

# NATIONAL AGRICULTURAL POLICY REPORT LEBANON – FINAL

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**Market and Trade Policies for Mediterranean Agriculture (MEDFROL):  
The case of fruit/vegetable and olive oil - SIXTH FRAMEWORK PROGRAMME  
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## **LIST OF ACRONYMS**

CDR = Council for Development and Reconstruction  
ESA = Ecole Supérieure des Affaires  
EU = European Union  
FAO = Food and Agriculture Organization  
GAFTA = Greater Arab Free Trade Area  
GATT = General Agreement on Tariffs and Trade  
GDP = Gross Domestic Product  
GTZ = Gesellschaft Deutsche für Technische Zusammenarbeit  
IDAL = Investment Development Authority of Lebanon  
IDB = Islamic Development Bank  
IFAD = International Fund for Agricultural Development  
IMF = International Monetary Fund  
INSEE = Institut National de la Statistique et des Études Économiques  
IPM = Integrated Pest Management  
LARI = Lebanese Agricultural Research Institute  
LARS = Lebanese Agricultural Research Strategy  
LL = Lebanese Lira (1 US\$ = 1505 LL)  
MAcMap = Market Access Map  
MCHE = Ministry of Culture and Higher Education  
MET = Ministry of Economy and Trade  
MHER = Ministry of Hydraulic and Electrical Resources  
MOA = Minister of Agriculture  
NAP = National Action Program  
NARS = National Agricultural Research System  
NCMS = National Center for Marine Sciences  
NGO = Non-Governmental Organizations  
NRWA = National Water Resources Authority  
ODS = Ozone Depleting Substances  
OECD = Organization for Economic Co-operation and Development  
PPP = Purchasing Power Parities  
PSE = Producer Support Estimates  
SME = Small and Medium Enterprises  
TRAINS = Trade Analysis and Information System  
UN = United Nations  
UNCCD = United Nations Convention to Combat Desertification  
UNDP = United Nations Development Program  
UNIDO = United Nations Industrial Development Organization  
VAT = Value Added Tax  
WTO = World Trade Organization

# 1. GENERAL SETTING

## 1.1 – Macroeconomy

The 1975-1991 civil war seriously damaged Lebanon's economic infrastructure, cut national output by half and all but ended Lebanon's position as Middle East enter port and banking hub. The period of conflict witnessed a significant reduction of government authority, large losses of human lives and human capital, substantial physical and infrastructure damage and a considerable emigration of skilled labor from the country.

The Taif Agreement was signed in 1989 and offered an honorable, reasonable and apparently workable solution. Peace enabled the central government to restore control in Beirut, begin collecting taxes and regain access to key port and government facilities. A financially sound banking system and resilient small- and medium-scale manufacturers helped economic recovery. Family remittances, banking services, manufactured and farm exports and international aid provided the main sources of foreign exchange. Lebanon's economy has made impressive gains since then, and Prime Minister R. Hariri (recently assassinated) launched his US\$ 18 billion Horizon 2000 reconstruction program in 1993. Real GDP grew 8% in 1994 and 7% in 1995 before Israel's Operation Grapes of Wrath stunted economic activity. During 1992 to 1997, annual inflation fell from more than 170% per annum to a mere 9%, and foreign exchange reserves jumped to more than US\$ 4 billion. Burgeoning capital inflows have generated foreign payments surpluses and the Lebanese pound has remained relatively stable. Progress has also been made in rebuilding Lebanon's war-torn physical infrastructure.

In 2002, services still accounted for the bulk of Lebanon's economy (60-70%) whereas the industry sector was around 18%. One source of confusion with Lebanon's macroeconomic picture is the simple fact that no official comprehensive GDP calculations have been made since 1977 (i.e. the advent of the devastating civil war). This was partially remedied by the calculation of these figures by a relevant branch of the French Census Bureau Institut National de la Statistique et des Études Économiques (INSEE) for 1997 to global standards and further work is now in progress to complement this for the period of 1998-2002. However, extrapolating from these rather limited data to projections for the following years is a matter to be treated with caution. Encouraging though is the trend identified with real GDP growth rates for the Lebanese economy, whereby a decline of -0.5% in 2000 quickly reverted to solid growth of 2% in 2001 and 2002, 3% in 2003 and a surprising 5% increase in 2004. Furthermore, unemployment at 18% in 1997, decreased to 8.6% by the end of 2004. The Lebanese work force tops 1.5 million but in addition, in 2001, there were an estimate of one million foreign workers (World Factbook).

The Lebanese economy has maintained its moderate but positive growth performance during the first quarter of 2004, with real GDP growth slightly above 2%. The sectors in the economy driving this growth are exports, tourism, industry, trade and as a sign of improved consumer condition; imports. Continued capital inflows have resulted in a cumulative annual surplus of US\$ 3.4 billion. However, further gains and improvement are seriously hampered by the erratic local political conditions, the continuing regional uncertainties, the fiscal consolidation lags and the rigidity in structural and administrative reforms at large. The post-war boom was followed by a slowdown, then a recession and most recently a modest recovery. The ongoing turmoil in the world's economic scene with record highs in the price of oil is not making matters easier for the Lebanese economy.

Both imports and exports have increased significantly reflecting an increasing domestic demand and fruitful market diversification efforts by exporters. The rise in imports (14.5%) within the context of a more important rise in exports (34.6%) resulted in an improvement in the export-to-import ratio (from 21.2% during the first quarter of 2003 to 24.9% over the corresponding period in 2004, a ten-year record high). The EU remained the main source of Lebanese imports with an aggregate share of 45.2%. Exports are mainly to the Arab countries.

## **1.2 – Place of Agriculture in the National Economy**

Approximately, one third of the Republic is arable. The most fertile areas are located along the coastal strip and in the Bekaa Valley. The diversity of the Republic's topography and climate enables cultivation of a wide variety of vegetables, fruits, industrial crops and cereals. The first comprehensive National Accounts for GDP, prepared in 1997, and detailed above, showed Lebanon's agricultural picture and how it features in its economy. Approximately 70% of domestic and external demand in 1997 that was about 35,190 billion Lebanese Pounds (LL,) pertains to the domestic consumption of households. The domestic and external demand was 31.6% covered by imports accounting to 46% of the GDP. Gross fixed Capital Formation was estimated at LL 7.1 billion, of which LL 142 billion is generated by the agricultural sector (Appendix Table 1 and Appendix Figure 1).

In 2002, agriculture contribution to the country's GDP was 11.7%. In 2003 this increased to 12.2% and in 2004 it surpassed the 13% mark. Growth rates of the agricultural sector are equally impressive (1.7% in the period of 1993-2001), plummeting to 1.0% in 2002 and then shooting upwards to 2.5% in 2003. In 2004, the annual growth rate became 3.0% thus tripling in only two years. Activity in the sector (rationalization of activities such as specific cultivations, breaking into new export markets with a better quality and better priced product vis a vis regional competitors) signifies this not as a blink but as mainstay of the Lebanese economy. The main agricultural products are citrus, grapes, tomatoes, apples, vegetables, potatoes, olives, tobacco, sheep and goats.

The agricultural value added estimated at LL 1,513 billion breaks down into vegetable production (LL 1,233 billion) and animal production (LL 280 billion). Crop production accounts for around 71% of the total agricultural production. A low 29% of this 71% is comprised of vegetables. In quantities, vegetables production was at 1,388,000 tons. Since 1997, the value of agricultural production has decreased by 11%. This is mainly due to the decrease in crop production by 16%, despite the considerable increase in the cultivated area of cereals, a subsidized crop. The cultivated areas of all crops, except onions and cereals, have decreased since 1997. On the other hand there is a significant increase in the value of animal production (+7% since 1997) due to the good standing of the poultry sector. Specifically in 1997, agriculture was 6.3% of the GDP. In terms of agricultural trade Lebanon is going through its own upheavals due to its membership in GAFTA (Greater Arab Free Trade Area) in 1997 as well as its Association Agreement with the EU in early 2002. Thus, one can argue that agricultural trade at least in Lebanon is on a one way road to complete liberalization with all the ensuing restructuring's costs and benefits. As far as GAFTA is concerned, the agreed upon free trade zone is effective as of January 1<sup>st</sup>, 2005, free trade with Syria in all produce with no tariffs is already a reality since October 1<sup>st</sup> 2004 and with the EU from 2008.

Food consumption data are still lacking in Lebanon, a net importer in food products. The gap between domestic food production and consumption requirements is covered mainly by imports. Fruits, vegetables and poultry production exceed the local market consumption and could contribute substantially to increasing exports, a national priority for mending persistent deficits. According to the statistics of the Higher Customs Council, total agro-food exports amounted to US\$ 235 million in 2004 vs. US\$ 175 million in the previous year. The breakdown of the clients for agricultural exports shows that the new agreements detailed above will create substantial export opportunities for Lebanese growers particularly with the EU.

The World Bank's tables show that in 2003 Lebanon's urban population standing at no less than 87%, thus allowing for 13% to permanently settled in the countryside and engaged full time with all forms of agricultural and farming activities. Even though the overall unemployment rate in the country is at 8.6%, it is only 3.5% in the countryside.

Adding to the already serious problem of chronic shortage of water of the region, Lebanon has the added political problem of the Syrian agreements that were signed. The diversion stipulated in an imposed bilateral treaty for Syrian use over three quarters of the water of the Asi River has much benefited Syrian agriculture and seriously harmed Lebanon's beleaguered farms (The Middle East Forum).

### **1.3 – National Economy and the World Economy**

Appendix Table 1 and Appendix Figure 1 show the main indicators of the Lebanese economy. According to data available, the EU is Lebanon's main trade partner. The relationship between Lebanon and the EU is increasingly gaining weight in the orientation and structure of the economy. The Association Agreement (from the side of the EU) is part of an overall European strategy for the Mediterranean area. This strategy aims to create a Euro-Mediterranean partnership in economic development, security matters and social and cultural affairs. The EU realizes that most of the political and security problems it suffers from can be solved only through cooperation with southern Mediterranean countries. These problems include the threat of instability in Europe's southern flank, the loss of influence to the US especially in the Middle East, the burden of illegal immigration and drug and arms trafficking (EUROPA). Several states have already signed an Association Agreement with the EU. All the Agreements seek to establish a free trade area between the EU and the individual countries by 2010. But the free trade area is neither free nor does it cover all EU trade. It is meant to achieve reciprocal free trade between the EU and Mediterranean countries in most manufactured goods, grant preferential and reciprocal access for agricultural products, establish conditions for gradual liberalization of trade in services and capital, and encourage the economic integration of Mediterranean countries (Hoekman and Djankov, 1995).

In terms of trade in the period 1980 to 2001 EU exports grew on average by 4.6% and EU imports by 9.3% per year. Lebanon ranks 43rd in the EU exports and 112th in EU imports, with a balance of trade deficit of 3 billion Euros for 2004. The EU remains Lebanon's most important supplier with 56% of total imports in 2004. Within the EU, Italy is the leading source of imports with a share of 9.72%, followed by Germany (8.55%) and France (8.43%). Concerning exports in 2004, main exporting items were transport material, agricultural products, machinery, chemical products and energy. Almost one fifth of Lebanese exports (19.3%) are destined to the EU. On the other hand, Lebanon's trade with

the world in 2003 amounted to 7.7 billion Euros (1 billion Euros in exports and 6.7 billion Euros in imports) with a resulting trade deficit of 5.7 billion Euros. The EU is Lebanon's main trading partner with 51.1% of Lebanon's foreign trade. Syria follows with 5.1%, the USA with 4.9%, China with 4.6%, and Saudi Arabia with 3.8%, while Mediterranean partners account for just 8.2% of Lebanon's trade (EUROPA).

