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The Design Of A Road Map For Agricultural Liberalization In The Euro-Mediterranean Region: The Need For Prioritisation

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THE DESIGN OF A ROAD MAP FOR AGRICULTURAL LIBERALIZATION IN THE EURO-MEDITERRANEAN REGION: THE NEED FOR PRIORITISATION

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EXECUTIVE SUMMARY

Introduction

The EU Ministers of Foreign Affairs granted in The Hague (November 2004) the development of a *Road Map* for the liberalization of agricultural trade between the EU and the Mediterranean Partner Countries (MPC's), including its non-commercial aspects (rural development, quality policies, improvement of productivity, institutional reforms, etc.). The adoption of a Road Map is related to the logic of the European Neighbourhood Policy (ENP), and implies that the adopted measures must be negotiated with the MPC's. Its aim is to achieve a bigger participation of MPC's in the European Single Market.

In fact, it implies a Euro-Mediterranean Agricultural Pact, as the AGREEM (2002, 2003) and FEMISE (2003) have been proposing for years. The FEMISE report (2003) on agricultural trade liberalization incorporated an important part of the AGREEM proposals, adopting a broad vision of the problem and bringing up alternative scénarios for Euro-Mediterranean agricultural trade liberalization. As the EU Ministers of Foreign Affairs recognised in The Hague, any Euro-Mediterranean Agricultural Pact must combine an asymmetric and reciprocal trade liberalization, as well as accompanying measures in order to modernise the agricultural sector of the MPC's. These accompanying measures should be included in the Action Plans and be monitored by the ENP, so to face the competition with European producers in continental agriculture. The framework of limited inclusion of agricultural trade in the EMFTA changed after the launching of the ENP, which implies a much broader perspective than a FTA.

For sure, full participation of MPC's in an agricultural ESM is not politically nor economically feasible in the short-medium run. Let's consider the political economy effect of a more open EU-MPC's agricultural trade in the latter group of countries. With unrestricted and fully reciprocal agricultural trade liberalization, the winners will be agricultural exporters of Mediterranean products and urban consumers, while the losers will

be traditional agricultural producers and rural population in general (we could include migrants working in the EU Mediterranean agricultural sector, who will be forced to return to their home countries or to move to different activities). So, full reciprocal liberalization does not seem advisable. On the contrary, asymmetrical liberalization complemented with, or made conditional to, rural development programs, can minimize the losses of rural population and traditional agricultural producers, while preserving winners support (FEMISE, 2003).

This research pretend to analyse the consistency of agricultural policy measures as presented in ENP Action Plans with the priorities that a comprehensive and integral Road Map for agricultural liberalization in the Mediterranean should consider. In offers a new methodology that can easily be applied in the identification of reform priorities for different countries in different policy and institutional areas. Our conclusions point to the fact that agricultural reform and accompanying measures are not being taken into account in an operative manner in the ENP Action Plans, while they are according to our results high priority issues when compared with mere trade liberalization and facilitation measures. Furthermore, the results obtained by the methodology used in this research are reinforced by the Turkish case study presented in chapter 3. The main conclusions of the study are summarized following its chapter structure in the remaining of this executive summary.

1. The *Road Map* for Euro-Mediterranean Agricultural Trade Liberalization and the European Neighbourhood Policy

With the only exception of the FEMISE (2003) paper on agricultural liberalization, there have not been to date much, if any, discussion on the implications of ENP on agriculture. As we have seen, agricultural trade inclusion in the EMFTA has certainly been limited. So, completion of EMFTA by introducing agricultural trade would be the first step towards MPC's gradual participation in the agricultural chapter of the ESM. There may be some ambiguities in the Commission's proposal of "obtaining a stake in the EU's Internal Market", but the means to achieve such a stake are clearly defined: legislative convergence towards EU's *acquis communautaire*. This is why we have conceptualised the ENP for

MPC's as a policy agenda aiming at the europeanisation of MPC's *formal* economic institutions, and insisted that including agriculture in a sensible way is essential for the sustainability and completeness of the EMFTA (Escribano, 2006).

