1.55%	0.83%	2.42%	-93.2	1.82%	-0.75%	-2.62%
Saudi Arabia	156.834	8.80%	7.21%	-1.47%	592.258	2.97%	5.10%	2.07%	-435.4	-0.87%	-4.34%	-3.44%
United Arab Emirates	28.894	12.81%	11.07%	-1.53%	286.398	-2.09%	0.00%	2.14%	-257.5	3.77%	1.24%	-2.62%
Bahrain	29.576	9.47%	7.44%	-1.85%	69.843	8.02%	10.88%	2.65%	-40.3	-6.95%	-13.41%	-6.04%

Source: adapted from the results of the economic modelling exercise, see chapter VI.

Table 108: Manufacture of Chemicals and Chemical, Petroleum, Coal, Rubber and Plastic Products, 2000, Activity data for the industrial manufacturing sectors

35 - Manufacture of Chemicals and Chemical, Petroleum, Coal, Rubber and Plastic Products	Number of Employees	% of total employees in all manufacturing sectors in that country	Total Wages sector Million US \$	Average wage employee US \$ (2000)	% of the average wage in that country	number of establishments	Number of employees per establishment
Qatar	3692	11.65%	108.8	29467	388.55%	23	161
Oman	3127	9.62%	29.6	9450	169.79%	68	46
Kuwait	12313	15.81%	296.7	24097	274.08%	62	199
Saudi Arabia	74113	23.56%				667	111
United Arab Emirates	23467	13.31%				383	61
Bahrain							

Source: adapted from ESCWA 2001

Table 109: Manufacture of Chemicals and Chemical, Petroleum, Coal, Rubber and Plastic Products & MINING AND QUARRYING, 2000, results of the economic modelling exercise, adapted for the activity sectors of ISIC

35 - Manufacture of Chemicals and Chemical, Petroleum, Coal, Rubber and Plastic Products + 2 - Mining and Quarrying million US\$	Export	% increase Export			Import	% increase Import			Trade balance	% increase Trade Balance		
		GCC CU	EU-GCC FTA	FTA on top of the CU		GCC CU	EU-GCC FTA	FTA on top of the CU		GCC CU	EU-GCC FTA	FTA on top of the CU
Qatar	10367.121	-0.17%	1.10%	1.26%	425.994	0.23%	1.17%	0.94%	9941.1	-0.18%	1.09%	1.28%
Oman	7969.002	0.75%	2.41%	1.65%	657.019	1.19%	0.35%	-0.83%	7312.0	0.71%	2.59%	1.87%
Kuwait	13545.435	-0.16%	1.09%	1.26%	508.703	-0.41%	1.57%	1.99%	13036.7	-0.15%	1.07%	1.23%
Saudi Arabia	64000.902	2.16%	3.48%	1.29%	3948.569	4.37%	6.13%	1.68%	60052.3	2.02%	3.31%	1.27%
United Arab Emirates	14539.762	3.52%	5.03%	1.45%	2446.911	-0.55%	0.75%	1.31%	12092.9	4.35%	5.89%	1.48%
Bahrain	4442.764	2.28%	3.47%	1.16%	2429.922	3.39%	2.41%	-0.95%	2012.8	0.95%	4.75%	3.77%

Source: adapted from the results of the economic modelling exercise, see chapter VI.

Table 110: Manufacture of Non-Metallic Mineral Products, except Products of Petroleum and Coal, 2000, Activity data for the industrial manufacturing sectors

36 - Manufacture of Non-Metallic Mineral Products, except Products of Petroleum and Coal	Number of Employees	% of total employees in all manufacturing sectors in that country	Total Wages sector Million US \$	Average wage employee US \$ (2000)	% of the average wage in that country	number of establishments	Number of employees per establishment
Qatar	2939	9.27%	14.0	4767	62.86%	64	46
Oman	5696	17.53%	32.6	5721	102.79%	258	22
Kuwait	8824	11.33%	55.4	6282	71.45%	145	61
Saudi Arabia	50178	15.95%				483	104
United Arab Emirates	27600	15.66%				302	91
Bahrain							

Source: adapted from ESCWA 2001

Table 111: Manufacture of Non-Metallic Mineral Products, except Products of Petroleum and Coal, 2000, results of the economic modelling exercise, adapted for the activity sectors of ISIC

36 - Manufacture of Non-Metallic Mineral Products, except Products of Petroleum and Coal	Export	% increase Export			Import	% increase Import			Trade balance	% increase Trade Balance		
		GCC CU	EU-GCC FTA	FTA on top of the CU		GCC CU	EU-GCC FTA	FTA on top of the CU		GCC CU	EU-GCC FTA	FTA on top of the CU
Qatar	0.089	0.00%	0.00%	0.00%	67.408	-0.89%	2.52%	3.44%	-67.3	0.89%	-2.53%	-3.45%
Oman	25.961	6.55%	5.39%	-1.08%	77.069	2.21%	4.54%	2.29%	-51.1	0.00%	-4.11%	-4.11%
Kuwait	2.795	3.58%	3.58%	0.00%	127.193	-1.18%	2.44%	3.66%	-124.4	1.29%	-2.41%	-3.75%
Saudi Arabia	137.67	8.86%	7.26%	-1.47%	486.194	6.33%	9.61%	3.08%	-348.5	-5.34%	-10.53%	-4.93%
United Arab Emirates	66.881	12.71%	10.91%	-1.59%	424.737	7.70%	11.18%	3.24%	-357.9	-6.76%	-11.23%	-4.19%
Bahrain	2.566	7.79%	7.79%	0.00%	79.324	24.96%	29.88%	3.93%	-76.8	-25.53%	-30.62%	-4.05%

Source: adapted from the results of the economic modelling exercise, see chapter VI.

Table 112: Basic Metal Industries, 2000, Activity data for the industrial manufacturing sectors

37 – Basic Metal Industries	Number of Employees	% of total employees in all manufacturing sectors in that country	Total Wages sector Million US \$	Average wage employee US \$ (2000)	% of the average wage in that country	number of establishments	Number of employees per establishment
Qatar	1694	5.34%	25.0	14758	194.60%	31	55
Oman	765	2.35%	7.3	9560	171.77%	6	128
Kuwait	980	1.26%	6.5	6654	75.68%	6	163
Saudi Arabia	2999	0.95%				30	100
United Arab Emirates	5823	3.30%				46	127
Bahrain							

Source: adapted from ESCWA 2001

Table 113: Basic Metal Industries, 2000, results of the economic modelling exercise, adapted for the activity sectors of ISIC

37 – Basic Metal Industries	Export	% increase Export			Import	% increase Import			Trade balance	% increase Trade Balance		
		GCC CU	EU-GCC FTA	FTA on top of the CU		GCC CU	EU-GCC FTA	FTA on top of the CU		GCC CU	EU-GCC FTA	FTA on top of the CU
Million US\$												
Qatar	190.671	4.46%	2.62%	-1.76%	424.676	-0.54%	3.16%	3.72%	-234.0	4.62%	-3.59%	-8.60%
Oman	122.949	6.59%	5.37%	-1.14%	357.468	-0.90%	1.57%	2.48%	-234.5	4.82%	0.43%	-4.61%
Kuwait	16.703	4.79%	2.39%	-2.29%	308.649	-1.88%	1.94%	3.90%	-291.9	2.26%	-1.92%	-4.28%
Saudi Arabia	551.94	8.81%	7.14%	-1.53%	2424.399	7.12%	10.63%	3.28%	-1872.5	-6.62%	-11.66%	-4.73%
United Arab Emirates	754.324	12.66%	10.86%	-1.60%	1364.501	-2.92%	-9.33%	-6.60%	-610.2	22.19%	34.29%	15.54%
Bahrain	838.817	9.53%	7.38%	-1.96%	170.519	4.16%	-1.94%	-5.86%	668.3	10.89%	9.76%	-1.03%

Source: adapted from the results of the economic modelling exercise, see chapter VI.

