Integrated Assessment of the Lebanon-EU Association Agreement:

A Pilot Study on the Lebanese Olive Oil Sector

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Executive Summary

"Integrated Assessment (IA) of the Lebanon-EU Association Agreement (AA) – A Country Study on the Lebanese Olive Oil Sector" is an all-embracing attempt to assess the socio-economic and environmental implications of opening up local sub-sectors to 'freer' trade.

The project was initiated on December 2004, headed by the Ministry of Economy and Trade (MOET), in collaboration with the Ministry of Environment (MOE), and with the technical assistance of the United Nations Environment Program (UNEP).

The project chose to focus on the olive oil sector for several reasons. This choice was based first and foremost on the important role of the sector to the Lebanese economy, local social indicators and the environment. Economically and socially, the olive oil sector has important repercussions in terms of poverty reduction, employment generation, migration, magnitude of trade, and growth potential among other things. Environmentally, the sector's certain role in defining rural landscapes is met with the challenge of dealing with solid and wastewater generation and disposal.

Moreover, the keen willingness of stakeholders in the olive oil industry to provide necessary information and available data enables such an assessment to be undertaken.

Lastly, the assessment focuses on the impact of the Association Agreement, it is necessary for the sector selected to have trade linkages with the EU. The survival of the Lebanese olive oil sector is, indeed, highly correlated to the ability to penetrate international markets at a high premium.

1. Structure of the country report

The report is divided in five chapters, the first of which introduces the report and project in general. Chapter 2 assesses briefly the Lebanese socio-economic and political situation, turning focus to agriculture and the olive oil sector in specific.
Chapter 3 reviews trade liberalization policies and agreements between Lebanon and the EU in particular and other agreements with other countries or organizations in general. Chapter 4 undergoes the integrated assessment, under two alternative scenarios; a baseline scenario where Lebanon can export up to 1,000 tons of olive oil duty free to the EU (however is not taken advantage of it) while imports of the latter's olive oil are subject to a 70% tariff rate and a second scenario where all necessary quality improvements are undertaken (enabling the exportation of all the 1000 tons quota) while still taxing EU olive oil imports. Chapter 5 draws conclusions, recommendations and identifies necessary action plans that should be undertaken to improve the sector's performance and readiness for more trade.

2. Key objectives of the IAP project

The project is expected to identify national priorities and hence outline Action Plans for Lebanon in line with European Neighbourhood Policy (ENP) guidelines. The results of this assessment will also provide insights on how the IA approach may be adapted to the Lebanese context so that it can be used in other sectors or planning processes.

The IA should also help fill in the gaps in existing literature since studies conducted so far only assessed AA's economic impact omitting social and environmental characteristics or likely inter-linkages between all three components.

Furthermore, the existing lack of coordination and information sharing between various research and relevant institutes is leading to duplications and inefficiencies. The proposed project will thus promote cooperation among relevant government and non-governmental entities. Since it is a country-driven national project, it will enhance national ownership, active participation and contribution of national ministries, the private sector and other relevant stakeholders.

This report aims to target policy makers (public sector bodies, private stakeholders, the olive oil syndicate, co-operatives and NGO's) and advocates raising awareness towards a more integrated approach for the design of trade policies taking into account key social and environmental issues. It therefore introduces a methodology and a framework to be used in planning, implementation and monitoring policies.

3. Key processes of the IA project

A multi-disciplinary team comprised of a number of economists, a social scientist, and an environmental economist underwent a participatory process that involved continuous consultations and discussions with various stakeholders, from the farming and olive oil syndicates and representatives to mill operators and various traders. A Steering Committee was established and two workshops undertaken to permit a more thorough and on-ground understanding of the sector as a whole, enabling thus an integrated assessment to take place.