Beyond the obvious long term benefits of the Association Agreement with the EU and the GAFTA trading bloc unraveling Lebanon has bilateral trade and economic agreements with more than 35 countries such as: Australia, Belarus, Chile, Egypt, Indonesia, Iran, Jordan, Kuwait, Morocco, Pakistan, Syria and others. The trading relationship with Syria is deeper than that with Jordan due to the long presence of Syria in Lebanon and the trade that has developed over the years. It is important to note that bilateral agreements between Lebanon and other countries in the region allowed various trading benefits to these countries that have not finalized any Association Agreement with the EU. Furthermore, this allowed them to indirectly enjoy the benefits of such an arrangement thus posing the issue of the possible futility of the EU having different agreements with such countries in the region because of their own trading links with Lebanon (Executive Magazine, 2005). Association with the EU has benefits for Lebanon, but also has its costs. One study by Haddad, estimates that losses will top US\$ 840 million annually and cost 50,000 jobs and shall inflict considerable suffering until the needed restructuring of the economy takes place to absorb these workers which by itself is a slow process. Thus, the main hope of a cushion against this are increased exports through the relevant Agreement that will take care of this (Haddad, 1996).

Despite the fact that Lebanon was one of the founding members of the General Agreement on Tariffs and Trade (GATT) in 1945 and has been an observer in WTO since the 30<sup>th</sup> of January, 1999, it is still in the process of accession to WTO. The negotiations on Lebanon's accession to the WTO commenced in 2002. A number of areas where Lebanon will need to bring its legislation into WTO compliance have been identified. Areas of concern included the lack of conformity with WTO requirements on sanitary and phytosanitary measures, technical barriers to trade, import licensing and intellectual property. Lebanon has submitted its initial offer in December 2003. Members of the WTO will negotiate the terms of Lebanon's accession to the organisation. In an effort to facilitate its accession to the WTO the EU is assisting Lebanon in its preparation for WTO accession (Australian Department of Foreign Affairs and Trade).



## 2. AGRICULTURAL AND FOOD POLICIES

### 2.1 – General Setting

*Objectives of agricultural food policy:* Lebanese agriculture is being overhauled through the various agreements Lebanon has entered into with organizations or states (i.e. EU, FAO etc). Thus, the Ministry of Agriculture is carrying out a revision of all agricultural policies and strategies. The strategy of doing so was actually the outcome of the work done by FAO, the EU and by the French cooperation protocol. The French Government seeing the fundamental difficulties that the Lebanese Government were encountering after the Taif Agreement, generously offered technical assistance in various matters. All were included in a comprehensive agreement known as the French Protocol. The FAO project was focused on a useful agricultural census, the EU project on agriculture policy and planning, and the French assistance on the organization of professional organizations in fruits, vegetables and vine production.

Surprisingly public expenditures on the agricultural sector have been low thus indicating the simple absence of the state in the actual incidence of agricultural policies. Consider that the Ministry of Agriculture's share of the total government budget in 2003 was less than 1%. However, there are other handouts by the Lebanese Government, like wheat production in the tune of US\$ 7.4 million by another ministry that is not included in the Ministry of Agriculture's budget. Similar examples are the Ministry of Finance's subsidizing of Tobacco and Tombac production with US\$ 37.4 million and from the Investment Development Authority of Lebanon (IDAL) allocating to the Export-Plus program that are not included in the Ministry of Agriculture's budget. The Council for Development and Reconstruction (CDR) has also awarded a total value of contracts of approximately US\$ 3 million in 2003 to the sector of agriculture.

The current food policy objectives of the Lebanese Government are focused on securing a steady stream of reasonably priced produce for the Lebanese consumer, giving assistance and support to the local producers in better organizing their production and marketing efforts of agricultural products and for the smoothest transition to the new state of agriculture as envisioned by the agreements entered into with the EU and GAFTA.

*Formulation of agricultural and food policy:* The government considered undertaking structural reforms that further liberalize the economy through modernizing existing laws, minimizing restrictions and simplifying procedures, which will promote private investment, improve public services, productivity and render the economy more competitive and promote the process of privatization. Concerning modernizing the laws and enhancing the legal framework several measures were taken the most relevant to agriculture being: (a) a new, WTO-compatible Customs Law was enacted in June 2001, which among others, simplifies procedures and introduces modern information technology for customs declarations and international standards for clearance, (b) imports of oil were liberalized in 2001 and this is somewhat of a happy respite from the upward spiraling cost of oil, and (c) licensing requirements for trade are being streamlined to allow exports and imports to flow without hindrance.

*Agricultural policy instruments being used:* Policy instruments in Lebanese agriculture have a distinct support flavor in its purest format; that of direct payments, price guarantees and subsidies. The problem is that there was no comprehensive approach to agriculture and

important matters like the organization of marketing activities in the form of associations and boards never really received the attention it deserved. The ongoing implementation of agreements in the sector with the EU and GAFTA is forcing such issues to the fore. As a result there is an increasing trend in the export of Lebanese agricultural goods.

Subsidized loans have long been a favorite instrument of the Government with which targets and promote the activities of farmers. Also, the forming of professional organizations focused on fresh fruits and vegetables as well as vine production has been consistently promoted through the French Cooperation Protocol. However, no substantial co-ops are yet in existence for the production and marketing of the above items. Another agricultural policy instrument of the Lebanese Government is the more traditional one of Supporting Subsidies of specific agricultural products. Wheat and tobacco are classic products that enjoy this preferential treatment for years in Lebanon. Fresh produce has not enjoyed such treatment, but olive oil support has been there. The Higher Commission for Relief, a body that is under the authority of the Council of Ministers, is entitled with special relief and development mission.

Furthermore, 'Kafalat', a loan-guarantee scheme by the government is another policy instrument that touches upon agriculture. Its aim is to increase the lending capacity to agricultural Small and Medium Enterprises of 40 employees or less (SME) from 100 to 300 LL million, as well as to stimulate investment in SME, which make up the biggest part of Lebanese firms. The fact that agricultural firms now have access to both getting subsidized as well as guaranteed loans from the Lebanese Government cannot be overlooked for what it is; a huge incentive to expand one's business but it does not of course remedy other structural problems, i.e. low prices for producers, huge profits for the marketers/middle men etc.

## **2.2 – Price and Income Support**

The Lebanese Government has been offering assistance to producers for quite a few years (at least since the early 70s) using an array of instruments ranging from outright handouts, to import restrictions, to credit assistance in a rather haphazard manner. The very composition of the population along ethnic lines made the process complex and inefficient thus allowing room for favoritism which was at times, rampant. The recent advent of entering the implementation phase of both the GAFTA as well as the Association Agreement with the EU, is forcing a restructuring of the above instruments and/or their outright dismantling.

*Grains/wheat-oilseeds and livestock products:* According to the current government policy, the state ensures that all wheat produce is purchased from local farmers at a subsidized rate. Both the public and private sectors import wheat at international market prices whereas refined sugar is imported only by the private sector. The General Directorate of Cereals and Sugar Beets gets the whole production from farmers as well as from imports and sells this wheat to the 11 operating mills in Lebanon. At the same time, mills import three quarters of the local market needs annually (approximately 300,000 tons) since local production and the Directorate's own imports are nowhere near the country's total needs. The mills first acquire a license from the Ministry of Economy and Trade (MET) provided that the Ministry enforces a ratio of 1 ton for every 3 tons of imported wheat to be bought from the Ministry.

The Ministry of Agriculture subsidizes inputs to livestock breeders in the form of reduced cost vaccinations and veterinary drugs. Each year the Ministry reviews the value of subsidy per ton according to the international prices of wheat. Moreover, the wheat seeds are to be provided by the Lebanese Agricultural Research Institute (LARI) which multiply, sterilize and sell it to the General Directorate of Cereals and Sugar beets at cost. According to this ministerial decision the production cost of one ton of wheat was less than LL 258,000. Moreover and as a result of removing the subsidy on sugar beets, the yield of wheat crop increased and the cost of land decreased, after it was contributing to more than 65% to the total cost of production. These after effects impacted on livestock breeders positively in a noticeable and immediate way offering thus the reasons behind the abolition of the subsidy on sugar beet in 2002.

Wheat was more extensively used in livestock farming and more intensively cultivated as a result of the removal of the sugar beet subsidy and abandonment of it as alternative feedstuff ingredient. Land that was sought to cultivate sugar beet for the sake of securing the relevant subsidy was thus not in demand anymore thus allowing its price (cost/rental) to decrease to its free market rate. As the international price of wheat decreased to about US\$ 133/ton (according to the Beirut Port Authorities), the MET set the price of subsidized wheat at 375,000 LL/ton for the production season of 2002-2003, against 400,000 LL/ton for the season 2000-2001. The total subsidy for the season 2000-2001 reached around US\$ 7.43 million. The total production reached 45,000 tons, while total imports of wheat and meslin amounted to 372,531 tons. A total of 1,411 farmers benefited from the support. Of these, about 68% has an area of five hectares. The above prices are quoted in both US\$ and LL due to the volatility in the rate of exchange of the local currency. Translating all into fixed dollar terms will greatly distort the conclusions, as the purchasing power of the currencies is not priced in PPP terms.

*Fruits:* There is no such thing as direct payments to fruit growers or income support measures accorded to them and there is nothing in the plans of the Government to do so. Reasons for this are the limited production locally, the limited potential of the sector to become an export earner for the country of any serious magnitude, continuing budgetary problems of the state and other sectors that are a bigger priority for the government. Overall, Lebanon is a net fruit importer. Also, fruit farmers are not organized in any effective way thus having a lobbying capacity with their interests vis a vis the Government. Apples have started only recently enjoying the benefits of price support due to their small volume. Apple production has been steadily increasing and is expected to figure prominently in support programs on a regular basis in the immediate future.

*Vegetables:* The situation here is pretty similar to the fruits sector but with important differences as well. Vegetable growers have available to them the opportunity to organize their trade towards exporting their produce offering high quality at overall reasonable prices. Their neighboring Jordan has managed to achieve such a position and is now a regular exporter to the EU known for its quality and price competitiveness. Lebanon mainly exports to neighboring Arab and Gulf countries. Exports of fresh fruits and vegetables to the Gulf countries (24% of the domestic production) in the last 5 years have increased by 21% in weight and decreased by 2% in value. A EU project focused on that, "The Lebanese Agricultural Development Project" was approved by the European Commission in August 2003 with a specific part focused on creating a reliable and functioning agricultural export information service to be made available to farmers. According to this, farmers will have access to all the information needed for exporting

their products: markets, sanitary requirements, administrative formalities, post-harvest requirements and marketing conditions. Information is available by product and specific requirements per importing country are provided. Export of agricultural products is facilitated and products are no longer rejected at the borders, a frequent incident of the past. Farmers are able to decide on their production based on economical and technical considerations (Vakakis International).

Fruits and vegetables have no direct price and income support, accorded to other products such as wheat, tobacco etc but have access, like other farmers of different crops, to subsidized loans, guarantees by the state on their borrowing capacity etc. With the advent of the EU Agreement as well as the GAFTA, it is very unlikely that growers of either fruits or vegetables will ever enjoy such direct price and/or income support by the Government.