Table 114: Manufacture of Fabricated Metal Products, Machinery and Equipment, 2000, Activity data for the industrial

38 - Manufacture of Fabricated Metal Products, Machinery and Equipment	Number of Employees	% of total employees in all manufacturing sectors in that country	Total Wages sector Million US \$	Average wage employee US \$ (2000)	% of the average wage in that country	number of establishments	Number of employees per establishment
Qatar	3458	10.91%	14.6	4211	55.52%	297	12
Oman	5124	15.77%	30.2	5885	105.73%	177	29
Kuwait	17014	21.85%	97.8	5749	65.39%	700	24
Saudi Arabia	84196	26.76%				883	95
United Arab Emirates	43321	24.58%				552	78
Bahrain							

Source: adapted from ESCWA 2001

Table 115: Manufacture of Fabricated Metal Products, Machinery and Equipment, 2000, results of the economic modelling exercise, adapted for the activity sectors of ISIC

38 - Manufacture of Fabricated Metal Products, Machinery and Equipment	Export	% increase Export			Import	% increase Import			Trade balance	% increase Trade Balance		
		GCC CU	EU-GCC FTA	FTA on top of the CU		GCC CU	EU-GCC FTA	FTA on top of the CU		GCC CU	EU-GCC FTA	FTA on top of the CU
million US\$												
Qatar	0.393	0.00%	0.00%	0.00%	1993.474	-1.12%	2.70%	3.87%	-1993.1	1.12%	-2.70%	-3.87%
Oman	883.584	6.63%	5.46%	-1.10%	2231.307	2.15%	4.80%	2.60%	-1347.7	0.79%	-4.37%	-5.21%
Kuwait	85.168	4.58%	2.94%	-1.57%	2348.163	-1.46%	2.62%	4.14%	-2263.0	1.69%	-2.61%	-4.37%
Saudi Arabia	277.02	8.81%	7.18%	-1.49%	13128.21	5.45%	8.97%	3.33%	-12851.2	-5.38%	-9.01%	-3.44%
United Arab Emirates	21.996	12.73%	10.91%	-1.61%	7955.639	-3.61%	-0.27%	3.47%	-7933.6	3.66%	0.30%	-3.49%
Bahrain	39.929	9.52%	7.51%	-1.83%	825.654	6.89%	11.85%	4.63%	-785.7	-6.76%	-12.07%	-4.97%

Source: adapted from the results of the economic modelling exercise, see chapter VI.

Table 116: Other Manufacturing Industries, 2000, Activity data for the industrial manufacturing sectors

39 - Other Manufacturing Industries	Number of Employees	% of total employees in all manufacturing sectors in that country	Total Wages sector Million US \$	Average wage employee US \$ (2000)	% of the average wage in that country	number of establishments	Number of employees per establishment
Qatar	2349	7.41%	10.4	4444	58.60%	205	11
Oman	2060	6.34%	8.8	4256	76.47%	37	56
Kuwait	1348	1.73%	9.8	7256	82.53%	194	7
Saudi Arabia	6978	2.22%				77	91
United Arab Emirates	10763	6.11%				216	50
Bahrain							

Source: adapted from ESCWA 2001

Table 117: Other Manufacturing Industries, 2000, results of the economic modelling exercise, adapted for the activity sectors of ISIC

39 - Other Manufacturing Industries	Export	% increase Export			Import	% increase Import			Trade balance	% increase Trade Balance		
		GCC CU	EU-GCC FTA	FTA on top of the CU		GCC CU	EU-GCC FTA	FTA on top of the CU		GCC CU	EU-GCC FTA	FTA on top of the CU
million US\$												
Qatar	2.167	4.61%	4.61%	0.00%	118.909	-0.67%	-4.46%	-3.81%	-116.7	0.77%	4.63%	3.88%
Oman	44.34	6.54%	7.67%	1.06%	153.903	12.09%	5.39%	-5.97%	-109.6	-14.33%	-4.47%	8.62%
Kuwait	11.455	4.36%	4.36%	0.00%	160.856	-0.87%	-4.60%	-3.76%	-149.4	1.27%	5.29%	4.07%
Saudi Arabia	55.282	8.86%	9.04%	0.17%	1741.493	5.96%	-0.23%	-5.84%	-1686.2	-5.87%	0.53%	6.04%
United Arab Emirates	49.149	12.82%	12.41%	-0.36%	1988.648	6.11%	0.20%	-5.57%	-1939.5	-5.94%	0.11%	5.71%
Bahrain	19.637	9.68%	9.17%	-0.46%	90.219	29.93%	24.94%	-3.84%	-70.6	-35.56%	-29.33%	4.60%

Source: adapted from the results of the economic modelling exercise, see chapter VI.

XII. Y VALUE ADDED PER EMPLOYEE IN THE MANUFACTURING INDUSTRIES

Table 118: Value added per employee, 2000							
1000 US \$	Qatar		Oman		Kuwait		
	Per employee 1000 US \$	% of average	Per employee 1000 US \$	% of average	Per employee 1000 US \$	% of average	
31 - Manufacture of Food, Beverages and Tobacco	17.4	58.19%	21.2	99.07%	13	24.16%	
32 - Textile, Wearing Apparel and Leather Industries	18.6	62.21%	9.1	42.52%	7.7	14.31%	
33 - Manufacture of Wood and Wood Products, Including Furniture	11.3	37.79%	18.2	85.05%	8.7	16.17%	
34 - Manufacture of Paper and Paper Products, Printing and Publishing	26.4	88.29%	15.2	71.03%	6.3	11.71%	
35 - Manufacture of Chemicals and Chemical, Petroleum, Coal, Rubber and Plastic Products + 2 - Mining and Quarrying	119.4	399.33%	48.9	228.50%	283.6	527.14%	
36 - Manufacture of Non-Metallic Mineral Products, except Products of Petroleum and Coal	17.7	59.20%	26.4	123.36%	16.3	30.30%	
37 - Basic Metal Industries	35.8	119.73%	33.6	157.01%	10	18.59%	
38 - Manufacture of Fabricated Metal Products, Machinery and Equipment	8.7	29.10%	16.1	75.23%	10.2	18.96%	
39 - Other Manufacturing Industries	9	30.10%	16.6	77.57%	12.1	22.49%	
3 - All Industrial Manufacturing Sectors	29.9	100.00%	21.4	100.00%	53.8	100.00%	

XII.Z EXPORTS OF MANUFACTURED GOODS OF GCC AND EU, 2001

Table 119: Exports of manufactured goods of GCC and EU, 2001

	EU Exports billion €	%	GCC ^a Exports billion \$	%
61 - Leather, leather manufactures, n.e.s., and dressed furskins	31.6	21.88%	0.04	1.53%
62 - Rubber manufactures, n.e.s.	24.7	17.11%	0.03	1.15%
63 - Cork and wood manufactures (excluding furniture)	23.5	16.27%	0	0.00%
64 - Paper, paperboard and articles of paper pulp, of paper or of paperboard	20	13.85%	0.22	8.40%
65 - Textile yarn, fabrics, made-up articles, n.e.s., and related products	17.2	11.91%	0.25	9.54%
66 - Non-metallic mineral manufactures, n.e.s.	11.9	8.24%	0.35	13.36%
67 - Iron and steel	6	4.16%	0.49	18.70%
68 - Non-ferrous metals	4.9	3.39%	0.95	36.26%
69 - Manufactures of metals, n.e.s.	4.4	3.05%	0.29	11.07%
Total miscellaneous manufactured goods	144.4	100%	2.62	100.00%

^a no data for the U.A.E., data Kuwait 1998; Sources: Statistical Office of the European Communities, 2003; United Nations Statistics Division (UNSD), 2003, classification based on 'Standard International Trade Classification 3' (SITC Rev.3)

XII.AA GENDER RELATED DATA

Table 120: Estimated earned income in the Arab region, Male and Female, PPP US\$, 2000

	Female	Male
Yemen	405	1384
Syrian Arab Republic	1537	5522
Jordan	1749	6014
Egypt	2003	5227
Lebanon	2013	6704
Morocco	2019	5068
Algeria	2389	8150
Iran, Islamic Rep. of	2524	9088
Libyan Arab Jamahiriya	2921	11894
Tunisia	3347	9320
Saudi Arabia	3466	18252
Oman	3806	21804
United Arab Emirates	5320	24412
Qatar	6864	25277
Kuwait	6895	22186
Bahrain	7010	21059

Source: UNDP. Human Development Indicators. 2002.