However, not every part of the relevant agricultural *acquis communautaire* needs to be adopted. In fact, agriculture is not included even in the European Economic Area (EEA). So, the stake in the ESM will clearly not automatically include free access to EU agricultural markets, a central issue for many MPC's. However, trade liberalization (asymmetric, gradual and reciprocal) and legislative approximation in standards is not sufficient to achieve integration of Euro-Mediterranean agricultural markets. Supporting measures are also important in order to prepare MPC's agriculture to face increasing competition from EU producers in continental products, and to unleash MPC's export potential in Mediterranean agriculture. These measures should be designed to foster modernization of the agricultural sector in MPC's, and require the reform of agricultural policies and institutions. These reforms should face the low productivity levels in traditional agriculture, but also bottlenecks in MPC's export agriculture related to supply infrastructures.

All of these dimensions (trade liberalization, legislative approximation in standards, agricultural reforms and rural development) are included in most ENP Action Plans with MPC's. However, agricultural measures identified and proposed in the Action Plans are fragmentary and biased towards trade facilitation. As happens with other areas of the Action Plans, they provide vaguely defined 'wish lists' which monitoring and implementation are not well specified, and where progress is difficult to asses. They do not form a coherent framework for agricultural reform in MPC's, nor a clear and well specified strategy towards the integration of MPC's and EU's agricultural sectors.

ENP Action Plans for Mediterranean countries include four kind of measures related to agriculture. Most are focused on trade issues, like agricultural trade liberalization and technical regulations and standards. By contrast, wider agricultural policy reform is only contemplated in the Lebanese and Moroccan Action Plans. Rural development is decoupled

from agriculture to be considered as a 'regional' issue, and it appears superficially in ENP Action Plans more like a mantra than as a concrete and well defined strategy. To achieve its objectives, Action Plans contemplates some loosely specified trade reforms for countries like Jordan, Lebanon and Morocco. For the rest of the countries these reforms are not even mentioned. The Moroccan and the Lebanese Action Plans are the only ones that link trade liberalization with agricultural policy reform and rural development.

Perhaps the better defined path of reform is found in the Moroccan Action Plan, but in practice, the commercial elements continue to be the central ones, and there are no significant innovations on the rural development or the agricultural policy reform fronts. So, concerning agricultural policy reform and rural development as necessary accompanying measures to the agricultural deepening of the FTA, the commitments by the Action Plans are scarce. In most cases, Action Plans include an impressive list of policy reforms, but they do not mention how to achieve these reforms, how to finance it, or what are the priorities and its timing.

One of the main set of measures concerning agricultural trade included in the ENP Action Plans refers to Sanitary and Phyto-Sanitary (SPS) issues. The shared objective is "to promote food safety and facilitate trade". In order to attain these goals, they mention the need to work towards full implementation of the WTO agreement on the application of the SPS measures and an active participation in relevant international bodies (OIE, IPPC, Codex Alimentarius). They also call for a gradual legislative approximation towards the principles of the EU legislation on SPS, food and animal traceability and hygiene. They consider as well strengthening regulation to prevent the placing on the market of unauthorized substances, including plant protection products, and ensure the monitoring of residues of these substances. However, there are also country-specific measures.

As can be seen, the best specified measures are directly related to facilitate agricultural trade by the completion of the EMFTA in agricultural matters, and its deepening by including the convergence of MPC's technical regulations towards the Community acquis. References to rural development or agricultural policy reform are scarce, with the only

exception of Lebanon and Morocco. So, the agricultural coverage of the Action Plans is far from incorporating the elements of the proposed Euro-Mediterranean Agricultural Pact or mentioned as the principles of the Rabat Road Map. The ENP Action Plans do not establish a coherent and comprehensive agricultural strategy, on which needed trade promotion issues are not complemented by concrete action towards the modernisation of MPC's agricultural sectors, nor by agreed policy reform measures.