*Olive oil:* The Higher Commission for Relief, a body that is under the authority of the Council of Ministers is entitled with special relief and development mission. In an effort to support producers of olive oil, the commission supports the marketing of their produce through buying the oil from farmers and cooperatives at guaranteed floor prices. In 2003, the figure attained a total of 5 billion LL with 1,500 tons of olive oil (at a price of 80,000 LL per tank which is equal to 15 kg). The olive oil is then sold at subsidized prices (half its price) to some institutions and distributed free of charge for social and humanitarian associations, public institutions and the Lebanese Army (a total of 300 tons).

### **2.3 – Agricultural Trade Policy Measures**

*General measures and institutional setting:* General measures basically mean the ones affecting and promoting exports since imports of food can now flow freely without substantive obstacles. As detailed below, exports are the focus of various international donor-funded projects in Lebanon with an aim of organizing and further promoting agricultural exports to Europe as exports to the Arab world and the Gulf countries are doing quite well.

*Measures affecting imports:* After being for decades a net exporter of agricultural products, Lebanon became a net importer of agricultural and processed food products where local production has stopped satisfying the domestic needs. The country is importing 80% of its food requirements, namely; basic commodities like animal products (meat, fish, dairy products) and crop products (wheat, vegetables and fruits in some seasons). As the country faced fifteen years of war, agriculture was severely affected through direct loss of structures, resources and assets. Whatever measures were in place protecting local agricultural production like tariffs, quotas, licensing procedures, etc, have now been mostly scrapped due to Lebanon participation and/or association in all the international treaties and organizations advocating free trade mentioned above like the EU, GAFTA etc.

*Measures affecting exports:* Lebanon mainly exports to neighboring Arab and Gulf countries. Exports of fruits and vegetables to the Gulf Countries (24% of the domestic production) in the last five years have increased by 21% in weight and decreased by 2% in value (Appendix Table 2 and 3). The lack of any farmers' groups and agricultural cooperatives of production and marketing of fresh produce creates a situation in the sector that allows added influence on the farmers by middlemen and exporters. Out of a total of 560 coops, none is really set up to busy itself with production or marketing the relevant produce but they are rather set up to benefit from the donations made by the government,

donors or non-profit organizations. The market of fruits and vegetables is truly controlled by middlemen and exporters that operate over a network of ten wholesale markets. It is at the level of the middlemen that the added value of production takes place in the absence of adequate marketing structures, resulting in a decrease in agricultural production and profitability of growers (Vakakis International).

The Export Plus Program that was started in August 2001 aims at supporting the Lebanese agricultural exports. This program was viewed as one program that can boost and revitalize the productive sectors in Lebanon. The Investment Development Authority of Lebanon (IDAL) prepared this program at an estimated 50 billion LL from its allocated budget. These direct payments were paid to farmers on the condition that the farmers abide to certain standards. This amount will depend on the cost of transporting the produce to its destined market and on the kind and date of agricultural production. Total export through IDAL amounted to 356,254 tons in the year 2003 of which potatoes rank as number one at 30% of total exports, followed by oranges at 25%, apples at 10% and grapes at 10%. The exports of table eggs amount to 174,627 boxes. Even though this program is criticized as not directly benefiting farmers but rather traders (Appendix Table 4). According to IDAL the program was marked by the following: (a) the overall activity for the first seven months of 2004 was marked by a 63% increase in the level of exports when compared to the corresponding period of 2003 with the total volume of exports of fresh fruits and vegetables reaching 212,811 tons, and despite the increase in export quantity marked by January, September, October, November and December of the year 2003, and (b) the overall activity for the second year shows a decline in volume but not in weight thus indicating a softening of the relevant prices in international markets as a result of the presence of competitors and efforts of Lebanese exporters to break into new EU markets.

The main financial tenet of the Export Plus program bind to certain standards functions just like a subsidy since it acts as a reduction on the cost of transport of the agricultural produce to the importer. The amount of this subsidy depends on the cost of transporting the produce to the destined market and on the kind and date of agricultural production. The benefits are, overall, positive but the breakdown of the import markets that benefit is revealing as the increase is skewed towards Saudi Arabia, the United Arab Emirates and Kuwait and not the EU that would have been more appealing to the Government. Terms of business and not so stringent quality standards with that area as well as cultural reasons have a lot to do with this incident. For this reason, the Government used the IDAL in redirecting the focus of its agricultural produce exporters to Europe through relevant seminars titled, 'Export to Europe'. These sessions cover quality control topics, namely, access to European markets; marketing strategies, crop management (organic farming) as well as packaging and pack house standards (Hamze and Abul Khoudoud, 2004).

#### **2.4 – Measures Affecting Input Use**

*Credit policy:* The Lebanese Government is using elaborate schemes of financial assistance as well as credit-assistance schemes relevant to the agricultural sector, which are of great importance in further organizing the sector. These policies of guaranteeing loans and subsidizing the cost of loans to the farmers plus other initiatives allow the farmers to overtake the major structural problems in the economy that do not allow the efficient use of savings in being channeled to basic sectors of the economy such as Agriculture.

'Kafalat' is a loan guarantee scheme and efforts made by the Government to increase lending capacity from 100 to 300 million LL to SME in agriculture among other sectors. SME constitute the overwhelming majority of Lebanese firms. The scheme is in addition to subsidized loans at 7% below 5 million LL and 5% between 5 and 15 million LL. Even though 'Kafalat' covers 30% plus of its total loan guarantees to agriculture and the Banque Du Liban (Central Bank) approves 4.1% of the total subsidized loans, the total share of agriculture-related subsidized interest loans is a poor third among other sectors at 12.6% with Industry a front runner at 61% and 'Other' (Tourism etc) at 26.4%. 'Kafalat' is popular among SME. However it has ways to go with agriculture as Industry and Tourism seem to enjoy a priority in accessing its resources. The majority of Lebanon's 200,000 farm holders much prefer 'Kafalat' to the other instrument available to them (i.e. loan subsidy), as it allows them to access credit much easier than otherwise. Enhancing their creditworthiness is a major benefit as 73% of the farmers have an area of less than one hectare. These specific farmers are naturally devoted to the production of fresh produce as opposed to grains for obvious reasons. Thus, in absolute numbers, 'Kafalat' is perhaps the single most important financial instrument for the majority of farmers in staying on with agriculture as a commercial activity in Lebanon.

*Input subsidies:* The Minister of Agriculture subsidizes inputs to farmers (pesticides, seeds, seedlings etc) on an annual basis. The total value of subsidized inputs for the year 2003 amounted to US\$ 3.2 million against US\$ 4.2 million in the previous year. The change reflected a MOA strategy in reducing the budget allocated to pesticides for the year 2003 in its efforts to disseminate IPM techniques and cutting down on pesticides applications and improving the quality produce.

Water, an important input in Lebanon's agriculture, has been in short supply but was never really subsidized due mostly to scarcity of funds and the preeminence of other priorities (Hamze and Abul Khoudoud, 2004).

*Tax (fiscal) policy:* Lebanon is faced with the challenge of rebuilding its revenue base and system and bringing public expenditure under control. High domestic interest rates needed to sustain monetary stability. Fundamental to fiscal policies and reform is the introduction of VAT in 2002. The Ministry of Finance's tax administration requires institutional modernization and computerization linking all revenues units (customs, large tax-payers, income tax, professional tax, VAT) and registration of all taxpayers. Steps are being taken to improve the monitoring of tax avoidance and collection and to introduce a general income tax. This will lead to a better spread of the tax burden and will give confidence that the system is fair and just. Any budget assistance that might be provided to Lebanon will be dependent on a sustainable macro-economic program supported by the IMF.

The Fiscal condition of Lebanon has been made worse due to the massive reconstruction program though present difficulties must be seen as an imperative investment in the future.

Table 1 shows the Public Debt performance of the country in the period of 1996-2001, which even though is not up to date, clearly shows the status of the economy. The situation prompted the World Bank's monitoring team of Lebanon to state its concerns in 2004, and these concerns are listed below. Sustaining a healthy macroeconomic environment is critical, which requires reducing the fiscal deficit. As of December 2003, the fiscal deficit to GDP stood at approximately 14% of GDP. While such a high deficit is not unusual during reconstruction phases, is simply not sustainable. Net public debt stood at

approximately 165% of GDP by end of 2003 and remains on an unsustainable path, which by all means calls for a strong fiscal adjustment. Several programs were launched and funded by the World Bank towards this goal as assistance to Lebanon. One such program is the ‘Revenue Enhancement and Fiscal Management Technical Assistance Project’, which was approved in August 26<sup>th</sup> 2003 (The World Bank Group). Furthermore, the fiscal deficit picture is similar to the above reality. Table 2 shows the fiscal deficit (including the budget deficit and the results of treasury operations) and the ratios of deficit to GDP and net public debt to GDP for the years 1996 to 2001.

**Table 1. Lebanon public debt**

	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>
	(billions of Lebanese pounds)					
Net Domestic Debt <sup>a</sup>	13,358	18,381	19,544	21,377	24,530	26,321
Public External Debt <sup>b,c</sup>	2,922	3,673	6,282	8,379	10,541	14,526
Net Public Debt	16,280	22,054	25,826	29,768	35,063	40,847

<sup>a</sup>Net domestic debt represents gross domestic debt less public sector deposits w/central bank & commercial banks.

<sup>b</sup>Amounts translated into Lebanese Pounds at end of period rates; include accrued interest,

<sup>c</sup>Public external debt figures in this Document differ from previously published figures due to continuing implementation of the Debt Management System.

Source: Ministry of Finance

**Table 2. Lebanon fiscal deficit**

	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>
GDP (at current market prices in billions of Lebanese pounds)	20,417	22,880	24,509	24,816	24,816	25,188
Total Deficit <sup>a</sup>	3,692	5,409	3,457	3,582	5,874	4,230
Deficit/GDP % <sup>a</sup>	18.08	23.64	14.11	14.45	23.66	16.70

(a) Excluding foreign financed CDR expenditure

Source: Ministry of Finance

## 2.5 – Infrastructure Policies

As a major regional enter port and financial center, Lebanon had a well-developed infrastructure prior to the conflict. The country’s ports (Beirut, Tripoli, Sidon and Junieh) and Beirut International Airport were especially productive assets of the economy operating under a free exchange system. Catering to the large number of residents, businesses and international visitors, the housing and telecommunications sectors had been built up to high standards. The development of the road network had not, however, kept pace with the growth of the economy. The years of conflict exacted a heavy toll on the infrastructure. Since 1992, significant progress has been made in restoring and upgrading the infrastructure: electricity is available on a 24-hour basis to most users, telecommunications systems have been undertaken, road networks are being upgraded and collection of solid waste has markedly improved. A note is needed here for the reconstruction of the country which even though has been underway for a decade now, it is

still progressing with important infrastructure works on which policies are quite important to be aware of. The CDR is a government agency entrusted with a key role in the process of reconstruction and economic recovery. Proposals for projects forming part of the reconstruction program are submitted for Parliamentary approval on a project-by-project basis. Approximately, 1,664 contracts with a total value of approximately US\$ 5.4 billion were awarded by the CDR for the period since reconstruction efforts started in 1992 to the end of 1999. In March 2000, the CDR prepared and submitted to the Government a five-year development program covering existing and proposed projects in an aggregate amount of approximately US\$6 billion.

The Government's strategy is to finance the reconstruction and development program principally through the use of external financing, preferably concessionary financing (in the form of grants and loans). Other sources of external financing include commercial loans with export credit guarantees and the issuance by the Government of Eurobonds and other international debt securities. As discussed elsewhere, the Government also seeks to partially finance the reconstruction program through participation by private sector companies. Major international institutions are also involved in assisting Lebanon in rebuilding its infrastructure like the World Bank Group active by July 2004 in no fewer than eleven ongoing projects. A partial listing includes: the Urban Transport Development Project, Community Development Project, Municipal Infrastructure Development Project, Power Sector Restoration, National Roads Project, etc.