XII.BB HUMAN DEVELOPMENT INDEX 2003

Table 121: The Human Development Index 2001, GCC (°) & its neighbours (°°), EU (*) & Candidate Member States

High Human Development ³ 0.8		
Country	HDI Rank	HDI value
Sweden*	3	0.941
The Netherlands*	5	0.938
Belgium*	6	0.937
Denmark*	11	0.930
Ireland*	12	0.930
U.K.*	13	0.930
Finland*	14	0.930
Lux.*	15	0.930
Austria*	16	0.929
France*	17	0.925
Germany*	18	0.921
Spain*	19	0.918
Italy*	21	0.916
Portugal*	23	0.896
Greece*	24	0.892
Cyprus**	25	0.891
Slovenia**	29	0.881
Czech R.**	32	0.861
Malta**	33	0.856
Poland**	35	0.841
Bahrain°	37	0.839
Hungary**	38	0.837
Slovakia**	39	0.836
Estonia**	41	0.833
Qatar°	44	0.826
Lithuania**	45	0.824
Kuwait°	46	0.820
U.A.E.°	48	0.816
Latvia**	50	0.811
Medium Human Development < 0.8		
Bulgaria**	57	0.795
Romania**	72	0.773
Saudi A°	73	0.769
Oman°	79	0.755
Jordan°°	90	0.743
Turkey**	96	0.734
Occupied Palestinian Territories °°	98	0.731
Iran°°	106	0.719
Syrian Arab Republic °°	110	0.685
Egypt °°	120	0.648

Source: UNDP. Human Development Report. 2003, 237-240

Note: The HDI rank is determined using the HDI values to sixth decimal points

XII.CC FOREIGN POPULATION BY NATIONALITY

Table 122: Foreign Population by Nationality, 1995, Saudi Arabia

Country	Number	As % in subgroup	As% in foreign population
Egypt	1,195.2	50.2	19.1
Yemen	424.4	17.8	6.8
Jordan&Palestine	266.0	11.2	4.3
Sudan	242.5	10.2	3.9
Syria	168.4	7.1	2.7
All Arabs	2,378.8	97.0	38.0
India	1,228.7	36.8	19.6
Pakistan	778.7	23.3	12.4
Philippines	451.0	13.5	7.2
Bangladesh	446.3	13.4	7.1
Indonesia	249.5	7.5	4.0
All Asians	3,342.6	94.0	53.4

Source: Ministry of Interior Saudi Arabia

Table 123: Kuwait: Distribution of Arab and Asian Foreign Labour, 2000

Occupation	Arabs	Asians	Total	Arabs	Asians
Technical & Scientific	50,568	31,431	87,716	57.6%	35.8%
Managerial	12,04	5,977	19,71	61.1%	30.3%
Clerical & Government	44,505	22,773	68,251	65.2%	33.4%
Sales	36,792	34,511	71,638	51.4%	48.2%
Services	26,573	277,159	304,712	8.7%	91.0%
Agriculture	4,05	11,159	15,227	26.6%	73.3%
Production	137,544	288,766	427,581	32.2%	67.5%
Total	319,852	673,74	1,004,721	31.8%	67.1%

Note: Numbers may not add up to totals across rows because other nationalities are excluded. Likewise, columns may not add up due to the exclusion of "unclassified" group.

Source: Public Authority for Civil Information, Population and Labour Force, Kuwait, 2000

XII.DD EXPATRIATE REMITTANCES FROM THE GCC

Table 124: Expatriate remittances from the GCC					
(Figures in billion US \$)					
Country	1997	1998	1999	2000	2001
Bahrain	0.2	0.3	0.4	0.4	0.4
Qatar	0.5	0.6	0.7	0.6	0.7
Oman	0.6	0.8	1.0	0.9	0.9
Kuwait	1.4	1.7	2.0	1.9	2.0
Saudi Arabia	15.2	15.0	14.0	15.4	15.7
UAE	2.4	2.5	3.0	2.8	3.0
Total	20.3	20.9	21.1	22.0	22.7

Source: Gulf News Online

XII.EE EVOLUTION IN THE AVERAGE YEARS OF EDUCATION, MALE AND FEMALE

	BAHRAIN			KUWAIT				QATAR		S. ARABIA			UAE	
	1965	1981	1991	1965	1975	1983	1996	1981	1987	1981	1992	1999	1975	1980
FEMALES	4.6	10.8	15.8	4.5	11.8	13.8	14.7	13.4	14.4	3.8	4.3	6.0	5.8	9.1
MALES	3.4	6.7	10.0	2.1	4.4	8.2	11.7	6.8	6.6	4.3	6.5	7.9	3.4	3.7

Notes: Data pertain to economically active population 5 years and older; Relative weights are: 0 yrs for illiterate; 3 yrs for read & write; 6 yrs for primary; 10 yrs for preparatory; 15 years for secondary and 18 yrs for university and higher.

Source: Maurice Girgis, 1999, Labour Market Reforms in the GCC, Op. cit.

XII.FF ESTIMATED NUMBERS OF FEMALE NATIONALS/EXPATRIATES AND THEIR EMPLOYMENT RATES IN THE GCC IN 2000

	Nationals			Expatriates			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Kuwait('000)									
Population	402,5	409,7	812,2	964,4	478,3	1442,7	1328,0	926,9	2254,9
Labour force	153,3	68,1	221,4	789,5	215,3	1004,8	938,1	288,1	1226,2
Saudi Arabia('000)									
Population	7760,7	7897,8	15658,5	3794,0	1881,7	5675,7	12564,9	8769,3	21334,2
Labour force	2197,0	975,9	3172,9	3145,7	857,7	4003,4	5490,0	1686,3	7176,3
UAE('000)									
Population	360,8	367,1	727,9	1452,0	720,1	2172,1	1708,0	1192,0	2900,0
Labour force	95,7	42,5	138,2	956,7	260,8	1217,5	1037,1	318,6	1355,7
Oman('000)									
Population	864,8	880,0	1744,8	438,0	217,2	655,2	1413,5	986,5	2400,0
Labour force	212,0	94,2	306,2	434,1	118,4	552,5	656,9	201,8	858,7
Bahrain('000)									
Population	211,3	215,1	426,4	176,2	87,4	263,6	406,4	283,6	690,0
Labour force	83,1	36,9	120,0	141,4	38,6	180,0	229,5	70,5	300,0
Qatar ('000)									

Population	84,0	85,5	169,5	264,4	131,1	395,5	332,8	232,2	565,0
Labour force	37,9	16,8	54,8	197,4	53,8	251,2	234,1	71,9	306,0
GCC (millions)									
Population	9,7	9,9	19,5	7,1	3,5	10,6	16,8	13,4	30,1
Labour force	2,8	1,2	4,0	5,7	1,5	7,2	8,3	2,7	11,2

Notes :

1. The source of the data in bold is Maurice Girgis, 2002.
2. The numbers in bold and italic are numbers calculated from total numbers of 2000 given by Maurice Girgis (2002) and percentages of expatriates in 1995 given by Maurice Girgis (2002).
3. Total numbers in red are data for 1999 from the World Bank Database given by Ibrahim Elbadawi (2002).
4. The distribution female/male is generated with the percentages given in VIII.C.1, Table 1.
5. The numbers for the GCC are the summations of the numbers for the six GCC countries.
6. Small differences in totals for the GCC are due to round ups