2. Qualitative Aspects of the Turkish Experience on the Adaptation of Agricultural and Agro-Industrial Acquis

The aim of this part of the research is to obtain some possible implications of adopting the EU *acquis* in agriculture by third Mediterranean Countries from the Turkish experience. As regarding Turkey's position in this framework, one of its significant experiences is the implementation of a strong reform program for restructuring agricultural policies. This program provides a transition from the traditional agriculture scheme to the modern structure of farming with rural policy development. Turkey's Agricultural Reform Implementation Programme (ARIP) was designed to increase the efficiency of the sector and economy at large, thereby helping it meet one of the most basic pre-conditions set down by the EU: efficiency, competitiveness and sustainability in a unified agricultural market.

ARIP, as a whole, established a framework for implementation of a modern, a market oriented agricultural policy in Turkey by abolition of administered prices and of input and credit subsidies, restructuring of agricultural state-owned enterprises and agricultural sales cooperatives, and also introducing of the direct income support scheme. Concerning market integration in Turkey, complying with the CAP support regime first started with the cereal sector. All price and trade distorting support policies were abolished and a nationwide Direct Income Support (DIS) scheme was adopted. Payments were on a hectare basis. There has been a downward trend in the cereal area since 2000.

Concerning farm structure, in Turkey, family owned farm is the basic unit of agricultural production, and family members provide most of the farm labour. The fragmented farmland in consequence of the heritage law, have a very negative effect on the agricultural productivity and quality. These characteristics are broadly shared with the MPC's. The large farmers benefit more from the support policies than the smaller farmers. Consequently, the lack of economy of scale on the farming structure makes clear that poorer farming could not resists to the strong competition coming from the EU internal market in which average farm size is 5 time bigger than domestic farms. The full elimination of internal support or sharp decrease on input subsidies would cause important losses of welfare to these subsistence (self-sufficient) farming. A special rural project has to be developed for attempting to an average optimal farming size in the country. Similarly, problem remains and needs to be encountered by the future rural policy scheme and it is familiar to some MPCs.

As regard the rural development policy for reducing poverty in rural areas, a framework for the existing and prospective Agriculture and Rural Development Policies is laid down in several development plans. They focus on resolving rural problems of human resources, inefficient development and maintenance of physical, social and cultural infrastructure, high rate of hidden unemployment, insufficient diversification of agricultural and non–agricultural income generating activities, a high rate of dependence on agricultural subsistence and also low income level and relatively low quality of life for rural population and migration. It is obvious that from a political economy perspective, rural development can be considered as a "public good" and the necessary institutional mechanism has to be set up also in MPCs in order to provide it. In fact, the future of the small farms and their competitiveness in the potential single market need to be considered locally in MPCs.

As regard the export performance in the highly competitive single European market, Turkey must follow and fulfil all requirements made by the European Commission on the food quality policy. On this issue, many projects and programmes have been implemented in Turkey since 2000. Food exporters of MPCs have to meet all these standards and their

products have to be fully in compliance with marking, labelling, certification, compliance regulations and market requirements of the EU internal market.

As regard to the institutional reforms, Turkey is in a continuous progress in adapting the EU's institutional framework to bring Turkey's formal institutions and institutional bodies closer into line with EU's *acquis communautaire.* As regards the agricultural and food sectors, progress in adopting legislation and formal rules need to be accompanied by the enforcement capacity. This is also a crucial issue for MPCs, which emphasized to by EU to improve their domestic food market.

3. Analysis of Relative Similarity between the Structure of Exports of the Mediterranean Countries and the European Union (ISREE)

As we have shown above, the Road Map for agricultural liberalization mainly consists on two vectors: trade liberalization and trade facilitation measures. In order to analyse the consequences of an eventual process of agricultural liberalization between the European Union and the Mediterranean Partner Countries, and to develop a useful tool for establishing an operative and comprehensive negotiation procedure, it is essential to observe the similarity of the exports among the two regions. A bigger similarity in the structure of agricultural exports between the European Union and each one of the MPC's reveals, to some extent, a higher degree of potential competition. So it is relevant to obtain a mechanism that allows policy-makers to draw a detailed 'agricultural competition map' of countries within the Euro-mediterranean region.