*Research and development:* With specific reference to agriculture, the National Agricultural Research System (NARS) in Lebanon is almost as old as the country's independence in 1946. By NARS here we refer to, basically, three sets of institutions: the scientific institutions, which have agricultural research as their central mandate (Lebanese Agricultural Research Institute (LARI) and National Center for Marine Sciences (NCMS)). They account together for 65% of the potential research years (pRY) and 88% of the total financial resources of all the NARS, the four faculties of agriculture which are involved in agricultural research, account for 28% of the pRY and 11% of the total financial resources of the NARS, and a few other scientific institutions, which allocate some resources to agricultural research. Peculiarly enough, there is no body for coordinating the NARS institutions; however LARI is recognized as the national agricultural research leader. It is worth mentioning that it was responsible for the preparation in 1996 of the Lebanese Agricultural Research Strategy (LARS) adopted by the Government.

In conclusion, the NARS of Lebanon has its bright sides and its pitfalls. Over the past fifteen years, three new faculties of agriculture were established to add to the formerly existing institutions. The Ministry of Environment and the Ministry of Culture and Higher Education (MCHE) have added more awareness to agricultural and urban practices, which negatively contribute to natural balances in living organisms and to environmental hazards. Rebuilding infrastructure and manpower is a time-consuming process and the recurrent lack of qualified personnel is a substantive matter still to be adequately dealt with by the Government. There have been of course certain important accomplishments over the last few years and these are the driving forces behind the need to improve the situation even further. These are the successful induction of qualified and talented young researchers in the various NARS institutes, the heavy investment made in existing infrastructure, the much needed mapping out of a national agricultural strategy and the development of new thematic research institutes that could provide support to agricultural research at a higher and more sophisticated level as agriculture manages to go beyond the basics in Lebanon.



Good examples of this are, the National Center for Remote Sensing as well as the National Atomic Energy Center.

*Extension and education:* Lebanon's human resources have traditionally been the backbone of its economy. The Republic's human resources have been developed to levels comparable to, or higher than, those of lower middle-income countries. Prior to the conflict, Lebanon was endowed with a well-trained population and labor force with adequate health facilities. The conflict resulted in setbacks for the human resources of the Republic. A significant emigration of skilled labor took place with large numbers of professionals, traders, industrial workers and construction workers leaving the country. The educational system also suffered. Overall though, despite the tremendous setbacks, education has retained its high standards and Beirut is becoming again the educational center for the region. Nine major Universities enrolled last year more than 120,000 students many of them coming from thirty different countries. New University-level schools have been introduced as well. At the initiative of the Lebanese and French Governments and with the support of the Paris Chamber of Commerce and Industry, the Central Bank of Lebanon and various private sponsors, the 'Ecole Superieure des Affaires'(ESA) was established in Beirut in April 1996. The ESA offers a full- and part-time MBA program and through its Monetary and Financial Institute, aims to attract bank and finance executives who wish to develop their knowledge of modern financial and financing techniques.

The Government's emphasis on education is evidenced by the existence of three active ministries with responsibilities relating to educational matters. They are the Ministry of National Education, Youth and Sport, the Ministry of Vocational Technical Education and the Ministry of Culture and Higher Education.

*Quality and sanitary control:* A rehabilitation and development program for the water and wastewater sector, which it is estimated that will cost approximately US\$ 1 billion, is underway. The program started in May 1993. This program, which is in progress consists of the following components: (a) the rehabilitation of existing infrastructure, including wells, springs, reservoirs and transmission and distribution networks for water supply, main sewers and collectors for wastewater, (b) the development and extension of the water and wastewater infrastructure, including increasing the available water resources, extending the distribution and transmission networks and constructing sewer networks and wastewater treatment plants to protect water resources, groundwater and coastal areas, (c) the establishment of National Water Resources Authority (NRWA) and five regional water sanitation and irrigation companies with the provision of technical assistance to the Ministry of Hydraulic and Electrical Resources (MHER) and to the regional water companies and (d) the operation and maintenance of wastewater and storm water systems in the major Lebanese urban center.

Worthy of mention here is the World Bank's 'Ba'albeck Water and Wastewater Project'. Its main development objectives includes developing and strengthening capacity of the water and irrigation authorities (and thus, important to agriculture), improving population coverage and customer access to satisfactory water supply and wastewater services, involving the private sector in the operation and maintenance of water and wastewater facilities, and rationalizing the use of water by introducing water meters.

*Structural policies (land, land reform):* The Government considered undertaking structural reforms that further liberalize the economy through modernizing existing laws, minimizing restrictions and simplifying procedures which will promote private investment, improve public services and productivity and render the economy more competitive. Concerning modernizing the laws and enhancing the legal framework several measures were taken dealing with trade of agricultural produce, important inputs to agriculture (like oil), agent legislation abolishing monopolies and WTO-relevant legislation affecting the trade of agricultural produce. Such measures definitely touch on agriculture from many different angles. A more direct development with substantive impact on the structural form of agriculture in Lebanon is the measures on land reform. Moreover, preparations are also underway for further legislation to support the privatization of the water and wastewater sectors. This will have direct impact on agriculture and its competitiveness vis a vis its rivals in the region.

It is evident that the land question is central to the debate on food security and rural poverty eradication in the Near East and Middle East of which Lebanon is part. The other important related question is the availability and equitable use of water. But without access to land, access to other production inputs such as water, credit and improved technology, becomes meaningless. Land in Lebanon is a scarce means of production as well as a strong social symbol of belonging to a specific spatial and cultural identity – partly because most of the land area is highly arid and not well suited for intensive agriculture. Furthermore, the category of the landless agricultural workers and small farmers, that constitute much more than 50% of the farming population, holds under a quarter of the cultivated area. The natural growth of population within this category has put additional pressure on land, resulting frequently in the increased subdivision, over-use and degradation of land. Also, there are fewer prospects for assessing new land by these people given elevated prices, high rental values of land and other productive assets and low wages. In Lebanon land reform though embarked, still needs to deliver on promises. More resolute political will is needed by the state. The land market has been in process of complete liberalization, tenants' rents are negotiated in the market, co-operatives are rendered ineffective, national agricultural plants are privatized, and agro-industrial groups are encouraged to possess productive land as well as take advantage of a cheap, unorganized labor force. FAO's tables show that Lebanon has 300,000 acres of arable land at 30.8% of total arable area. This had grown at an average of 1.2% per annum in the period of 1990-97. The irrigated area is at 120,000 acres and the cultivated land area is at 250,000 hectares. With an agricultural population at 370,000 but only 200,000 being farm holders (12% of the total working population) and at 0.83 hectare per person as far as land ownership is concerned, it is apparent that land reform in Lebanon is in need of an even bigger overhaul in order to make production more cost-efficient, competitive and thus create enough reasons for farmers to stay with farming.

*Agricultural infrastructure:* Lebanon has been fortunate in having the greatest water flows through its river systems in the wider Middle East area compared to all other countries in the region. It has been unlucky though in the sense that international politics in which it always finds itself clogged does not allow full management of its water resources. For example, Syria with a thirty year military presence in the country, has diverted the flow of the Asi River into its own territory for the use of its own farmers and thus to the severe detriment of local growers in Lebanon. Israel, another invader in Lebanon has engaged in similar practices in the past. In the late 1970s and early 1980s, Lebanese officials reported that small tributaries of the Hasbani River were being diverted into Israel. Independent

water analysts stated that after the 1982 invasion, Israel engaged in a much bigger diversion of Lebanese waters by attaching stopcocks at a pumping station on the border. The stopcocks were designed to switch at least part of the flow to Israel via a specially constructed pipeline. Even though the tampering with Lebanon's water resources has not entirely stopped by Syria and Israel, the Lebanese Government pulled ahead of these incidents and set about to create a more rational system of using its water resources with the aid of international organizations such as, the World Bank, the EU, IFAD and others.

Several projects have been financed by various donors including the EU who has a major role in the development of agriculture in Lebanon. A directly relevant project to agricultural irrigation infrastructure is the Agriculture Infrastructure Development Project, supported by the World Bank and under the umbrella of the Ministry of Agriculture. The main objectives of the project are to develop and conserve land and water resources and strengthen the institutional and implementation capacity of the Ministry of Agriculture and the Green Plan. An important component of the project is to increase the institutional capacity of the Ministry of Agriculture; a national agricultural census was conducted in 1998, a management information system was created and the preparation of the agricultural strategy for the development of the sector (irrigation included) is under way.

The Irrigation Rehabilitation and Modernization Project has as main objectives to increase irrigated agricultural production and improve its quality and increase agricultural based incomes and employment in neglected areas where irrigation schemes are under rehabilitation. One major component of the project is to provide support to national public institutions involved in the irrigation, water management research, extension and quality control. Major outcomes of the project included the establishment of sound market-oriented extension system in the large irrigation schemes with the assistance of the American University of Beirut. Growing organic products and facilitating access to markets through the creation of the Healthy Basket project which consists of marketing the products directly to the consumers were among the main outcomes in this respect. The Agricultural Rehabilitation of South Lebanon project aims at providing extension services to farmers and rehabilitation of agricultural schools. Major outcome of the project are the creation of three operational agricultural service centers in the cazas of Marjeyoun, Hasbaya and Bint Jbeil in South Lebanon. The project established an agricultural laboratory in the Agricultural Technical School in Khiyam. In addition, an office for market information was created at the level of the Chamber of Commerce, Industry and Agriculture in the South.

*Promotion and distribution:* The Support to the Implementation of the Association Agreement project aims at supporting the Lebanese public administrations concerned by the Association Agreement and providing them with technical assistance, opportunities for exchange of experiences, training of staff etc. Small agricultural projects aiming at promoting agricultural exports to European markets will be carried out within this program. The Quality Project aims at improving the quality of the Lebanese industrial and agricultural products and their conformity with international and European norms and standards. The three major components of the project are: (a) the development of a national policy for quality with the adequate legislative and regulatory framework, (b) institutional and capacity building for the concerned organizations and (c) support to enterprises in terms of training for increasing the added-value of the products.

## 2.6 – Rural Development Policies

The task of rural development in Lebanon is an activity involving several ministries and agencies but the main agent for national planning and coordination is the CDR. In May 2002, CDR prepared a draft for a 'Rural Development Strategy and Policy State' attempting to create a comprehensive rural development program at a national level. Its emphasis is on: increasing the effectiveness of public expenditures; improving access to social and economic infrastructure; enhancing competitiveness of agriculture; providing a forum to enable policies, laws and regulations; improving the natural resource management; increasing the contribution of rural women in development; and adopting participatory approach for rural development.

It is a stated aim to benefit rural areas through their municipal councils by allowing more resources and a bigger say. As an end result of this approach, regional development will become more balanced and will allow local government to associate itself with local communities in prioritizing and implementing their development policies for the rural areas. CDR will have overall responsibility for its execution and supervision. This devolution of central authority has the dual advantage of promoting the economic development of rural areas and at the same time achieving the development of local self-government thus aiming for a second incidental target of more efficient and effective government.

The rural development policy also includes the following three main projects.