XII.GG HEALTH IMPACTS OF MAJOR PETROCHEMICALS

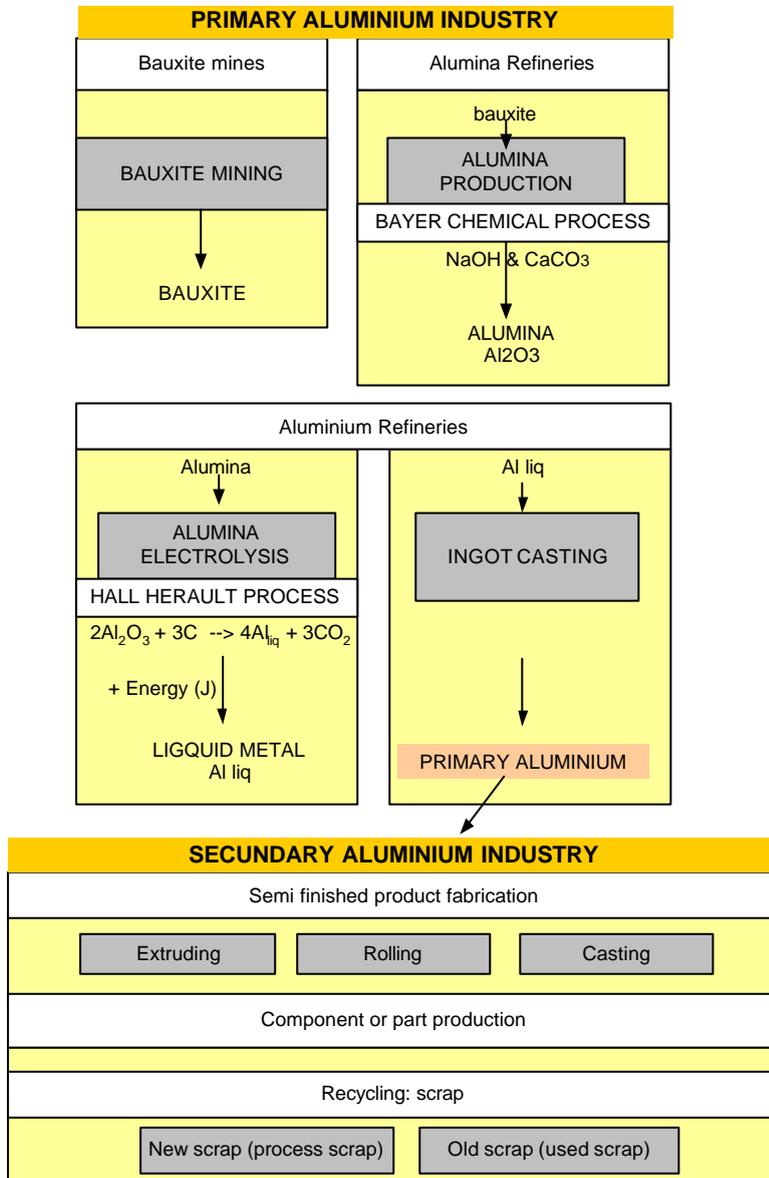
Substance	Health Hazards	Risk of Exposure
<i>Ethylene</i>	<p>Breathing low levels of ethylene oxide for several months to years has caused irritation of the eyes, skin, and respiratory passages and affected the nervous system (headache, nausea, vomiting, memory loss, numbness, etc.). At higher levels of exposure for shorter periods, effects are similar but may be more severe. There is some evidence that exposure to ethylene oxide can cause a pregnant woman to have a miscarriage.</p> <p>Increased incidences of leukaemia and stomach cancer have been reported for workers exposed to ethylene oxide. Ethylene oxide may reasonably be anticipated to be a human carcinogen.</p> <p><i>Ethylene glycol (derivative):</i></p> <p>Eating or drinking very large amounts of ethylene glycol can result in death, while large amounts can result in nausea, convulsions, slurred speech, disorientation, and heart and kidney problems.</p> <p>Ethylene glycol affects the body's chemistry by increasing the amount of acid, resulting in metabolic problems. Similar to ethylene glycol, propylene glycol increases the amount of acid in the body. However, larger amounts of propylene glycol are needed to cause this effect.</p>	<p>Exposure is unlikely for general population because not found commonly in the environment.</p> <p>Workers in plants where it is made could be exposed to it by breathing it or getting it on skin.</p> <p>Ethylene oxide has been measured in some foods shortly after being sprayed as a pesticide, it is not known if any ethylene oxide would remain on the food by the time it is processed and eaten.</p>
<i>Propylene</i>	<p>Propylene glycol (derivative) is generally regarded as safe.</p> <p>Acrylonitrile (Propylene derivative):</p> <p>Breathing high concentrations of acrylonitrile will cause nose and throat irritation, tightness in the chest, difficulty breathing, nausea,</p>	<p>Propylene glycol: Eating food products, using cosmetics, or taking medicine that contains it.</p> <p>Workers in the industry can be</p>

	<p>dizziness, weakness, headache, impaired judgment, and convulsions. These symptoms usually disappear when exposure is stopped. If spilled on the skin, acrylonitrile will burn the skin and produce redness and blisters.</p> <p>There is evidence that children are much more sensitive to acrylonitrile than adults. In a few cases, children have died following exposure to acrylonitrile vapours that caused only minor nose and throat irritation in adults.</p> <p>Acrylonitrile may reasonably be anticipated to cause cancer in people.</p>	<p>exposed by breathing or touching.</p> <p>Acrylonitrile: Exposure unlikely in the general population.</p> <p>Breathing contaminated air near hazardous waste sites that contain acrylonitrile.</p> <p>Working in, or living near, industries where it is manufactured or used.</p> <p>Swallowing food and water that contains small amounts of acrylonitrile.</p>
<i>1,3-Butadiene</i>	<p>Breathing very high levels of 1,3-butadiene for a short time can cause central nervous system damage, blurred vision, nausea, fatigue, headache, decreased blood pressure and pulse rate, and unconsciousness. There are no recorded cases of accidental exposures at high levels that caused death in humans.</p> <p>Breathing lower levels may cause irritation of the eyes, nose, and throat. Studies on workers who had longer exposures with lower levels have shown an increase in heart and lung damage, but these workers were also exposed to other chemicals.</p> <p>1,3-butadiene may reasonably be anticipated to be a carcinogen.</p>	<p>Exposure to butadiene mainly occurs in the workplace. Examples of industries with a high potential for exposure include: synthetic elastomer (rubber and latex) production, petroleum refining, secondary lead smelting, water treatment, agricultural fungicides, production of raw material for nylon, and the use of fossil fuels. Exposure can also occur from automobile exhaust, polluted air and water near chemical, plastic or rubber facilities, cigarette smoke, and ingestion of foods that are contaminated from plastic or rubber containers.</p>
<i>Aromatics</i>	<p>Benzene.</p> <p>Breathing very high levels of benzene can result in death, while high levels can cause drowsiness, dizziness, rapid heart rate, headaches, tremors, confusion, and unconsciousness.</p> <p>Eating or drinking foods containing high levels of benzene can cause vomiting, irritation of the stomach, dizziness, sleepiness, convulsions, rapid heart rate, and death.</p> <p>The major effect of benzene from long-term (365 days or longer) exposure is on the blood. Benzene causes harmful effects on the bone marrow and can cause a decrease in red blood cells leading to anaemia. It can also cause excessive bleeding and can affect the immune system, increasing the chance for infection.</p> <p>Some women who breathed high levels of benzene for many months had irregular menstrual periods and a decrease in the size of their ovaries. It is not known whether benzene exposure affects the developing fetus in pregnant women or fertility in men.</p> <p>Benzene is a known human carcinogen. Long-term exposure to high levels of benzene in the air can cause leukaemia, cancer of the blood-forming organs.</p>	<p>Benzene: Outdoor air contains low levels of benzene from tobacco smoke, automobile service stations, exhaust from motor vehicles, and industrial emissions.</p> <p>Indoor air generally contains higher levels of benzene from products that contain it such as glues, paints, furniture wax, and detergents.</p> <p>Air around hazardous waste sites or gas stations will contain higher levels of benzene.</p> <p>Leakage from underground storage tanks or from hazardous waste sites containing benzene can result in benzene contamination of well water.</p> <p>People working in industries that make or use benzene may be exposed to the highest levels of it.</p>
<i>MTBE</i>	<p>There is no evidence that MTBE causes cancer in humans.</p>	<p>Touching the skin or breathing</p>