Quantitative analysis in the form of a rapid cost-benefit analysis was undertaken and mainly focused on economic issues. A comprehensive set of consultations and focus group meetings brought back into the picture environmental and social issues. The importance of these qualitative consultations lies also in the fact that data for the purpose of quantitative analysis is lacking in Lebanon. The extensive consultations and focus groups meetings undertaken offered a feasible alternative to assess the implications of the AA on the olive oil sector.

Accordingly, extensive consultations and data gathering permitted an IA analysis of the socio-economic and environmental dimensions (and their possible inter-linkages) involved in the life-cycle of olive oil production of two Scenarios independently, from farming to milling and marketing (traders);

- Scenario one considers the state of the sector without any change made (farming and milling practices) As such it assess the current state in that Lebanon can export (duty-free) up to 1,000 tons of extra virgin olive oil and still impose a 70% tariff rate on EU olive oil imports.
- Scenario two assumes that the required olive oil quality improvements are achieved to take full advantage of the 1000 tons quota through training and education of farmers and mill operators, and through communicating the economic benefits associated with such improvements (among other things).

The main socioeconomic indicators used were export quantity, employment levels, poverty, migration, while environmental indicators are mainly in the form of olive oil production residues (vegetable water and pomace) and the manner in which they are disposed.

4. Key results and findings

The qualitative assessment, based on the Steering Committee Members' feedback on the impacts of Scenario 1 and Scenario 2 pointed to the favourability of Scenario 2.

Scenario 1

Scenario 1 highlighted that most Lebanese olive oil growers are not taking advantage of the duty-free export quota due to the fact that it requires a change in farming and milling practices in order to produce olive oil of high quality (extra-virgin olive oil). The main economic, social, and environmental impacts are the following:

- Lebanese exports of virgin and extra virgin olive oil to the EU have increased about 365% from 2002-2004 partly due to the elimination of customs duties within the quota restriction, the depreciation of the dollar relative to the Euro, and the ability of a small group of producers to meet the necessary production, testing, labelling and bottling requirements demanded by the EU. Although total export to the EU has been in the range of 0.36 – 2.8% of total domestic production and have almost no impact on the domestic price and production structures, the increasing trend does reflect a willingness to take advantage of higher prices mainly in extra-virgin olive oil sales associated with the EU market.

- The configuration of the olive oil supply chain creates an asymmetric structure between direct producers and traders' economic activity. The following characteristics creates a situation in which a large number of vulnerable producers (scattered all over the country and producing each a relatively insignificant fraction of national production of olive oil) are dependant on a few influential traders that have access to cheap foreign olive oil in order to sell their product on local or international markets.

Social Impacts of Scenario 1 – Summary
1. Farmers & Millers
• **Olive oil cultivation advantages**: Acts as the only social safety net keeping farmers from extreme poverty; Additional source of income; Not time consuming and easy to manage; Olive oil residues are highly demanded in winter as heating material, specifically in rural regions (which in turn results in extra-income when sold, and lowering the demand for more expensive/non ecologic heating substances).
• **Challenges:** Scattered throughout the country, unorganized, lack of resources and sufficient capacity to apply proper methods of production; Lack of necessary incentive to target high quality olive oil (virgin and extra-virgin olive oil prices are not differentiated); Yearly production fluctuations
2. Traders
• **Highest price premium is captured when:** EU standards are met, and proper marketing channel are insured
• **Challenges:** limited number of traders (could result in privileged position and price manipulation); High cost associated to transport, testing, bottling, packaging and certification; Fierce foreign competition; Low investments due to erratic annual supplies

All in all, there are no significant impacts from the AA on the social structure embedded throughout the olive oil production chain, since the incentive to export high quality is absent and most of the agents participating in the production and supply chain are unaware of the 1,000t quota granted to Lebanese olive oil exported to the EU under the AA.

- In general, there is an absence of concrete data concerning the environmental effects of olive farming in Lebanon, especially quantitative data on specific impacts such as soil erosion and water pollution. However, environmental implications of scenario 1 have been to a certain extent validated by sporadic field visits, expert meetings, and observations on the Lebanese case.