(a) *The Post Conflict Socioeconomic Rehabilitation Program for Southern Lebanon*: It was launched by the CDR and UNDP in 2000. During the year 2002 the program targeted youth, agricultural cooperatives and municipalities. About twenty youth clubs were established in the formerly occupied regions of South Lebanon. Training workshops were held for forty-five agricultural cooperatives of which twenty received further support to establish small-scale projects. Capacity building for nine municipalities was done to access the resources of the program and help them execute small-scale community development projects. Furthermore, the program was able to sign an agreement with the AGFUND to set the preparatory activities to the establishment of a credit scheme as a venue to stimulate post-conflict economic recovery.

(b) *The Community Development Project*: It was officially launched in January 2003. It is a World Bank loan of US\$ 20 million and government contribution of 5 million and in kind local community contribution. The objective of this project is to secure sustainable and effective means to improve living conditions and the economic status for the most deprived communities. It will be implemented through a number of carefully selected NGO's or through partnership agreements to design and execute the program at national level.

(c) *The Economic and Social Fund for Development Project*: It started implemented in 2003 and extends for four years. It was established on the basis of a funding agreement signed between Lebanon and the European Union. The funding agreement allocated 25 million Euros with an additional 6 million Euros for the establishment of the Economic and Social Fund for Development as an autonomous agency. The project succeeded in achieving a quantitative determination of the higher and lower poverty lines of the

Lebanese District. It was prepared for the launching of pilot schemes for job creation and community development.

## **2.7 – Agro-Environmental Measures**

Lebanon agriculture offers environmental opportunities for green space, landscaped terraces and fresh and healthy produce. At the same time, improper agricultural practices lead to soil erosion and impoverishment, depletion of underground water resources, water pollution and health impacts from inappropriate use of pesticides and fertilizers and environmental pollution from haphazard dumping of slaughter waste and animal farms. The Lebanese Government policies appear targeted to increasing the availability of irrigation water and controlling the use of pesticides with, however, little investment or incentives for water- and soil-conserving irrigation techniques. Non-governmental organizations (NGOs) alone and/or in partnership with governmental related institutions, like the Extension Departments of the MOA, are gradually taking advantage of organic farming and high value-added agricultural produce.

A serious environmental problem for almost all Middle East countries in the region of Lebanon is the constant encroachment of arable land by the onward extension of the desert. Lebanon is no exception unfortunately. Lebanon launched its National Action Program (NAP) to combating desertification in July 2003. The NAP, which was prepared with the support of UNDP and Gesellschaft Deutsche fur Technische Zusammenarbeit (GTZ), emphasized a line of actions that are considered as commitments of the government towards the implementation of the UN Convention to Combating Desertification (UNCCD). These included: water management, forest management, sustainable agriculture, soil conservation, rangeland management, protected areas, socio-economic conditions, land use planning and institutional framework and legislations. Also, a map of the desertification-prone area was produced. The UNDP was mainly tackling resource mobilization strategy for the implementation of the NAP, awareness raising and pilot projects conducting in the areas suffering from desertification.

The Methyl Bromide in Agricultural Production Phase Out project states that Lebanon has until year 2015 to completely phase out methyl bromide. Hence a series of projects were initiated to replace methyl bromide with economically and environmentally feasible alternatives. One project is funded by the Multilateral Fund of the Montreal Protocol and managed by UNDP and others by UNIDO. The UNIDO project is a five-year project that responds to the ratification by Lebanon of the Montreal Protocol, which set schedules to phase out Ozone Depleting Substances (ODS) in industrialized and developing countries. It aims at the progressive phase out of methyl bromide from the strawberry sector in Lebanon and its replacement by soil steaming to reach a complete phase out by 2007 (Hamze and Abul Khoudoud, 2004).

## **2.8 – Measures Affecting Consumers**

In an economy as volatile as the Lebanese, to secure consumers' interests it is necessary to ensure that the cost of living remains relatively stable. The gap between incomes and prices increased dramatically during the year of the war with prices increasing by as much as four times as incomes. After 1992, the government managed to stabilize the Lebanese pound and even improved its exchange rate vis-à-vis the dollar and reducing the annual average inflation rate to around 12% between 1992 and 1994. The consolidation of the

Lebanese pound had, unfortunately, limited social impact especially as it did not lead to a fall in basic and consumer prices. The government did take eventually, some limited steps to control prices, though this provoked the displeasure of some ministers who considered it violated free market principles. These measures included the establishment of popular markets and intervention with bakery owners to prevent them from raising bread prices. However, the measures did not prevent prices from remaining at levels going back to the period of hyperinflation, before 1993.

Safety nets play a significant role in reducing the spread of poverty and dealing with its effects. In this regard, the government seems to have renounced building up a welfare state. Instead, it has preferred using immediate, ad hoc and temporary financial transfers or transfers in kind, to establishing mechanisms entrusted with an empowering or development role. The number of enterprises registered with the National Fund for Social Security has decreased from 32,000 in 1974 to 26,000 in 1992 (Haddad, 1996). For the same period, the number of registered workers has remained unchanged, though the size of the labor force almost doubled. As for family and other allowances, their value fell, in real terms, by 50% between 1984 and 1992 (Ministry of Social Affairs).

End-of-service compensation declined on average from US\$ 17,000 to US\$ 4,700. Between 1988 and 1992, basic medical services increased twice as much as the price index. At the same time, the actual capacity of government hospitals dropped to less than 20% of their nominal capacity (Haddad, 1996). The situation did not change much in later years. It is natural then that consumers were left in disarray in post-war Lebanon. However, the overall behavior of Governments in Lebanon after the war showed a rather haphazard way of offering respite to consumers at the micro level and focused rather on the macro side of things (The Middle East Forum).

## **2.9 – Social Measures**

In Lebanon, now, prevails significant poverty and income disparities as society is increasingly dichotomized between the very rich and the poor. According to the World Bank's crude Living Condition Index which measures the degree of satisfaction of basic needs, 32% of Lebanese households are at the low end of the index, 42% at the intermediate level while 26% reach the high end of the index. UN calculates that 35% of the population lack basic needs, that is, live below a poverty line of minimum living standards. There are up to an estimated one million poor in Lebanon today, of whom 75% are urbanized (Global IDP Project). Economic growth and reconstruction have favored some regions notably parts of the Beirut region, to the detriment of large parts of the country. It has also favored services sectors over, typically, labor-intensive employing activities in agriculture and industry. Illiteracy reaches 15% to 20% in the disadvantaged areas of the Beka'a valley, South Lebanon and the North and is acute amongst women. Unemployment, officially given as 8%, is at least double this figure according to studies and it is highest amongst the young.

Tight monetary policy, a narrow tax base and economic recession have led to declining real incomes of many salary earners. The risk of unbalanced growth is social tension and the exploitation of poverty by political organizations, which have proven particularly effective in supplying much-needed services to the margins of society. Without adequate social intervention, the problem of poverty, particularly in cities, may prove destabilizing. Public welfare programs and social safety nets are largely non-existent in Lebanon, are

narrowly based and often subject to mismanagement. Remittances from expatriates go some way to alleviating the situation amongst underprivileged communities (Appendix Table 5). There is no national health care policy. The system favors equipment, curative and tertiary services driven by the supply of an abundant private sector, rather than primary health care and prevention. There is a need to develop national poverty reduction programs, to establish a comprehensive social development policy and to tackle health care.

According to preliminary estimates, based on non-statistical field research, the size of a poor family is higher than the national average indicating that a large family is seen as a shield from the ravages of poverty. Unfortunately, there is hardly any policy in operation today that discourages this practice. Support measures to reduce the size of the family would tackle the self-perpetuating cycle of poverty among the poor.

Poverty places an additional burden on women and exacerbates discrimination against them. Their salaries are lower than their male counterpart who leads to chain of events to the detriment of women like, exhaustion owing to overload of work both within and outside the home. Moreover, poor women and young girls are discriminated against regarding access to health care and nutrition. Even though there currently exist food support programs for the poor, there is no focus on poor women and young girls and no such measures for allowing them preferential access to health care. Furthermore, the existing employment legislation dealing with women in the workplace does not provide the needed legal tenets to shield them against gender discrimination in the workplace.

Education in Lebanon is free for all with Universities being the occasional exception based on their status (i.e. private or public). However, the educational level of the poor, both men and women alike, is low, since few heads of poor families have received secondary or higher education – except for civil service employees – or adequate vocational training. As for the children of poor families, a high percentage of them are enrolled in schools; however, a correspondingly high percentage drops out after a period of time. This is caused by several factors, including the insufficient number of government schools in poor neighborhoods, and the low occupational and economic return of education and the constraints of higher education costs on family budgets.

Even if the above may seem to be too obvious they are no less important. Lurking in the background there are of course other less discernible adjustments that need to be effected in order to make social measures more effective either upon inception or reforming them. Actuarial imbalances in the social security system constitute another potential contingent liability for the government that could destabilize public finances over the medium term. It is important in this regard to assist the temptation to shift the cost of unfunded mandates and future liabilities to the state. In the reform of the pension system now under consideration, any expansion of benefits for pensioners should be fully financed by adjustments in contributions (International Monetary Fund).

## **2.10 – Budgetary Outlays Associated to Agricultural and Food Policies**

Lebanon's agricultural sector, fractured and dispersed over a large number of landholders barely viable on a commercial basis, is directly linked to the need for support by the state. The void here is not only one of financial repercussions but touches upon the very fact of sustained undernourishment referred to as the food deficit. Thus direct help from the

Lebanese state to support farmers' incomes is of little help in terms of improving their quality of life (i.e. food intake) as when poor rural families are helped to produce a greater variety of foods on their household plots, they will often sell these items rather than consume them because of their high market value. Lack of cash income renders its own attributes. Thus, their food security improves only when overall household income rises to a level that permits them to afford the other foods they need. The depth of hunger is measured by the average dietary energy deficit of undernourished people and not of the population as a whole- expressed in kilocalories per person per day. The higher the number is the greater the hunger. Table 1 shows the average dietary energy deficit for several countries (FAO). Lebanon has an average dietary energy deficit of 160 Kcal.

**Table 3. Average dietary energy deficit**

<u>Asia and Pacific</u>	<u>Kcal</u>	<u>Near East and North Africa</u>	<u>Kcal</u>
Bangladesh	340	Afghanistan	480
Korea DPR	340	Yemen	290
Mongolia	310	Iraq	210
		Morocco	210
		Algeria	190
		Egypt	190
		Iran	190
		Kuwait	180
		Jordan	170
		Turkey	170
		Lebanon	160

Source: FAO

The budgetary outlays that were engineered by the Lebanese Government were unfortunately not backed by a thorough analysis of cause and effect *ex ante*. Thus, the impact was limited past the short term. For example, no research went into the specifics of the group being earmarked for these outlays and thus no sustainable benefits took place within the economy through important linkages. For example, outlays from the budget went into satisfying mainly consumption needs of the growers who were struggling with borderline poverty conditions. A study presents evidence about country consumer food demand patterns that can be used to forecast future food supply and demand and to simulate the impact of various government policies, including budgetary outlays, on food demand (Seale et al., 2003). The emanating satisfaction of that demand is the desirable multiplier effect through the economy that will show that the overall result in the economy is bigger than the sum of the budgetary outlays. To avoid making the issue highly technical here in order to explain the deficiencies in the effectiveness of the Lebanese Government's budgetary outlays to the agricultural sector and growers, we should restate the issue here: Cross-sectoral food demand analysis can improve understanding of country wide food trends by quantifying the relationship between income levels and food demand, including specific types of food and their elasticities (vis a vis price and income changes).



The Lebanese Government has been providing price support to four main products among growers increasingly in the tune of almost US\$ 55 million in 2003 (Table 2). It is expected that this will reach US\$ 60 Million by the end of 2005.