		<p>contaminated air while pumping gasoline.</p> <p>Breathing exhaust fumes while driving a car.</p> <p>Breathing air near highways or in cities.</p> <p>Drinking, swimming, or showering in water that has been contaminated with MTBE.</p>
<i>Synthetic gas</i>	<p>e.g., Ammonia. Exposure to high concentrations of ammonia in the air may cause severe burns to skin, eyes, throat, and lungs. In extreme cases, blindness, lung damage, or death could occur. Breathing lower concentrations will cause coughing and nose and throat irritation. Concentrated ammonia spilled on the skin will cause burns.</p>	<p>Ammonia: Through ammonia cleaning products released to the air and through contact with skin.</p> <p>In the air through the application of ammonia fertilizers.</p> <p>From leaks and spills from production plants, storage facilities, pipelines, tank trucks, and rail cars.</p>

XII.HH OVERVIEW OF PRIMARY AND SECONDARY ALUMINIUM INDUSTRY

Figure 12: Overview of primary and secondary aluminium Industry



XII.II BAUXITE MINING AND ALUMINA PRODUCTION IN THE EU AND WORLDWIDE.

Alumina Production	1991	2001	Share 1991	Share 2001	Change
	(1000 tonnes)		(%)	(%)	(01-91)
UK	120	98	2,0	1,6	-19,2
France	538	598	8,9	9,8	9,9
Greece	641	690	10,7	11,3	6,5
Germany	1.148	836	19,1	13,7	-28,0
Italy	805	993	13,4	16,3	22,0
Spain	1.004	1.199	16,7	19,7	18,1
Ireland	981	1.449	16,3	23,8	46,1
Yugoslavia	780	201	13,0	3,3	-74,5
Total Europe	6.017	6.083	100,0	100,0	0,0

Figures give quantities, share and change in share (as a percentage of starting value) of world alumina production in 1991 and 2001. (World Metal Statistics, 2001)

1000 tonnes	Bauxite Production					Alumina Production				
	1991	Share	2001	Share	Change	1991	Share	2001	Share	Change
GCC	0	0	0	0	0	0	0	0	0	0
Europe	4.748	4,1	2.815	2,0	-50,6	6.017	14,0	6.082	11,4	-18,5
Asia	7.246	6,3	9.861	7,1	13,4	2.458	5,7	3.094	5,8	1,4
Africa	18.684	16,2	18.674	13,5	-16,7	651	1,5	674	1,3	-16,6
America	28.026	24,3	36.322	26,3	8,0	14.110	32,9	16.165	30,4	-7,7
Australia Oceania	40.503	35,1	53.285	38,5	9,6	11.713	27,3	16.271	30,6	12,0
Eastern countries	16.041	13,9	17.373	12,6	-9,8	7.957	18,5	10.952	20,6	10,9
Total world	115.248	100	138.330	100	0	42.906	100	53.238	100	0

Eastern countries: China, Russia, Kazakhstan, Hungary, Romania, Ukraine, Azerbaijan

Figures give quantities (1000 tonnes) , share (%) and change in share (as a percentage of starting value) of world bauxite production and alumina production in 1991 and 2001.

XII.JJ ALUMINIUM PRODUCTION IN THE EU AND WORLDWIDE

Aluminium Production	1991	Share	2001	Share	Change
GCC	453	2,3	1.058	4,4	91,0
Europe	3.791	19,3	4.113	17,1	-11,4
Asia	835	4,2	946	3,9	-7,4
Africa	608	3,1	1.087	4,5	46,2
America	7.950	40,4	7.211	29,9	-25,9
Australia and Oceania	1.487	7,6	2.106	8,7	15,7
Eastern countries	4.566	23,2	7.575	31,4	35,6
Total world	19.690	100	24.097	100	0

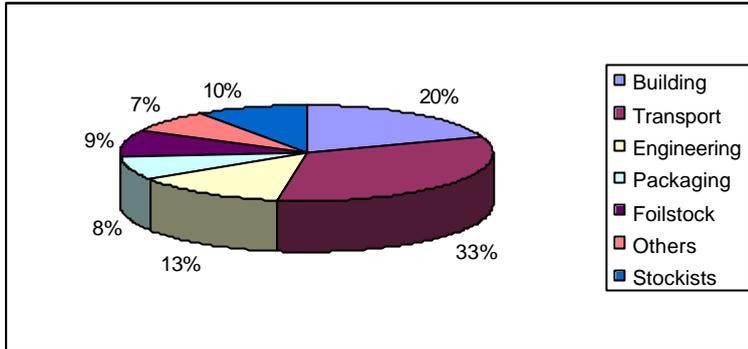
Figures give quantities (1000 tonnes), share (%) and change in share (as a percentage of starting value) of world aluminium production in 1991 and 2001.

Aluminium Production	1991	2001	Share 1991	Share 2001	Change
	(1000 tonnes)		(%)	(%)	(01-91)
Austria	80	0	2,1	0,0	-100,0
France	286	469	7,5	11,4	51,2
Germany	690	652	18,2	15,8	-13,0
Greece	152	162	4,0	3,9	-2,0
Italy	218	188	5,7	4,6	-20,6
Netherlands	264	293	7,0	7,1	2,4
Spain	355	376	9,4	9,2	-2,3
Sweden	97	102	2,6	2,5	-3,2
UK	294	341	7,7	8,3	7,0
EU 15	2.436	2.583	61,7	60,3	-2,2
Slovenia		76	0,0	1,8	100,0
Iceland	89	243	2,4	5,9	150,7
Norway	886	1.068	23,4	26,0	11,1
Switzerland	66	36	1,7	0,9	-49,4
Yugoslavia	314	108	8,3	2,6	-68,3
Total Europe	3791	4113	100	100	0

Note: Other sources indicate that there is also a limited aluminium production in Hungary, Poland, Slovakia and Romania

XII.KK END-USE MARKETS OF ALUMINIUM PRODUCTS IN WESTERN EUROPE

Figure 13: End-use markets of aluminium products in Western Europe



Source data: National Aluminium Associations

XII.LL PRIMARY ALUMINIUM CONSUMPTION

Aluminium Consumption	1991	2001	Share 1991	Share 2001	Change
	(1000 tonnes)		(%)	(%)	(01-91)
GCC	116	295	0,6	1,3	102,7
Europe	4.835	5.771	25,7	24,5	-4,7
Asia	4.236	4.830	22,6	20,5	-9,0
Africa	245	361	1,3	1,5	17,9
America	5.315	6.841	28,3	29,1	2,8
Australia and Oceania	316	357	1,7	1,5	-9,8
Eastern countries	3.716	5.068	19,8	21,5	8,9
Total world	18.780	23.524	100,0	100,0	0