With the aim of overcoming the shortcomings of existing indicators, we recur to a new approach carried out by the application of a Cluster analysis. In our view, this technique could be helpful in deepening policy-makers' insight on the characteristics of Euro-mediterranean agricultural trade when contemplating any agricultural trade liberalization process. The contribution of our analysis is the construction of a quantitative index of relative exposure for each MPC's *vis-à-vis* each EU member state, and with the rest of the MPC's. In this regard, we find it a useful instrument in order to identify paths to be

explored by agricultural negotiations on the trade facilitation and liberalization domain in the context of a Road Map for agricultural liberalization. It can be applied not only to identify items to prioritise in a liberalizing agenda, but also sectors and sub-sectors to be tackled by any institutional or productive support, either by the EU or the MPC's concerned.

This index presents some advantages regarding those developed by others authors in regard to our research:

- It takes into account a multivariate structure as for products and countries.
- It doesn't present results of difficult or confused interpretation.
- It is an starting point to discriminate among the most outstanding country-to-country relationships when beginning processes of agricultural trade liberalization (or of any other type) between the EU and other countries.

It is a useful indicator for helping the policy-makers in assessing the positive and adverse effects in a liberalization process that concerns different states with very different agricultural structures, endowing him with an easy to interpret tool to frame necessarily asymmetric negotiations, in the North-South commercial concessions dimension, as well as in eventual North-North compensatory measures, such the one proposed in the Agricultural Euro-Mediterranean Pact (Lorca et al., 2006).

Our results point out to some relevant conclusions in the formulation of a Road Map for agricultural trade liberalization:

- In a country-by-country basis, the competition picture arising from the ISREE shows that for certain countries, like Morocco or Tunisia, negotiations affects a smaller number of EU countries, making probably easy to conduct better focused agricultural trade liberalization negotiations; for Egypt and Algeria negotiations should be even easier, but for most Mashrek countries, as well as for Turkey, the multiplicity of countries affected make negotiations prospects more complex.
- From a regional perspective, developing a Road Map with Maghreb countries including a sub-regional dimension seems easier than for the Mashrek. The Turkish

situation looks rather unique and would be much better approached in the Custom Union context.

4. Quantification of countries' characteristics in the design of a specific "Road Map For Agricultural Trade Liberalization"

With the aim of generating a comparable quantitative framework to establish different "Road Maps" for each one of the MPC's, we have considered the following aspects:

- To determine a group of "fundamental vectors" to analyse the previous situation of each country.
- To gather the set of available indicators to measure these vectors.
- To generate our own indicators (factors) for each one of the vectors, trying that each one of them is represented by the minimum possible variables and, at the same time, it captures the maximum available information applying factorial analysis.
- To establish a interpretation guide for the generated factors.
- To analyse the similarities and dissimilarities among each country and in the whole region.
- To carry out a brief individual synthesis analysis concerning each country's situation regarding these indicators, generating an useful record to determine which matters are to be prioritised.

The analysis' final goal is to provide a classification methodology particularized for each country depending on some objective characteristics, derived from its relative situation regarding a set of indicators that summarise all the working variables. The final result is summarized by the following table:

	High-priority (0 - 25)	High-medium priority (26 - 50)	Medium-low priority (51 - 75)	Low priority (76 - 100)
Algeria	Resources for production External food dependence Economic activity performance Water resources Index of Democracy Exchange rate:% 2000-2006 Exchange rate: variation coefficient 2000-06 Available agricultural resources Wealth Use of Transport Means Agricultural Exports Level	Transport means Household-agricultural water use State support to agriculture Agricultural Obtained production Road infrastructure Tariff Protection	Human capital Use of available agricultural resources Agricultural Exploitation Size more than 20 Hc (%)	Level of Wealth distribution Machinery Industry water use Bureaucratic obstacles
Egypt	Available agricultural resources Agricultural Exploitation Size more than 20 Hc (%) Water resources Wealth Performance of Economic Activities Obtained production Index of Democracy	Tariff protection Road infrastructure External food dependence Means of transport Bureaucratic obstacles Industry water use Human capital	Exchange rate:% 2000-2006 Agricultural Exports Level	Exchange rate: variation coefficient 2000-2006 Household-agricultural water use Use of available Agricultural resources Resources for production Machinery State support to agriculture Use of Transport Means Wealth distribution level
Israel	Water resources Use of available agricultural resources Bureaucratic obstacles Agricultural Exports Level Household-agricultural water use Tariff Protection Use of Transport Means Exchange rate:% 2000-2006 Exchange rate: variation coefficient 2000-06 Transport means State support to agriculture	Available agricultural resources Industry water use		Human capital Road infrastructure Wealth Economic activity performance Index of Democracy

	High-priority (0 - 25)	High-medium priority (26 - 50)	Medium-low priority (51 - 75)	Low priority (76 - 100)
Jordan	Tariff protection Means of transport Exchange rate: variation coefficient 2000-2006 Water Resources Wealth Available agricultural resources Exchange rate:% cto. 2000-2006 Index of Democracy State support to agriculture Road infrastructure	Resources for the production Industry water use Bureaucratic obstacles Household-agricultural water use	Agricultural Exploitation size more than 20 Hc (%) Performance of Economic Activities Wealth distribution level External food dependence Use of Transport Means	Machinery Obtained production Agricultural Exports Level Human capital
Lebanon	Household-agricultural water use Industry water use Machinery State support to agriculture Exchange rate: variation coefficient 2000-2006 Agricultural Exploitation Size more than 20 Hc (%) Use of available Agricultural resources Exchange rate:%. 2000-2006 Performance of Economic Activities Means of transport Bureaucratic obstacles	Use of Transport Means Road infrastructure Water resources Resources for production Obtained production	Index of Democracy Agricultural Exports Level	Available agricultural resources External food dependence Tariff protection
Morocco	Road infrastructure Human capital Exchange rate:%. 2000-2006 Wealth distribution level Index of Democracy Use of Transport Means Obtained production Wealth Resources for production	Industry water use Water resources Performance of Economic Activities Agricultural Exploitation Size more than 20 Hc (%) Means of transport Bureaucratic obstacles Exchange rate: variation coefficient 2000-2006 Agricultural Exports Level State support to agriculture	Machinery Tariff protection	Available agricultural resources Use of available Agricultural resources Household-agricultural water use External food dependence

	High-priority (0 - 25)	**High-medium priority (26 - 50)**	**Medium-low priority (51 - 75)**	**Low priority (76 - 100)**
Tunisia	Use of Transport Means Wealth distribution level Index of Democracy Resources for production Water resources Exchange rate:% 2000-2006 Bureaucratic obstacles Road infrastructure Means of transport Exchange rate: variation coefficient 2000-2006	Wealth Industry water use Obtained production Agricultural Exports Level Machinery Performance of Economic Activities	Use of available Agricultural resources External food dependence Human capital Household-agricultural water use	Tariff protection State support to agriculture Available agricultural resources Agricultural Exploitation Size more than 20 Hc (%)
Turkey	Agricultural Obtained production Wealth Wealth Distribution Level Resources for production	Use of Transport Means Road infrastructure Machinery Tariff Protection Bureaucratic obstacles Agricultural Exploitation size more than 20 Hc (%) Economic activity performance	Household-agricultural water use Agricultural Exports Level Index of Democracy Industry water use Use of available agricultural resources	External food dependence Available agricultural resources State support to agriculture Human capital Water resources Transport means Exchange rate: variation coefficient 2000-06 Exchange rate:% 2000-2006

Note: In the case of Israel the vectors of Modernization, and Lebanon, the vectors of Development haven't been estimated because there is not enough information about their component indicators.