Environmental Impacts of Scenario 1 – Summary
1. Oleiculture Impact on:
• **Soil**: Beneficial to soil preservation and reduces soil loss. • **Water**: Positive impact on water conservation since Lebanese olive trees are rain fed. Groundwater may be contaminated by extensive use of fertilizers and agro-chemicals: pesticide use per hectare is almost twice the weighted average of pesticide use per hectare in the world. • **Landscape and Agro-tourism:** Positive landscape effects and agro-tourism promotion **(**e.g existing 500 year-old water and olive mills)
2. Olive Oil milling produces:
• **Pomace:** Used for heating purposes, or as fertilizer and animal feed. When burned, pomace emissions could have potential health implications. • **Vegetable water:** Implications are severe, specifically for ecosystems, depending on where they are discarded. When dumped into rivers, the water turns to black and the high biological oxygen demand (BOD) present is detrimental to the flora in the river and fish populations, among other organisms.

Scenario 2

In line with steering committee members, a list of priority action plans was addressed so as to enhance the quality of Lebanese olive oil and achieve the benefits of scenario 2. In order to strengthen and ensure this sector's viability, these action plans are to be implemented before undertaking any further trade liberalization discussions. These plans fall mainly within the categories of a sustainable regulatory framework that creates the

incentives to produce extra-virgin olive oil, upgrading mill operations, and better agricultural practices.

- The economic benefits of applying the requirements for Scenario 2 under the AA are truly substantial when considering the implications of producing extra-virgin olive oil and not only the quota that could be exported to the EU duty-free. In absolute terms, the increase in revenues from exports is only slightly significant assuming prices are fixed. However, when compared to revenues from export generated under the conditions of Scenario 1, the increase in revenue is considerable reaching up to 2380% of initial revenues (US$3,500,000 relative to US$ 147,000 in 2004).

This additional revenue would increase local farmers' share in the domestic market (relative to non-local farmers). Employment rates are very likely to increase slightly as the production of extra-virgin olive oil would call for a more qualified and efficient labour force that can adapt to mechanization or managerial changes. This will hopefully aid in curbing the aggravating rural unemployment rates that increased, between 1997 and 2004, by 0.8% and 1.4% in the two most important olive oil producing regions in Lebanon.

As a result of these improved economic indicators, national welfare is likely to improve slightly since exports, employment, and incomes are being enhanced by qualitative improvements, thus optimizing AA potential.

- An increase in the production of extra-virgin olive oil would create a spillover-effect which would impact on employment patterns, poverty levels, migration trends, and educational opportunities.

In response to the increase in demand for premium olive oil, olive growers will need to hire, in the harvesting period, a larger amount of seasonal labourers. Within the personnel hired for harvesting purposes, local women and foreign labour are usually the most employed, because they cost less.

With respect to milling, improving and smoothing the yearly fluctuations of olive orchard yields (by applying scenario 2 assumptions) would optimize milling productivity and generate employment opportunities, which would translate into increased income for the new, and necessary, hired labour force as well as a more reliable safety net. On the other hand, the reorientation of the production processes towards extra-virgin olive oil could, at least in the short-run, impose social costs.

Youth decisions to migrate are the results of a trade off between staying in poor, low income regions and the opportunity cost of the latter. At the moment this opportunity cost is relatively high and explains the need to migrate. Olive oil production activity is underexploited and profits are untapped. A very small fraction of Lebanese farmers are aware of foreign niche markets potential and income differential they gain by exporting high quality extra virgin olive oil. Making the youth aware of such opportunities and reviving the olive oil sector is very likely going to attract them towards this activity.

Increased revenues and improved living conditions will become more and more tangible in comparison to job opportunities in cities and abroad.

The poverty – unemployment – migration – education patterns, if not addressed properly, are likely to reinforce each other in a vicious circle, leading to a massive deterioration of the poor living conditions. Higher economic return associated to the sector would create incentives to remain in those communities, lobby for better infrastructure associated to a decrease in the cost of production as well as increase in investments.