World Metal Statistics, 1991-2001

XII.MM ALUMINIUM PRODUCTS TRADE FLOWS BETWEEN THE EU AND GCC

Table 132: Aluminium products trade flows between the EU and GCC							
EU exports to the GCC 2001 (1000 €)	Kuwait	Bahrain	Qatar	UAE	Oman	Saudi Ar.	GCC
Bauxite	0	0	5.51	33.05	0	15.31	53.87
Alumina	83.2	10.95	70.38	1226.29	2.03	616.32	2009.17
Aluminium Alloys - Primary Aluminium	345.98	665.68	0	1062.22	0	211.59	2285.47
Aluminium Bars, Rods and Profiles (Semi-finished products)	1325.11	585.94	883.72	3544.26	167.19	2184.61	8690.83
EU imports from the GCC 2001 (1000 €)	Kuwait	Bahrain	Qatar	UAE	Oman	Saudi Ar.	GCC
Bauxite	0	0	0	0	0	0	0
Alumina	0	0	0	0	0	0	0
Aluminium Alloys - Primary Aluminium	0	19747.81	0	123847.9	0	2056.45	145652.1
Aluminium Bars, Rods and Profiles (Semi-finished products)	0	8357.48	20.66	17.87	657.45	328.62	9382.08
Trade balance 2001 (1000 €)	Kuwait	Bahrain	Qatar	UAE	Oman	Saudi Ar.	GCC
Bauxite	0	0	5.51	33.05	0	15.31	53.87
Alumina	83.2	10.95	70.38	1226.29	2.03	616.32	2009.17
Aluminium Alloys - Primary Aluminium	345.98	-19082.1	0	-122786	0	-1844.86	-143367
Aluminium Bars, Rods and Profiles (Semi-finished products)	1325.11	-7771.54	863.06	3526.39	-490.26	1855.99	-691.25

Source Eurostat 2003

XII.NN ENERGY SOURCES OF ELECTRICAL POWER FOR THE SMELTING OF ALUMINIUM, 2001

Table 133: Global energy sources of electrical power for the smelting of aluminium in 2001		
	Total GigaWh	%
Hydro	121373	48.9
Coal	88708	35.8
Oil	2145	0.9
Natural Gas	23176	9.3
Nuclear	12711	5.1
Total	248113	100

Source: International Aluminium Institute, 20/09/2002, <http://www.world-aluminium.org/iai/stats>.

XII.OO NATURAL GAS STATISTICS

	Production, 2002, Billion cubic meters	% Global Production	Proved Reserves, 2002, Trillion cubic meters	% Global Reserves	Prod./Res. Ratio
EU_15	208.8	8.3%	3.14	2.0%	14.4 years
GCC	164.4	6.5%	29.18	18.7%	>100 years
Saudi Arabia	56.4	2.2%	6.36	4.1%	>100 years
United Arab Emirates	46	1.8%	6.01	3.9%	>100 years
Qatar	29.3	1.2%	14.4	9.2%	>100 years
Oman	14.8	0.6%	0.83	0.5%	56.2 years
Bahrain	9.2	0.4%	0.09	0.1%	10 years
Kuwait	8.7	0.3%	1.49	1.0%	>100 years
Europe & Eurasia	988.1	39.1%	61.04	39.2%	58.9 years
North America	766	30.3%	7.15	4.6%	9.4 years
Asia Pacific	301.7	11.9%	12.61	8.1%	41.8 years
Middle East	235.6	9.3%	56.06	36.0%	>100 years
Africa	133.2	5.3%	11.84	7.6%	88.9 years
S. & Cent. America	103	4.1%	7.08	4.5%	68.8 years
WORLD	2527.6	100%	155.78	100%	60.7 years

Source: BP 2003

Billion cubic meters	Oman	Qatar	UAE	Total GCC	
Japan	1.09	8.4	5.93	15.42	
South Korea	5.48	6.95	0.32	12.75	
Asia Pacific	6.57	15.35	6.25	28.17	
Belgium	---	---	0.1	0.1	
France	0.54	---	---	0.54	
Spain	0.76	2.2	0.5	3.46	
Europe	1.3	2.2	0.6	4.1	
North, S. & C. America	0.09	1.04	---	1.13	
World	7.96	18.59	6.85	33.4	

Source: BP 2003

Table 136: Gas Production and Utilisation in Bahrain

Items	Billions of Cubic feet		Change %		Relative Share %	
	2001	2002	2001	2002	2001	2002
Gas Production	424.4	429.2	3.0	1.1	100.0	100.0
Natural Gas	327.9	333.0	3.5	1.6	77.3	77.6
Associated Gas	96.5	96.2	1.3	-0.3	22.7	22.4
Gas Utilisation	424.4	429.2	3.0	1.1	100.0	100.0
Alba	112.2	115.3	3.9	2.8	26.4	26.9
Power Stations	105.4	112.5	4.2	6.7	24.8	26.2
Oilfield Re-Injection	102.0	95.2	0.4	-6.7	24.0	22.2
GPC	43.8	43.0	6.8	-1.8	10.3	10.0
Bapco Refinery	36.0	37.1	-0.8	3.1	8.5	8.6
Others	25.0	26.1	4.2	4.4	6.0	6.1

Source: Bahrain Monetary Agency 2002

XIII. Appendices

XIII.A APPENDIX 1: GENUINE SAVINGS

The World Bank has estimated what the net savings of a country would be taken into account investments in human capital, depletion of natural resources and damage caused by pollution. In standard national accounting the rents on natural non-renewable resource extraction are included implicitly in standard income measures but not the fact the resource itself is depleted and cannot be replaced anymore. To estimate genuine savings for a country on the long term one should take into account the depletion of the resources in several ways. The World Bank has tried to estimate just that. In Table 137 the results for the EU and the GCC countries are represented. All EU member states, including the new Member States have positive genuine savings. For the GCC the picture is completely different with almost only negative genuine savings. This implies that their total wealth is in decline if one takes into account the resource depletion itself. The economic policies in the GCC can thus be interpreted as policies that could lead potentially to long term unsustainability.

	Average 1970-79	Average 1980-89	Average 1990-95	1995	1996	1997	1998	1999
EU 15								
Austria	NA	15.4	32.3	36.4	34.2	30.2	34.7	33.4
Netherlands	NA	32.7	66.5	85.4	77.9	75.6	77.7	75.0
Spain	NA	38.3	111.3	90.4	90.3	86.9	92.3	94.4
Sweden	13.2	22.2	34.2	44.2	44.3	40.6	41.7	40.6
UK	NA	NA	93.8	116.1	93.9	120.3	125.7	110.4
Belgium	12.3	18.2	41.4	48.4	45.5	44.1	45.2	45.0
Denmark	NA	NA	22.6	30.4	31.9	29.1	29.1	30.3
Finland	4.7	12.1	13.8	21.6	19.7	21.8	25.5	24.5
France	59.9	92.6	172.8	205.9	199.1	194.4	208.5	208.0
Germany	NA	NA	290.6 ^a	359.8	335.8	309.2	323.7	312.5
Greece	5.2	5.3	7.1	8.2	8.9	10.0	11.5	14.1
Italy	36.4	83.4	145.7	167.8	193.2	175.3	179.8	169.0
Portugal	NA	NA	14.3	17.6	18.6	18.1	18.1	NA
Ireland	NA	NA	10.4	16.7	19.4	23.6	25.9	30.0
New Members States								
Poland	NA	NA	9.1	15.7	16.8	19.8	22.0	20.0
Czech Rep.	NA	NA	7.2 ^b	11.7	12.2	10.1	11.6	10.4
Estonia	NA	NA	0.9	0.5	0.4	0.6	0.6	0.7
Hungary	NA	3.9	4.7	7.1	8.4	9.5	9.8	9.4
Lithuania	NA	NA	1.7	0.5	0.7	1.0	0.7	0.8
Slovak Rep.	NA	NA	2.5	4.0	3.7	4.1	3.9	3.8
Slovenia	NA	NA	1.3 ^a	1.7	1.8	1.9	2.2	2.2
Latvia	NA	NA	2.8	0.4	0.3	0.6	0.6	0.7
GCC								
Oman	0.2	-1.2	-2.2	NA	NA	NA	NA	NA
Saudi Arabia	-8.2	-33.5	-30.4	-17.6	-26.8	-19.1	-21.0	-18.6
United AE	NA	-1.3	-3.9	NA	NA	NA	NA	NA
Kuwait	-2.5	-4.2	-8.2	-7.9	-9.0	-8.6	-8.0	-7.8

^a No data available for 1990, ^b No data available for 1990 and 1991. Source: World Bank, <http://lnweb18.worldbank.org/ESSD/envext.nsf/44ByDocName/GreenAccounting>

XIII.B APPENDIX 2: WORLD TRADE SIMULATION MODEL (TSM)

The trade simulation model (TSM) is a simple computable partial equilibrium model of world trade developed for application to a variety of multilateral, regional, and unilateral trade policy issues. This appendix presents the main elements of the model in some detail, notably including consideration for two factors not incorporated in the trade simulation model: (1) possible inter-industry demands for traded goods and (2) protection arising from not only tariffs but also non-tariff barriers (NTBs) to imports. Finally, it should also be emphasized that although TSM does not account for substitution between traded goods in consumption and production or for income determination (two important hallmarks of computable general equilibrium (CGE) models), the model does determine domestic and international prices that are consistent with balance of payments equilibrium in each country of the model, through determination of an equilibrium real exchange rate for each country.