In the previous table it is shown to what degree it is needed taking corrective measures in each concrete vector for each country. These results point then to the setting of a first priority agenda in order to design a specific "Road Map." We want to stress again that this research goal is not to offer a specific design of such a Road Map, but rather proposing a methodology in order to built policy-consistent Road Maps. Sure, a relatively good situation in the southern Mediterranean context does not means that no policy reforms are needed, but to some extent it signals the path to prioritise issues.

However, from the table below we can obtain relevant insights in the general patterns of a Road Map that fits the needs of the different involved countries, and try to compare our conclusions with the ENP Action Plans approach. There are some horizontal priorities for all the countries that are clearly underestimated by Action Plans, like the water resources issue, which should be considered as a priority in any integral approach to Euro-Mediterranean agriculture, with the only exception of Turkey. However, within the water resources issue, the situation also clearly differs between countries for which agricultural water use is a priority (Algeria, Israel, Jordan and Lebanon) or not (the rest of countries). Another almost generalised issue, with few exceptions (Israel, Lebanon, Turkey), is the lack of democracy, also mentioned in ENP Country Reports, which we assume does not allow agricultural sector actors to transfer its policy preferences into their governments.

The level of obtained production is shown to be an almost common priority, too. With the exception of Israel and Jordan, the rest of the countries have problems in this respect. Concerning low productivity, mechanization would be a priority for Lebanon, Tunisia and Turkey. Another common trait is the shortcomings in the transportation system. All countries, except Israel, need to prioritise its transport infrastructures , another issue that is not mentioned in Action Plans when dealing with the agricultural sector reforms. Exchange rate stability also seems a priority for all countries with the only exception of Egypt.

But most priorities are country-specific and call for a more detailed level of negotiations. For instance, concerning tariff reduction, a significant part of any Euro-Mediterranean

Agricultural Pact, our results point out that it won't be a priority for countries such as Lebanon, Morocco or Tunisia, whilst it should be a high priority for the rest of the countries. External food dependency will be a priority only for Egypt and Algeria. Export promotion seems an issue to be prioritised in Algeria, Morocco and Tunisia, relative to the rest of the countries. Concerning agricultural resources, it is a priority for most countries, with the exception of Lebanon, Morocco, Tunisia and Turkey. Reducing state support to agriculture, mainly subsidies, is a priority for most countries, including Israel, with the only exception of Egypt, Tunisia and Turkey.

So, the picture offered by our results highlights that trade-related issues are not such a high priority issue in several MPC's when compared with other non-trade related aspects. In the previous chapter of this research we have shown that different degrees of competition exposure existis within the Euro-Mediterranean area, then making it difficult to achieve a regional, or sub-regional, Road Map; only the Morocco-Tunisia couple could be interesting in exploring a joint dynamic. When adding the policy dimension, we confirm that no consistent policy framework can emerge that fits MPC's as a whole.

This case-by-case approach, on the contrary, fits well the ENP framework. But our results points to the fact that ENP Action Plan priorities are not fully consistent either with the MPC's agricultural situation. Sure, trade liberalization and trade facilitation measures are important, and MPC's need them. But issues such as water resources, transport infrastructure, state support to agriculture, food dependency or low production levels are almost absent in the ENP documents (at less in an operative manner), that tend to focus on trade-related issues.

These results reassess the significance of non-trade, accompanying issues in any Road Map for agricultural trade liberalization. It also raises some doubts about the viability of a regional approach for the implementation of such a Road Map. Finally, it shows that ENP Action Plans do not adopt a truly country-specific approach when dealing with agriculture, and that there is much more room for fostering agricultural policy reform with a better prioritisation pattern.