**Table 4. Agricultural support by product (US\$ Million)**

	<u>Support Type</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
Wheat	Price Support	8.1	7.5	7.4
Tobacco & Tombac	Price Support	32.3	38.0	37.8
Olive Oil	Price Support	N/A	1.1	6.6
Apples	Price Support	N/A	N/A	3.3
<b>Total</b>		<b>40.4</b>	<b>46.6</b>	<b>55.1</b>

Source: Ministry of Agriculture

In essence price support refers to outright subsidies by the Lebanese Government or the farmers of the products above. Financial assistance though and thus budgetary outlays to agriculture in Lebanon takes many more shapes and forms. These are: research extension (values of contracts awarded through CDR for year 2001 and budget of LARI for years 2002 and 2003), training (funds allotted in the annual budget of the state towards the training and education of local farmers), market support (export plus program of IDAL), Input subsidies (total value of subsidized inputs through the MOA), subsidized interest loans (represents the sum of the subsidized interest loans and the subsidized interest), salaries and compensations and other (total subsidies for Wheat, Tobacco and Tombac, Olive Oil and apple) (CIHEAM).

### 3. ASSESSING RATES OF ASSISTANCE TO AGRICULTURE

In public discussion, words such as support, subsidy and aid to producers are often used interchangeably to describe the transfers provided to farmers or the agricultural sector as a whole, which result from government policies that raise farmers' revenues or reduce their costs. The OECD has been one international organization that has created a manual on the Producer Support Estimates (PSE), which shows the annual monetary transfers to farmers from policy measures that: maintain domestic prices of farm goods at levels higher than those at the country's border (market price support), and provide payments to farmers, based on criteria such as the quantity of a commodity produced, the amount of inputs used, the number of animals kept, the area farmed or the revenue or income received by farmers (budgetary payments).

The key point is that contrary to popular opinion, support not only comprises budgetary payments that appear in government accounts but also the price gap for farm goods between domestic and world markets as measured at a country's border. In fact, the latter constitutes the lion's share of support for some agricultural commodities in many countries (Organization for Economic Co-operation and Development). The PSE measures transfers from taxpayers and consumers that raise farm receipts. This transfer does not mean that farmers' incomes change by the same amount. In order to receive a transfer, farmers usually have to produce a commodity or service or use an input and thus, they incur extra costs. The transfer is greater than the farm income generated by the amount of these extra costs. The OECD study exhibits a technique with which to calculate the 'Transfer Efficiency' of a policy measure, which is the share of support that translates into extra farm income. In fact, one extra Lebanese Pound of market price support actually results in a rise in farm incomes of no more than 25% of that pound while the share for payments based on historical entitlements is about one-half. Only in the case of a transfer that does not require the farmer to incur any extra costs (such as a lump sum payment) is support translated entirely into extra farm income.

#### 3.1 – General Indicators

*Agricultural Trade Protection Indices:* These were derived from MAcMap and/or TRAINS. Measuring concisely the rate of protection accorded to Lebanese products by the various measures of the Government vs. imports of the MEDFROL goods is a difficult task due mainly to the lack of totally reliable data. Too many products are from different sources of origin and enjoy different methods of protection. Nevertheless, MAcMap has become a very useful tool for measuring exactly that; trade protection of agricultural products has become a useful index of comparisons across many different countries trading many different goods amongst them. MAcMap is a comprehensive source of tariffs and market access measures applied at the bilateral level by 169 importing countries on the products exported by 238 countries and territories. Products are described at the most detailed level, the national tariff line. MAcMap makes heavy use of the concept of ad valorem equivalent tariffs. This is essentially, a tariff presented as a percentage of the value of goods cleared through customs. For example, 15% ad valorem tariff means 15% of the value of the merchandise entered. Lebanon is an interesting example of what happens to a country's customs treatment of the same goods traded with many other countries with which Lebanon maintains simultaneous trading relations even though many different trading agreements are in effect some of them in a multilayered fashion. Conceptualizing this further consider that Lebanon is a member of GAFTA in which members are also

other Arab countries that have or don't have Association Agreements with the EU as Lebanon does. To make this even more conceptually challenging consider that Lebanon has bilateral agreements with countries that are or are not members of GAFTA and have or don't have Association Agreements with the EU. Looking at the specific tariff structures with the help of MAcMap will make matters easier to understand focusing always on the specific agricultural products that MEDFROL is dealing with. Table 3 shows the Trade Protection Indices for the groups of MEDFROL products.

**Table 5. Lebanon agricultural trade protection indices**

<u>Fruits (Edible)</u>		
Imports from:	EU	0.584
	PECO	0.536
	USA	0.528
Exports to:	EU	0.069
	PECO	0.085
	USA	0.011
<u>Vegetables (Edible)</u>		
Imports from:	EU	0.173
	PECO	0.232
	USA	0.190
Exports to:	EU	0.091
	PECO	0.215
	USA	0.039
<u>Citrus Fruits (Oranges)</u>		
Imports from:	EU	0.700
	PECO	0.700
	USA	0.700
Exports to:	EU	0.042
	PECO	0.064
	USA	0.00*
<u>Tomatoes</u>		
Imports from:	EU	0.700
	PECO	0.700
	USA	0.700
Exports to:	EU	0.109
	PECO	0.383
	USA	0.00*

\* In the case of the US above, zero across all countries refers to the lack of data rather than a reality of zero tariffs whatsoever

### 3.2 – Rate of Assistance to Agricultural Products

*Grains:* Lebanon is a net importer of grains with support measures offered by the Government to the biggest users of these grains, i.e. livestock breeders. Also, certain

subsidies exist for the poor class below an official subsistence level towards the cost of bread. The country has low grain prices even if import tariffs are low for obvious reasons and mostly has to do with international trade practices by the biggest exporters of grains, (i.e. US and EU). Public stockpiles in Lebanon for food security purposes are quite limited mostly due to the availability of its own alternatives locally grown without taxing the Governments' limited budget. For locally grown wheat it is government policy that all wheat produce is purchased from local farmers and at a subsidized rate. A government body then sells it to the country's eleven mills. The Islamic Development Bank (IDB) is quite actively supporting through generous loans and grants to its member countries, i.e. Lebanon included the production of grains with two of Lebanon fellow Arab countries, neighboring Jordan and Egypt receiving from 1998 to 2003 US\$ 155 million and US\$ 140 million respectively. In Lebanon, the IDB is focusing on finding a balance between two apparently conflicting policies: provide food subsidy to consumers as a means to reduce food insecurity and give price support to farmers that maintains incentives for investment in productivity-enhancing technology (Islamic Development Bank Group).

*Oilseeds:* Oilseeds are marginally taxed upon import and are scheduled to be duty-free by the full implementation of the EU Association Agreement as well as from other countries triangularly benefiting from Lebanon's trade agreements (i.e. GAFTA and EU).

*Sugar:* Lebanon is a net importer in sugar and up to now no direct subsidy for the price of imported sugar was in effect. Sugar beets though, a product useful to many like livestock farmers and end-consumers, have been receiving an effective subsidy from the Lebanese Government. Interestingly enough, only the private sector is allowed to import sugar allowing a premium to importers that can be seen as a de facto subsidy. In landmark rulings, the WTO has found exports of subsidized sugar from the EU to be contravening their reduction commitments. These subsidized sugar from the EU array of policy instruments are exported (some of it to Lebanon) and is seen as a major cause of keeping farmers' incomes in the importing country very low.

*Livestock products:* Livestock farming in Lebanon is making a steady comeback with bovines and dairy production leading the way in an organized manner. It is seen as a safe and steady source of income and low cost of factors of production (i.e. feedstuff, land cost etc) is one major reason behind it. Farmers have been encouraged to expand dairy production through several grants and loan agreements from the Ministry of Agriculture and private initiatives under international and national NGOs. Local production is still insufficient though to satisfy local demand and thus growth in the sector is expected to continue.

### **3.3 – Rate of Assistance for Fruits and Vegetables**

*Olive Oil:* As a support measure to producers of olive oil, the relevant body (the Commission) supports the marketing of their product by buying the olive oil from farmers and their coops. In the year 2003, this practice cost the Lebanese Government's Budget a total of 5 billion LL at 1,500 tons of olive oil at a price of 80,000 LL per tank (coming out at 80,000 LL per tank of 15 kg). The practice is costly and is driven by a spirit of 'Assistance and Support' to the olive oil sector rather than free market policy. This olive oil is then sold at subsidized prices at half its market rate to various institutions of national importance such as the Lebanese Armed Forces. Furthermore it is handed out to third parties free of any distribution charge for social and humanitarian purposes.

*Fruits and vegetables:* Fruits and vegetables production in Lebanon exceed local market consumption and are essentially a prime export item for the economy. The Government budget provides assistance to the sector indirectly either in the form of input subsidies and export subsidies.

As there is no single figure available for fresh fruits and vegetables for the input subsidies support, we can only draw conclusions from the general budget made available as 'Input Subsidies' by the Ministry of Agriculture in Lebanon. In the year 2003, the total value of subsidized inputs was at US\$ 3.2 million from US\$ 4.2 million in the previous year. The export subsidies program was launched by the Government in August 2001 in its effort to bring in much needed foreign exchange to sustain the ongoing reconstruction of the ravaged economy. A big part of it, the 'Export Plus' program, is the support of agricultural exports. The IDAL organized the program and administers it at 50 billion LL from its allocated budget from the Government. The practice here is to set standards for the exporting farmers as well as exporters the satisfaction of which allows IDAL to make direct payments to them depending on the cost of transporting the produce to its final market and on the date and kind of agricultural production, fresh fruits and vegetables receiving a large part of the allotted budget.

#### 4. CONCLUDING REMARKS

Agriculture in Lebanon has had its own tumultuous history since independence in 1946 much like the country itself. Ironically, the objective basics of its own circumstances are much more in its favor than those of countries in the region. The total land area that can be cultivated is not desperately inadequate as elsewhere, and Lebanon is the only country in the region that possesses a respectable network of rivers and streams that can sustain the development of a competitive agricultural sector. Unfortunately, though, politics more than economics have proven to determine the course of the Lebanese economy and the sector of agriculture. The Taif Agreement, which formally brought all hostilities to an end proved to be too porous in order to allow Lebanon to march solidly into reconstruction and sustainable development. The normalization process for the economy is a difficult one by itself barring all the politics that continuously unravel in Lebanon mostly obstructing progress. The recent withdrawal of Syrian troops from Lebanon after twenty-nine years of presence is a welcome respite for the Lebanese economy. For agriculture it means the saving of precious water resources from rivers whose flow had been diverted into Syria for the benefit of local farmers to the detriment of Lebanese farmers. A similar practice is studiously followed by Israel in Southern Lebanon where they still exercise control through a proxy local militia force. Cheap Syrian labor in Lebanese fields, so crucial for the competitiveness of Lebanese agriculture and exports, will continue to flow into the economy wherever its needed so the most important advantage of Syrian presence can be maintained at will. It will not be the uncontrollable influx that it has been during the last twenty-nine years.

The greatest obstacle of the economy is the huge and ever growing fiscal and budget deficits generated by the urgent need to reconstruct erroneously through a total dependence on domestic deposits. This practice has stripped the economy of valuable and desperately needed capital for their infrastructure and working capital needs. Thus, the recurrent cycle of international conferences of donors to fill this crucial void culminating in the Paris II Conference in 2003. Unfortunately with privilege comes responsibility and vice versa and local companies have become disgruntled with companies from the donor nations accorded preferential treatment and allowed access to the best projects pushing them aside.