Import Demand

Import demand ($M_{k(i)}^d$) for traded good k by each country i is given by the relationship:

$$(1) \quad M_{k(i)}^d = c_{k(i)}^m [P_{k(i)}^m - S_j (a_{jk(i)} P_{j(i)}^m)]^{\eta_{k(i)}}$$

where

$$P_{k(i)}^m = [P_k^* (1 + t_{k(i)}) / e_{(i)}]^{1-f_{k(i)}} [P_{k(i)}^{ntb}]^{f_{k(i)}}$$

and where $P_{k(i)}^m$ is an index of the domestic price of imports of good k in country i , a_k is the amount of good j necessary to produce one unit of output of good k in country i , $\eta_{k(i)}$ is the own-price elasticity of import demand for good k in country i , P_k^* is the world price of good k denominated in U.S. dollars, $t_{k(i)}$ is the *ad valorem* MFN tariff rate for good k in country i , $e_{(i)}$ is the exchange rate of country i 's currency in terms of the U.S. dollar, $f_{k(i)}$ is the frequency of non-tariff barriers facing imports of good k in country i , and $P_{k(i)}^{ntb}$ is the domestic price of imports of good k in country i covered by non-tariff barriers. Equation (1) posits that import demand in each country i is a positive function of the exchange rate, the domestic price of imported inputs, and the (absolute value of the) price elasticity of import demand, and a negative function of the world price of good k , the tariff rate, the domestic price of imports covered by NTBs, and the frequency of non-tariff barriers.

Equation (1) also posits that import demand in each country i is a negative function of the (imputed) domestic price of value-added [$P_{k(i)}^m - S_j (a_{jk(i)} P_{j(i)}^m)$]. This specification of import demand is not rigorously derived, but it points to the importance of the costs of intermediate goods in production and how these costs should be expected to influence international competitiveness, notably, in the determination of import demand (and export supply, as seen further below). At the same time, it should be noted that the model does not account explicitly for

intermediate demands for goods implied by the specification of domestic value-added prices as determinants of import demand and export supply.²⁶⁴

Non-tariff barriers are assumed to limit the supply of imports to the country imposing the barriers, and so they are assumed to have an equivalent effect as quantitative restrictions on imports. With sufficient information about domestic prices and quantities of imports covered by non-tariff barriers, and the restrictiveness with which the barriers are enforced, baseline values of the $P_{k(i)}^{ntb}$ might be endogenously determined in the model. However, given only limited information about the coverage of imports affected by non-tariff barriers and the degree of their restrictiveness, the model takes a simpler approach to determining each $P_{k(i)}^{ntb}$. Specifically, non-tariff barriers are assumed to be highly restrictive (akin to import quotas), and the domestic price of imports covered by non-tariff barriers is assumed to differ from the baseline price of similar imports not covered by non-tariff barriers by a constant *a priori* proportional margin:

$$P_{k(i)}^{ntb} = (1 + \tau_{k(i)}) [P_k^* (1 + t_{k(i)}) / e_{(i)}]$$

where $\tau_{k(i)}$ is the constant margin by which the price of imports covered by non-tariff barriers differs from the baseline price of imports not covered by non-tariff barriers in category k in country i , and where the other variables in the equation are evaluated at their baseline values (indicated by bold italics). Note that the parameter $\tau_{k(i)}$ may be either positive or negative in value, depending upon the precise character of the "similar" goods in category k , the nature of the non-tariff barrier, and the precise magnitude of the tariff rate (the tariff rate itself may be prohibitive). In the absence of reliable information about domestic prices for the large number of countries in the model, zero is assumed to be an appropriate, "neutral" value for this parameter for all countries and all categories of traded goods.

Export Supply

Export supply ($X_{k(i)}^s$) of good k in each country i is given by the relationship:

$$(2) \quad X_{k(i)}^s = c_{k(i)}^x [P_{k(i)}^x - S_j (a_{jk(i)} P_{j(i)}^m)]^{o_{k(i)}}$$

where

$$P_{k(i)}^x = P_k^* / e_{(i)},$$

²⁶⁴ TSM does not explicitly differentiate between demands for intermediate and final goods in production and consumption. If produced inputs to production are considered Leontief-type goods, that is, goods demanded strictly in fixed proportion to output in each sector, then the model should be interpreted as implicitly assuming that demands for intermediate goods are satisfied solely by domestic producers of import-competing goods. Alternatively, if demands for Leontief-type intermediate goods were assumed satisfied mainly by producers of traded goods abroad, then more complete specification of the model would incorporate import demand equations of the form:

$$(1') \quad M_{k(i)}^d = c_{k(i)}^m \{ [P_{k(i)}^m - S_j (a_{jk(i)} P_{j(i)}^m)]^{n_{k(i)}} + S_j [a_{kj(i)} (X_{j(i)}^s - M_{j(i)}^d)] \}$$

where $X_{j(i)}^s$ is the supply of exports of the j th good in country i .

and where $\alpha_{k(i)}$ is the own-price elasticity of export supply of good k in country i . Equation (2) states that export supply is a positive function of the world price of good k and the elasticity of export supply, and a negative function of the price of intermediate goods used to produce good k and the U.S. dollar exchange rate for the currency of country i . Analogously as in the specification of import demand above, equation (2) also states that export supply is a positive function of the (imputed) domestic price of value-added in each sector.

World Market Equilibrium

As mentioned at the outset of this section, all countries in the model are assumed to be "price-takers" in international markets. Thus, the world price of good k expressed in U.S. dollars, P_k^* , is largely determined independently of the behaviour of consumers and producers in any single country, or any small group of countries. Specifically, each world price P_k^* is determined by the world market-clearing condition:

$$(3) \quad S_j M_{k(i)}^d = S_j X_{k(i)}^s.$$

That each country i may simultaneously import and export goods in the same traded goods category is assumed to reflect problems of aggregation or the influence of transportation costs for like goods imported and exported from widely separated customs ports in the same country, rather than a departure from the model's underlying assumption of trade in homogeneous (i.e., undifferentiated) goods.²⁶⁵

International Payments Equilibrium

Net earnings from trade in services and long-term international resource flows to finance trade imbalances are exogenous in the model. Thus, the condition for balance-of-payments equilibrium for each country i is given by

$$(4) \quad S_j (P_k^* X_{k(i)}^s - P_k^* M_{k(i)}^d) + K_{(i)}^* = 0$$

where $K_{(i)}^*$ is the sum of net services exports and net financial inflows from abroad, denominated in U.S. dollars. (If country i is in trade surplus, then $K_{(i)}^*$ is the sum of net services imports and net financial outflows to finance trade imbalances in other countries.)

²⁶⁵ The case of U.S. petroleum exported from Alaska to Japan, while Eastern U.S. ports import petroleum from the Middle East, is a prime example. A popular alternative approach to accounting for "two-way trade" in world trade models is to incorporate the assumption of differentiated demands for similar products produced in different countries.