CHAPTER 1

THE *ROAD MAP* FOR EURO-MEDITERRANEAN AGRICULTURAL TRADE LIBERALIZATION AND THE EUROPEAN NEIGHBOURHOOD POLICY

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Introduction

The EU Ministers of Foreign Affairs granted in The Hague (November 2004) the development of a *Road Map* for the liberalization of agricultural trade between the EU and the Mediterranean Partner Countries (MPC's), including its non-commercial aspects (rural development, quality policies, improvement of productivity, institutional reforms, etc.). These aspects condition the concrete drawing and the success of Euro-Mediterranean agricultural trade liberalization. The adoption of a Road Map is related to the logic of the European Neighbourhood Policy (ENP), and implies that the adopted measures must be negotiated with the MPC's. Its aim is to achieve a bigger participation of MPC's in the European Single Market.

In fact, it implies a Euro-Mediterranean Agricultural Pact, as the AGREEM (2002, 2003) and FEMISE (2003) have been proposing for years. This Pact would be characterized by a package of agricultural trade liberalization and agricultural support measures. On the trade liberalization side, a gradual, reciprocal and asymmetric liberalization strategy is proposed, permitting to consider some exceptions for especially sensitive products. On the accompanying measures, the aim is the modernization of MPC's agricultural sector and institutions in order to face the opportunities and competitive pressures stemming from trade liberalization. The close link between the Road Map and the ENP is explicitly presented in the EU/Lebanon Action Plan (AP)(p. 11), which calls for "further progressive

liberalisation of trade in agriculture, processed agricultural products and fisheries, building on the Rabat roadmap and in coherence with the reform process in agriculture and rural development"

I.1. Euro-Mediterranean agricultural trade liberalization: the precedents of the Road Map

The economic research on Euro-Mediterranean agricultural liberalization and its effects began to be considerable only these last years. However, the quantitative studies specifically dedicated to Euro-Mediterranean agricultural trade are not very numerous, due to the complexity to measure the tariff and non tariff barriers, and to the insufficiency of statistical data with regard to agriculture in the MPC's. One of the most interesting acquirements of the FEMISE network has been to develop an important number of studies on Mediterranean agriculture, that stimulated research and the obtaining of data on the sector. Among these, some FEMISE projects approached the analysis of the agricultural Euro-Mediterranean trade and suggested some relevant economic policy implications. That work originated the FEMISE (2003) paper on agricultural trade liberalization, which claimed for a Euro-Mediterranean agricultural pact to set up a process of liberalization *cum* modernization in Euro-Mediterranean trade as the way to achieve further integration of agricultural systems north and south of the Mediterranean.

Some FEMISE studies targeted the export side of MPC's agriculture. Muaz et al. (2000, 2004), for example, concentrated on the export possibilities of the Mashrek countries towards the EU. They conclude that a better management of technical issues (irrigation) and of the possibilities offered by the import calendars of horticultural products, as well as the development of the non-traditional productions, could have a positive impact on the export supply of the Mashrek countries. Tangermann (1997) has also underlined the opportunities of MPC's Mediterranean agricultural exports toward the EU after the Uruguay Round, a question that has also been analysed by Mahía, Arce and Escribano (2005).

The FEMISE studies by the AGREEM (2000, 2005), and Arce and Escribano (2001) obtained very meaningful effects in terms of employment creation for a unilateral liberalization on the European side for the Mediterranean agricultural exports of the MPC's. But this AGREEM studies also underlined the importance to introduce the necessary reforms in the agricultural policies and the institutions, public and private, that condition the development of the agricultural export supply in MPC's. Similar findings are presented in García Alvarez-Coque (2002) and García Alvarez-Coque and Jordán Galduf (2006), who underlines that the agricultural supply insufficiencies of MPC's increase the transaction costs of agricultural exports and erode its comparative advantages.