The household budget increase will also allow an expenditure reallocation towards goods and services related to health. Poverty reduction will increase access to health services through alleviating the income obstacles, increase access to medication, vaccines and vitamins, and allow better nutrition. Improving health will in turn increase work attendance and performance, and decrease the percentage of household expenditures on health.

The liquidity constraints will therefore loosen up, enhancing investment and credit access. Very often, the poor cannot access banking or financial facilities because they have no collateral or guarantees. Agricultural holdings do not necessarily offer a means to escape poverty unless the size, soil productivity, and marketing outlet are adequate to generate sufficient income.

- Article 45 of the Association Agreement encourages the "cooperation in preventing deterioration of the environment, controlling pollution and ensuring the rational use of natural resources, with a view to ensuring sustainable development." The application of Article 45 of the AA with respect to olive oil production should entail the targeting of the entire process from farming to marketing. Beginning with farming, this requires a change of unsustainable farming practices such as the misuse of pesticides and the pruning of olive branches. In the milling category, the environmental impacts are mainly the untreated disposal of vegetable waters to preserve natural ecosystems (specifically river ecosystems). And finally in the marketing process, this could entail the use of recycled material for bottling purposes and the encouragement of recycling on sold bottles.

Exporting 1000 tons of olive oil to the EU does not necessarily mean an increase in production or supply, though that is highly possible, yet more so it would entail a re-orientation of production categories to target extra-virgin olive oil and better packaging for export purposes. Therefore, the environmental implications of taking advantage of the 1000 tons are relatively similar to what is currently occurring, yet if/when Article 45 is implemented, then the implications for the environment are positive in that better agriculture practices are advised such as the careful use of pesticides.

Assessing the two scenarios at hand

The stakeholders (including NGOs) were asked their opinions with respect to the two alternative scenarios and asked to state the impact of each scenario on economic, environmental and social indicators by using different levels of impacts from severely

negative to severely positive. Scenario two clearly offered the most potential benefits relative to the current situation or Scenario 1 on all three fronts (economic, social and environmental), as revealed by the indicators.

Given time, financial restraints and data constraints, a rapid CBA, consisting of both a quantitative and a qualitative part and based on existing information was conducted. Environmental and social costs and benefits however were not included due to lack of quantitative data to that respect.

- Total costs of all action plans listed, including changing traditional mills to modern ones was estimated to be about USD 81.4 million, spread out across varying time frames to a maximum of 16 years.
- The benefits are assumed to be USD 27 million per year over a 13 year period (and after three years of commencing with action plans). These benefits have to be discounted therefore as they extend into the future.
- Consequently, the Cost-Benefit Analysis (CBA) pointed out that total net benefits from applying Scenario 2 would be approximately 269.6 USD million, 137.3 USD million, and 79.39 USD million at discount rate of 0%, 3%, and 5% respectively.

All in all, the economic values indicate an immense potential benefit for applying scenario 2.

5. Key recommendations

Recommendations for the olive oil sector embrace different complementary measures that should be undertaken to implement the action plans and successfully reform the sector. As a pre-requisite to the implementation of the action plans however, it is worth emphasizing that necessary measures need to be undertaken. These measures could partly be in the form of continuing technical and financial assistance from the EU within the framework of the European Neighbourhood Policy (ENP), a commitment to enforce relevant regulations, and stakeholders' commitment to a public-private partnership.

Trade regulations, such as quality standards as well as regulation with respect to duties and their gradual elimination should be communicated to all parties involved in order to ensure efficiency and the minimization of refused (and returned) products. Technical and non-trade barriers, such as lengthy bureaucratic procedures, should be revised and eliminated when unnecessary.

With respect to Lebanese olive oil, the government of Lebanon should encourage each region in Lebanon to use regional branding, in order to market their products as 'unique' or 'distinct' and better target niche markets (such the Lebanese diaspora). The European Union can encourage this endeavor by firstly helping to create these geographic indicators in Lebanon and secondly by financing the promotion of such products in European trade fairs and exhibitions.