The balance-of-payments condition in equation (4) is essential for "closure" of the model. With other equations in the model, the balance-of-payments condition also serves to determine the real exchange rate of each country.

XIII.C APPENDIX 3: REPRESENTING A CUSTOMS UNION & FTA

Representing a customs union or FTA in the trade simulation model requires special consideration of price determination, trade creation, trade diversion, and most importantly changes in economic welfare.

Price Determination

In the basic model, the international price of good k expressed in U.S. dollars, P_k^* , is determined largely independently of the behaviour of consumers and producers in any single country or any small group of countries. Under a customs union or FTA, however, trade of member countries with non-member countries might be largely diverted, and an independent intra-block export price for good k , P_k^{xr} (denominated in U.S. dollars), might be established so long as the intra-block export price falls within acceptable bounds to producers and consumers who will continue to have recourse to markets for traded goods outside the customs union or FTA.

Two bounds on intra-block prices, both contingent upon the comparative advantage of the new trading block, must be highlighted:

Lower price bound: If good k lies within the comparative advantage of member countries (i.e., the trading block is expected to remain a net exporter of good k to the world), then P_k^{xr} cannot fall below the international price P_k^* .

Upper price bound: If good k lies outside of the comparative advantage of member countries (i.e., the trading block is expected to remain a net importer of good k from the world), then P_k^{xr} may lie above P_k^* by a finite premium (specified below).

To enforce these two bounds on intra-block prices, the trade simulation model sets intra-block prices P_k^{xr} based on considerations for the new trading block's comparative advantage and external tariffs. On the one hand, if member countries as a block are net exporters of the good to the world, as for example would certainly likely be the case for petroleum and other mineral products in any GCC-based trading block, the intra-block price of exports is set equal to the international price of the traded good. In this instance, the customs union or FTA succeeds in lowering the price of imports to consumers in the preferential trading area if member countries impose a tariff on imports of the good. On the other hand, if member countries as a block are net importers of the good from the world, then the intra-block price of exports P_k^{xr} is set equal to the international price multiplied by one plus a premium t_k^r equal to highest external MFN tariff level of the block member whose import demand just "clears" the block's combined exports of the product. Notably, in the case of a customs union the premium will be equal to common external tariff for the product. Also, in the case of either a customs union or FTA, the preferential trading arrangement will succeed in lowering import prices faced by consumers only in those member countries for which the premium is lower than their initial MFN tariff.²⁶⁶

²⁶⁶ The regional premium in "non-competitive" sectors is approximated using a downward-sloping linear relationship between the external tariff levels and total import demand of member countries for each product vis-à-vis the total export supply of member countries for each product. The parameters of the linear relationship between external tariff levels and total import demand are estimated by ordinary least squares regression after first ranking member tariff levels from highest to lowest and calculating the cumulative block import demand at each tariff "step."

In the trade simulation model, each country's balance of payments is valued at border prices, in U.S. dollars. Under the GCC customs union and EU-GCC FTA, all exports of member countries are valued at the intra-block export price P_k^{xr} . All imports of member countries, on the other hand, are valued using a block-wide price of imports P_k^{mr} formed by the international price P_k^* and the intra-block export price P_k^{xr} for the given good. The block-wide price of imports of good k , P_k^{mr} , is given by:

$$(1) \quad P_k^{mr} = P_k^* (1-w_j) P_k^{xr} w_j$$

where

$$P_k^{xr} = (1 + t_k^r) P_k^*,$$

and where w_j is the block-wide ratio of intra-regional imports of good k to total imports of good k by member countries. The import price index in equation (5) reflects the fact that under the customs union, imports of many goods will continue to be supplied at the margin by non-member countries.²⁶⁷

In summary, the foregoing intra-block price relationships under a GCC customs union or EU-GCC FTA posit (1) lower consumer prices and unchanged border prices for internationally competitive goods produced by block exporters, and (2) unchanged consumer prices but higher border prices for non-internationally competitive goods produced by block exporters. The higher border prices for non-internationally competitive goods include (per unit) forgone tariff revenues of importing member countries captured by non-competitive exporters in partner member countries. Also in the latter case, the trade simulation model assumes that, while member countries continue to import from non-member countries, member countries divert the entire volume of their exports of non-competitive goods to partner member countries in response to the higher intra-block prices for their exports occasioned by the customs union, thereby maximizing their export revenues.²⁶⁸

Trade Creation, Trade Diversion, and Economic Welfare

The trade simulation model requires additional equations to quantify trade creation, trade diversion, and changes in economic welfare in member countries of the customs union. These equations are solved in a recursive manner, after the basic model is solved for equilibrium levels of trade, prices, and exchange rates.

²⁶⁷ That the U.S. dollar price of imports for balance of payments valuation is uniform across members of the preferential trading arrangement is an *ad hoc* assumption but predicated partly on the assumption that some form of block-wide arbitrage prevails, notwithstanding rules of origin or other possible restrictions against such arbitrage under the preferential trading arrangement.

²⁶⁸ This is a particularly strong assumption that follows from the model's assumption that similar traded goods are perfect substitutes for one another. In other applied international trade models that assume similar traded goods are imperfect substitutes for one another (following the so-called Armington assumption), trade diversion is likely to be less pronounced.

Trade Creation

Trade creation ($TC_{k(j)}$) of good k for an individual member country j occurs when the customs union or FTA causes the domestic price of imports of good k in country j , $P_{k(j)}^m$, to fall and imports of the good, $M_{k(j)}^d$, to rise. Thus, trade creation in the model is computed simply as the change in imports:

$$(3) \quad TC_{k(j)} = \Delta M_{k(j)}^d$$

where Δ denotes change-in-variable between the base case (no preferential trading arrangement) and the preferential trading arrangement case.

Trade Diversion

On a block-wide basis, trade diversion (TD_k) of good k is equal to the decrease in demand by member countries for imports of good k from non-member countries. In the model, block-wide trade diversion is computed simply as the increase in supply of exports of good k by member countries (j), $X_{k(j)}^s$, in response to higher intra-block prices for exports of non-competitive goods ($k=nc$) produced by the trade block:

$$(2) \quad TD_{k=nc} = S_j [\Delta X_{k(j)}^s] .$$

Trade diversion for individual members of the customs union or FTA in the trade simulation model is calculated on an *ad hoc* basis, because the model does not explicitly determine changes in bilateral trade. Specifically, block-wide trade diversion for good k is apportioned to the member countries according to the share of each member country in total block imports of good k under the customs union or FTA.

Economic Welfare

The impact of a customs union on economic welfare is divided into three components: changes in consumer surplus, changes in producer surplus, and forgone import tariff revenues.²⁶⁹ Consumer surplus refers to the net benefit that consumers derive from purchases of a good at market prices at less than their marginal benefit from the good (i.e., the Harberger triangle formed by the area beneath the demand curve and above the market price, less reduced tariff revenues captured by domestic consumers). Producer surplus refers to earnings producers enjoy at market prices above their marginal variable costs (i.e., the Harberger triangle formed by the area above the marginal cost curve and below the market price). Finally, forgone tariff revenues are reduced tariff

²⁶⁹ On the fundamentals of consumer and producer surplus, see Harberger (1954, 1971). On their application in partial equilibrium trade models, see for instance Francois and Hall (1997).

revenues captured by member country exporters under the customs union or FTA arising from their margins of preference under the preferential trading arrangement.

On a combined basis, changes in consumer surplus and producer surplus (less forgone tariff revenues) equals the change in national economic welfare. The change in consumer surplus corresponds to the change in national welfare, occasioned mainly by trade creation. The change in producer surplus corresponds to the change in national welfare occasioned mainly by trade diversion, and forgone tariff revenues correspond to the change in national welfare owing to forgone tariff revenues on duty-free imports that would otherwise have been captured by government and redistributed to domestic consumers in one form or another.²⁷⁰

²⁷⁰ Note that forgone tariff revenues are captured by exporters of non-competitive goods in preferential trading arrangement member countries as part of their producer surplus.