International trade and exports may prove for Lebanon the way out of a very demanding situation where scarce resources are being pressed hard continuously. The diligent effort of the Lebanese Governments to join large and important international trade agreements and associations such as the WTO, GAFTA and the further deepening of the existing EU Association Agreement are proof of the acute awareness of the critical situation by them and the great opportunities afforded to Lebanon through their age-old art of international trade. This is further signified by a key concern from the EU side that due to their low cost structure and small economies (thus possessing a threat to its members) further benefits can be mutually reaped by completely removing all trade barriers between the EU and a non-member in the Middle East, i.e. Lebanon.

Price and income support measures in the agricultural sector have already been reduced to a minimum with a view of selectively converting them to different and indirect and non-distorting market support schemes within specific time horizons emanating from the above international agreements Lebanon is entering into.

Slowly, painfully but undoubtedly, Lebanon is restructuring to become a much more efficient economy better able to compete based on its core competences that allow it a sustainable competitive advantage than relying on the previous practice of state interventionism that was costly delivered only momentary benefits and led nowhere in the long run.

In terms of Lebanon's infrastructures further to the obvious need to improve on physical infrastructure, the very nature of the world economy becoming more knowledge-based than product oriented, requires of Lebanon to increase its long run commitment to research, development, extension and education in a real and substantive way. The country's research network including that focused on agriculture is badly in need of being overhauled and injected with fresh capital, both financial and human.

Lebanon has in reality a non-existent list of alternatives in managing its economy and the agricultural sector. Its budgets are leveraged to their limit, its domestic deposit base is held hostage to the massive capital needs of the government to reconstruct and even if donor aid flows in it will take some time until the local financial situation is improved. Lebanon should use the obvious path of international trade and exports to generate the much needed funding for the exodus from its economic problems that cannot simply be sustained anymore by its current economic configuration. Its trade flows with the EU as a bloc are continuously increasing and favorable treatment extended by it to Lebanon is an act to be reciprocated at minimal cost and maximum benefit to the local economy for a less volatile future that will allow the consolidation of its progress forward and leaving its tumultuous past behind.

## 5. POLICY OUTLOOK

About 40% of Lebanese imports originated in the EU and 20% of the Lebanese exports are destined to EU countries, a trend that has been observed since the 1970s. The Association Agreement between the EU and Lebanon opens new horizons in bilateral relations and consolidates the Euro-Mediterranean partnership launched by the 1995 Barcelona conference.

The agreement with the EU represents a vital cornerstone in Lebanon's trade liberalization strategy. It serves as a catalyst to conduct the required adjustments to the domestic economy that will render Lebanon more competitive. It is expected that in the future Lebanon will develop its past role as being a primary trade center in the region and between the GAFTA and the Euro-Mediterranean Free Trade Area.

For Lebanon, the Association Agreement offers important concessions in agricultural exports to the EU. The Union has adopted a liberal trade approach towards Lebanon on agricultural goods. The main characteristic of the Agreement is the full liberalization (i.e. no duty, no quota) for all Lebanese agricultural products, with a list of exceptions covering sensitive areas of EU domestic agriculture. The list includes olives, olive oil, table grapes, wine, potatoes, pears, apples, garlic, tomatoes, products that are massively produced in other EU member states. Moreover, significant reductions in duties of processed agricultural products will also apply. Duties will be phased gradually on a wide range of food and other processed farm products from Lebanon.

In addition to agricultural products and while EU markets have been duty and quota free to Lebanese industrial products since the 1978 Co-operation Agreement, the new Agreement will see a gradual reduction in Lebanese tariffs on EU industrial products, over a twelve-year period, leading to a free trade in industrial products.

The main challenge for Lebanese producers remains in its ability to follow up with the EU and international standards and norms to benefit of the potential markets. This entails as being able to follow up with the capacity of the Lebanese produce in implementing the international and EU standards in quality. However, liberalizing trade with EU is expected to facilitate the transfer of new technology and know how as a result of the expected increased inflow of Foreign Direct Investment. Furthermore, the agreement will serve as catalyst to modernize and update the Lebanese trade-related legislation.

Taking into account the recent political situation, i.e. the pullout of Syrian troops, as well as a set of developments in trade, like the implementation of the Association Agreement with the EU mentioned above, it is expected that the economic prospects of Lebanon in the near future tend to be positive. The driving force that will lead the economic development will be the inflow of foreign funds into the country, which is needed to assist the restructure of the state. In terms of individual sectors tourism and services will continue to be the power machine of Lebanon's growth. Given the presence of comparative advantage in the production of certain agricultural products it is expected that the role of agriculture will become more important.

The Association Agreement will stimulate agricultural production and widen the export potential of certain commodities to the EU. Taking into consideration the low cost of production, mainly attributed to the low labor cost, as well as the support from the



government for quality improvements, it is estimated that products like olive oil, citrus, and vegetables, will easily find outlets to European markets competing their counterparts of EU members' origin.

One major issue that will define the self-sufficiency rate of Lebanon and its export potential in the coming years is water. It is estimated that by implementing the National Action Plan for combating desertification, launched in 2003, the country will maintain in a sustainable way its water resources, widening therefore its export potential.

In order to avoid severe shocks in the agricultural sector of EU members that are producing similar products with Lebanon, especially the smaller ones, necessary precautionary measures, like quotas or calendar limitations on imports, should be introduced.

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## **APPENDIX**

Appendix Table 1. General indicators on Lebanese Agriculture						
	UNIT	1979-1981	1989-1991	1998	1999	2000
<b>Population &amp; Agricultural Labour Force</b>						
Population	1000	2 673	2 722	3 380	3 438	3 496
Population annual growth	percent	-0,7	1,9	1,8	1,7	1,7
Rural / Total Population	percent	26	16	11	11	10
Density	Inh/ sq km	261	266	330	336	342
Agricultural Labour Force	1000	108	63	50	49	47
Agricultural Labour Force/Total Labour Force	percent	14	7	4	4	4
<b>Land Use</b>						
Total Land	1000 HA	1 023	1 023	1 023	1 023	1 023
Arable Land + Permanents Crops	1000 HA	304	305	326	330	332
Arable Land	1000 HA	213	183	187	190	190
Irrigated Land	1000 HA	86	86	111	104	104
<b>Macroeconomic Indicators</b>						
GDP	US\$ ..	2838485398	16251223958	16543488648	16488225539	
GDP growth	percent ..	26,53316009	3,000004325	1	0	
GNI per capita, PPP	current US\$ ..	2170	4210	4290	4380	
Agriculture, value added	percent of GDP ..	..	11,9230822	11,9230822	11,9230822	
Agriculture, value added	ual % growth ..	..	4,184803522	1,084860427	1,059618668	
Agriculture value added per worker	current US\$ ..	..	26741,04944	27582,80868	29061,25494	
<b>Lands &amp; Inputs</b>						
Total Population/Arable Land	Inh / HA	13	15	18	18	18
Fertilizer Use/Arable Land	kg nutrs./HA	167	151	341	335	349
Tractors/Arable Land	ho / 1000 HA	14,1	17,5	30	43,5	43,7
<b>Food Production</b>						
Food Production Index	1989-91=100	61	100	145	143	154
Per caput Food Production Index	1989-91=100	62	100	117	113	120

Source: SLU

Appendix Table 2. Production of certain agricultural commodities in Lebanon								
Product	Unit	1979-1981	1989-1991	1998	1999	2000	2001	200
<b>FRESH FRUITS</b>								
Apples	Mt	101.000	203.876	124.200	138.800	126.700	112.000	112.00
Avocados	Mt	0	0	4.400	6.200	3.000	4.400	4.40
Cantaloupes&oth Melons	Mt	12.000	20.282	40.400	43.100	21.600	14.900	14.90
Cherries	Mt	19.000	45.398	44.300	47.600	45.400	42.300	42.30
Grapefruit and Pomelos	Mt	23.333	51.539	12.100	10.600	11.800	11.500	11.50
Grapes	Mt	141.667	268.420	122.000	126.000	112.600	116.200	116.20
Lemons and Limes	Mt	60.000	78.215	85.500	81.400	103.700	103.100	103.10
Olives	Mt	36.667	50.694	100.000	66.400	189.500	85.800	92.00
Oranges	Mt	215.000	272.970	181.900	195.200	152.400	155.800	155.80
Strawberries	Mt	592	6.186	11.600	12.600	27.300	29.700	29.70
Tang.Mand.Clement.Satsme	Mt	31.667	53.877	39.600	44.700	49.800	46.100	46.10
<b>VEGETABLES</b>								
Beans, Dry	Mt	1.400	4.060	400	500	100	100	1.00
Chick-Peas	Mt	2.500	6.717	4.100	3.200	2.200	1.900	3.20
Chillies&Peppers, Green	Mt	0	0	7.000	6.400	6.900	5.900	5.90
Lentils	Mt	3.133	9.793	1.600	1.400	800	500	1.50
Onions, Dry	Mt	21.333	59.704	48.400	64.100	157.600	144.200	144.20
Potatoes	Mt	129.000	247.474	263.538	281.600	275.000	257.000	397.10
Tomatoes	Mt	103.333	210.520	303.900	337.300	235.000	247.000	247.00
<b>OTHER MAIN COMMODITIES</b>								
Wheat	Mt	32.333	55.677	80.600	73.000	108.100	139.500	119.00
Barley	Mt	6.000	19.181	15.000	13.900	9.400	8.100	17.10
Maize	Mt	1.483	2.901	4.779	4.000	3.500	3.800	2.70
Sugar Beets	Mt	83.667	65.017	300.000	369.500	341.700	15.200	14.00
Sugar Cane	Mt	508	2.501	4.729	4.750	4.800	4.850	4.85
Cattle Meat	Mt	18.779	17.145	45.004	49.094	47.491	54.806	88.80
Chicken Meat	Mt	45.760	56.295	87500	90100	113100	117400	12900
Cow Milk, Whole, Fresh	Mt	84.955	93.580	189315	149630	158400	167162	19350
Hen Eggs	Mt	41.275	35.205	41400	43200	43200	44400	4620