However, the major contribution should come from the Lebanese government and through relevant ministries as well as the different municipalities and cooperatives concerned with olive oil production. Within its prerogatives, the GOL ought to create an enabling environment by improving intra-ministerial coordination to aid the olive oil sector efficiently. It should upgrade and certify existing testing laboratories, disseminate information and build databases. It also should provide training for farmers and mill operators (e.g. good agricultural practices and good manufacturing practices), facilitate by-product management, and provide access to capital. From another aspect, the treatment of vegetable water ought to be financed and implemented by the GOL.

Centralizing decision-making with respect to olive oil (e.g. by forming a national olive oil office) would go a long way in assessing and taking in all the concerns and priorities of the various stakeholders. As an output, a national policy (with respective action plans) could be formulated in which the various stakeholders are given specific responsibility to better the sector. The policy should be towards the production of better quality olive oil by decentralizing quality checks and enforcing necessary laws (e.g. with respect to hygienic milling conditions and olive oil quality categorizing).

The private organization could play a major part in achieving economies of scale, promoting fair competition (e.g., inputs, fertilizers), disseminating information and proposals, investing in newer technologies and production techniques, maintaining a competitive edge, coordinating with NGOs, and promoting public- private partnership.

Finally, NGOs should continue to work together (and with the private sector) in order to maintain their efforts in raising awareness, training farmers, enhancing intra-NGO networking, disseminate information and facilitate public-private partnership.

6. Key conclusions - Gaps, lessons learned and suggestions for follow-up

The findings of the assessment elaborated the need to strengthen the sector via necessary regulatory and policy improvements that included bringing the olive oil sector up to export quality standards. Many of the initiatives proposed would have positive environmental implications and would optimize the socio-economic benefits of the AA.

The sector is facing tremendous hardships in the form of high production costs, regional competition, sub-standard quality output that does not permit exports (specifically to Europe), and a lack of proper coordination and management between the main actors in the field. Such hardships are only exacerbating socio-economic concerns in the region, like unemployment and poverty, a falling quality of life, and rural-urban migration.

From an organizational perspective, for the positive impact on the AA and at a later stage the ENP to be maximized, it is necessary to have one body or task force within the public sector in charge of co-ordination between various beneficiaries. Indeed this would allow proper monitoring and avoid any duplication, which tends to be the case. Political will and engagement is necessary if effective changes are envisaged. Institutional capacity

building is central to improving coordination between all stakeholders and regions, information dissemination, new regulations and quality controls.

The process has already started with the establishment of a steering committee (for the olive oil IAP) with representatives of relevant ministries, the chamber of commerce, the olive oil syndicate and active NGO'S within the field. The ability of the committee to impact positively the sector is dependant on its aptitude to translate decisions and priority issues into actions at the community level.

In addition, upgrading as well as increasingly involving regional co-operative would allow tapping into the farmer's community that is the most difficult group to attain. Active co-ordination with the regional chamber of commerce on a regular basis could insure better channels of communication and dissemination of information between the farmers and the traders. Increasing awareness concerning the AA and the potential of producing extra virgin olive oil is central in order to exploit the agreement's full potential.

Finally, the public sector could monitor olive oil production by engaging stakeholders into regular meetings and undergoing regular sectoral analysis. The public sector has a key role in insuring fair competition, regulations that protect local producers, dissemination of information, and skill upgrading through vocational training is necessary to insure sustainable methods of production and ability of labour force to adapt to the new production processes (mentioned above). This could be achieved by involving all relevant stakeholders and government agencies.

The Association Agreement should be taken as an opportunity for the olive oil sector, or any other sector for that matter, to re-examine its production techniques and processes, address key bottle-necks that prohibit better profitability of the sector, and improve the overall socioeconomic situation of farmers, mill operators and traders.