Source: SLU

Appendix Table 3. Yields of certain agricultural commodities in Lebanon								
Product	Unit	1979-81	1989-91	1998	1999	2000	2001	20
<b>FRESH FRUITS</b>								
Apples	hg/ha	90.732	149.933	135.000	149.247	136.207	118.393	118.3
Avocados	hg/ha	0	0	146.667	206.667	103.448	153.846	153.8
Cantaloupes&oth Melons	hg/ha	103.411	116.161	448.889	478.889	309.013	32.043	32.0
Cherries	hg/ha	82.587	117.234	75.085	78.033	59.768	55.739	55.7
Grapefruit and Pomelos	hg/ha	438.552	433.422	201.667	176.667	212.230	214.953	214.9
Grapes	hg/ha	69.240	91.231	79.739	81.290	79.858	84.203	84.2
Lemons and Limes	hg/ha	359.681	298.530	225.000	208.718	285.754	285.833	285.8
Olives	hg/ha	12.389	11.829	19.398	12.994	34.055	15.097	16.1
Oranges	hg/ha	286.667	275.819	219.157	232.381	172.789	175.056	175.0
Strawberries	hg/ha	50.280	149.615	386.667	315.000	282.025	291.176	291.1
Tang.Mand.Clement.Satsma	hg/ha	228.811	233.218	208.421	223.500	226.364	204.889	204.8
<b>VEGETABLES</b>								
Beans, Dry	hg/ha	13.333	21.107	20.000	25.000	15.873	16.667	25.0
Chick-Peas	hg/ha	11.500	15.480	17.083	13.913	8.462	9.500	12.8
Chillies&Peppers, Green	hg/ha			175.000	160.000	174.684	210.714	210.7
Lentils	hg/ha	8.696	18.191	10.000	10.000	11.679	11.111	15.0
Onions, Dry	hg/ha	141.270	159.494	193.600	228.929	345.311	350.000	350.0
Potatoes	hg/ha	169.471	186.975	201.559	190.270	213.178	215.966	294.1
Tomatoes	hg/ha	190.851	248.102	389.615	396.824	385.246	411.667	411.6
<b>OTHER MAIN COMMODITIES</b>								
Wheat	hg/ha	15.054	21.168	20.667	18.814	27.025	31.995	27.6
Barley	hg/ha	10.250	17.053	13.268	11.032	10.805	11.571	15.5
Maize	hg/ha	9.167	16.960	23.717	20.000	17.500	19.000	13.5
Sugar Beets	hg/ha	485.741	570.699	500.000	456.173	486.267	562.963	560.0
Sugar Cane	hg/ha	203.333	214.990	245.026	243.590	242.424	242.500	243.5
Cattle meat	Carcass Wt (Hg/An)	785	785	1.510	1.510	1.510	1.510	1.5
Beef and Veal	Carcass Wt (Hg/An)	1.350	1.350	2800	2800	2800	2800	28
Mutton and Lamb	Carcass Wt (Hg/An)	220	220	220	220	220	220	2
Chicken Meat	Carcass Wt (.1Gr/A)	11.000	11.258	14511	14509	17059	17139	175
Cow Milk, Whole, Fresh	Yield (Hg/An)	22.898	28.261	52118	38934	40720	42237	485
Hen Eggs	Yield (100 Mg)	136.445	121.000	138000	135000	135000	134545	1400

Source: SLU



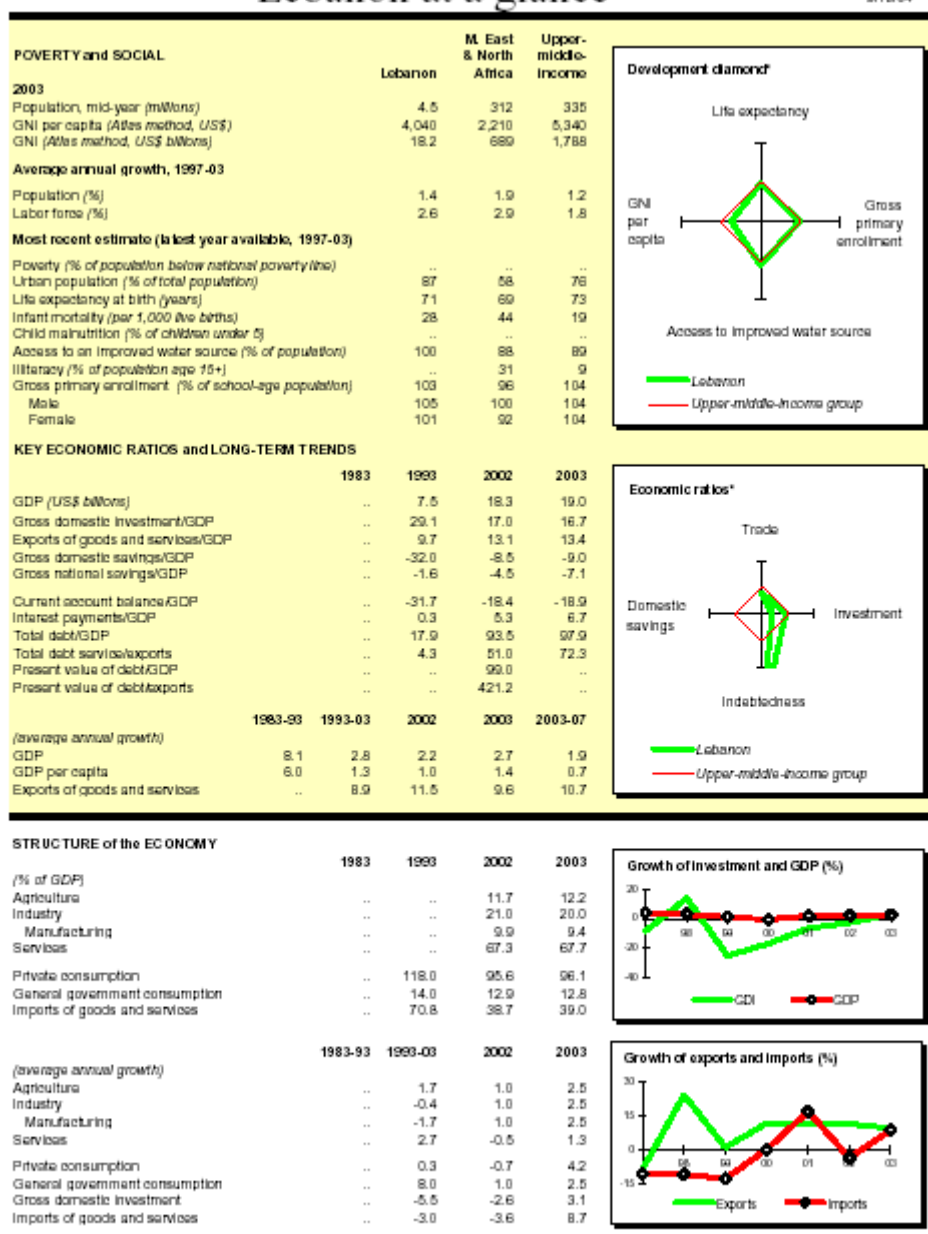
**Appendix Table 5. National Indicators for Lebanon**

	<b>Most Recent Year</b>	<b>Data</b>
<b>Socioeconomic context</b>		
Total population (000s)	2003	4,498
GNI per capita, Atlas Method (US\$)	2003	4,040
Expected years of schooling	2002	13
Adult literacy rate (% of population ages 15 +)	..	..
<b>Demographic indicators</b>		
Average annual population growth rate (%) 1990-2003		1.6
Age dependency ratio (dependents as a proportion of working-age population)	2003	0.6
Total fertility rate (births per woman)	2003	2.2
Adolescent fertility rate (births per 1,000 women ages 15-19)	2003	25
Contraceptive prevalence rate (% of women ages 15-49), any method	2000	63
<b>Health status indicators</b>		
Life expectancy at birth (years)	2003	71
Infant mortality rate (per 1,000 live births)	2003	27
Under-5 mortality rate (per 1,000)	2003	31
Maternal mortality ratio (per 100,000 live births), modeled estimates	2000	150
Prevalence of child malnutrition--underweight (% of children under age 5)	1996	3
<b>Health care indicators</b>		
Child immunization rate, measles (% of ages 12-23 months)	2003	96
Child immunization rate, DPT3 (% of ages 12-23 months)	2003	92
Births attended by skilled health staff (% of total)	1996	89
Physicians (per 1,000 people)	2001	3.3
Hospital beds (per 1,000 people)	1997	2.7
Tuberculosis treatment success rate (% of registered cases)	2002	91
DOTS detection rate (% of estimated cases)	2003	67
<b>Health finance indicators</b>		
Health expenditure, total (% of GDP)	2002	11.5
Health expenditure, public (% of GDP)	2002	3.5
Health expenditure, public (% of total health expenditure)	2002	30.1
Health expenditure per capita (\$)	2002	568
<b>Risk factors and future challenges</b>		
Prevalence of HIV, total (% of population ages 15-49)	2003	0.1
Prevalence of HIV, female (% of population ages 15-24)	..	..
Tuberculosis incidence (per 100,000 people)	2003	12
Tuberculosis death rate (per 100,000 people)	2002	1

Source: FAO

Figure 1. Lebanon at a glance

SI 504



Note: 2003 data are preliminary estimates.

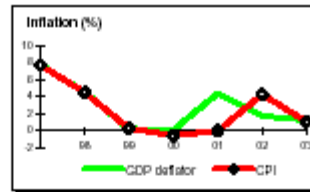
This table was produced from the Development Economics central database.

\* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.



## PRICES and GOVERNMENT FINANCE

	1983	1993	2002	2003
<b>Domestic prices</b>				
(% change)				
Consumer prices	..	29.1	4.3	1.1
Implicit GDP deflator	..	29.1	1.8	1.3
<b>Government finance</b>				
(% of GDP, includes current grants)				
Current revenue	..	14.2	21.1	23.0
Current budget balance	..	-5.8	-12.9	-8.7
Overall surplus/deficit	..	-9.2	-14.0	-11.5



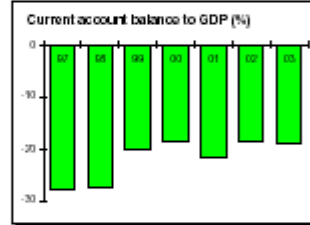
## TRADE

	1983	1993	2002	2003
<b>(US\$ m/tons)</b>				
Total exports (fob)	..	..	894	971
n.a.	..	..	..	..
n.a.	..	..	..	..
Manufactures	..	..	655	722
Total imports (cif)	3,772	..	6,182	6,525
Food	605	..	..	..
Fuel and energy	326	..	..	..
Capital goods	998	..	1,751	1,771
Export price index (1995=100)	..	..	108	105
Import price index (1995=100)	..	..	110	106
Terms of trade (1995=100)	..	..	99	99



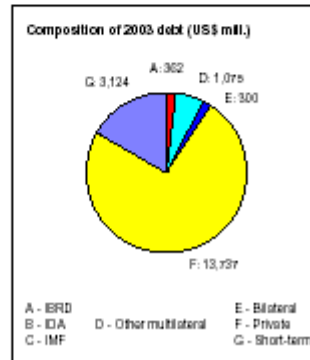
## BALANCE of PAYMENTS

	1983	1993	2002	2003
<b>(US\$ m/tons)</b>				
Exports of goods and services	..	729	2,399	2,540
Imports of goods and services	..	5,335	7,055	7,417
Resource balance	..	-4,606	497	521
Net income	..	171	817	1,058
Net current transfers	..	2,050	1,000	1,241
Current account balance	..	-2,386	-3,363	-3,587
Financing items (net)	..	2,842	3,443	3,911
Changes in net reserves	..	-456	-80	-324
<b>Memo:</b>				
Reserves including gold (US\$ millions)	..	..	7,315	7,639
Conversion rate (DEC, loc/US\$)	..	1,741.4	1,507.5	1,507.5



## EXTERNAL DEBT and RESOURCE FLOWS

	1983	1993	2002	2003
<b>(US\$ m/tons)</b>				
Total debt outstanding and disbursed	915	1,347	17,077	18,598
IBRD	41	39	313	362
IDA	0	0	0	0
Total debt service	108	135	2,188	3,252
IBRD	7	6	43	50
IDA	0	0	0	0
<b>Composition of net resource flows</b>				
Official grants	63	43	145	..
Official creditors	41	15	-7	58.1
Private creditors	-10	-5	4,642	33
Foreign direct investment	1	7	257	..
Portfolio equity	0	0	4	..
<b>World Bank program</b>				
Commitments	0	175	109	37
Disbursements	9	22	65	57
Principal repayments	4	5	29	34
Net flows	5	17	36	23
Interest payments	3	2	14	15
Net transfers	2	16	22	7



The World Bank Group: This table was prepared by country unit staff; figures may differ from other World Bank published data.

9/15/04