Other studies approached the impact on the import side of MPC's. Chemingui and Dessus (2001), and Chemingui and Thabet (2001) get interesting results, estimating that the liberalization of the imports in Tunisia, notably in cereals, could have a negative impact on Tunisian income, increasing inequalities and poverty in the rural households. Manarious and Mehyar (2004) found similar problems for the Egyptian case. An AGREEM (2002) FEMISE study, Arce, Mahías, Escribano and Lorca (2005), and Arce and Mahía (2004), demonstrated that a reduction of the tariff protection in continental agricultural products (cereals, meats, dairy products) by MPC's not being accompanied by a reduction of the support granted by the EU to these productions would not be affordable for MPC's, due to the estimated reduction in agricultural employment. But these studies also show that a reduction of the European agricultural domestic support without a reduction of the agricultural tariffs in the MPC's would not be sustainable either, due to the price rises in agricultural staples that it would entail.

From a general viewpoint, of other studies (Chaherli, 2002; IARC, 2005) are based on a review of the existing quantitative literature to counsel a bigger inclusion of agriculture in the Euro-Mediterranean FTA, but without considering any accompanying measures. A broader perspective and more oriented toward the adoption of concrete measures of economic policy, including accompanying measures, is adopted by other studies, most of them achieved in the context of the FEMISE network. The first published proposal on the need of a Euro-Mediterranean Agricultural Pact for the agricultural trade coherent with the

present approach of the Road Map is Escribano and Lorca (2000), that inspired the AGREEM (2000, 2002, 2005) FEMISE research.

Table 1: Summary of Euro-Mediterranean agricultural trade liberalization scenarii

Scenarii	**Viability/ Advisability**	Problems	**MPC's Winners & Losers**	**EU Winners & Losers**	Accompanying policies
I. Maintaining the status quo	Yes/No	Preferences are insufficient for MPC's agricultural exports to develop Difficult to compensate for difficulties in the industrial sector MPC's could benefit from cheaper food supply There will be no incentives to modernize MPC's agriculture			Substantial increase in EU aid flows towards MPC's, in order to ease the adjustment cost of the industrial FTA
II.1. A Euro-Mediterranean CAP	No/No	Extending producers support to MPC's would be very expensive and difficult to justify Criticisms about CAP measures			
II.2. A Euro-Mediterranean FEOGA-orientation for MPC's	Yes/Yes,	'rent-seeking' in MPC's farmers Limited capacity of MPC's to administer such programs in a transparent and accountable manner	Winners: Modern agriculture, MPC's administration	Losers: Med EU producers, taxpayers	-Upgrading MPC's administrative capabilities and accountability -Agricultural liberalization
III. Unilateral EU liberalization in Med products	Yes/Gradual	Modest gains in MPC's, but substantial gains at a sectoral level Necessary but not sufficient condition for MPC's exports to grow Moderate costs in Med EU, but high sectoral and regional costs EU asymmetries in cost-sharing	Winners: exporters, big landowners Losers: consumers, traditional agriculture	Winners: Consumers Losers: Med producers	-Restructuring EU Med agricultural sector and/or compensating EU Med producers -Modernization measures in MPC's agricultural sector
IV. Multilateral liberalization & bilateral reciprocal EU-MPC's liberalization in continental products	Yes/Gradual	MPC's tariff dismantling makes agricultural prices to fall to a bigger extent than EU domestic support reduction push them upwards Price reduction are significant in prepared fruits and nuts, and butter In cereals and milk, price reduction do not seem so dramatic as expected	Winners: Agricultural exporters and modern agriculture, urban consumers, industry Losers: Traditional agriculture, rural consumers	Winners: Consumers, taxpayers Losers: Small & medium continental producers	CAP reform MPC's rural development & modernization Upgrading MPC's administrative capabilities and accountability

FEMISE (2003)

A conceptual systematisation of the elements of a Euro-Mediterranean Agricultural Pact can be found in AGREEM (2003 and 2004) and Escribano, Arce and Lorca (2004). The FEMISE report (2003) on agricultural trade liberalization incorporated an important part of the AGREEM proposals, adopting a broad vision of the problem and bringing up alternative scénarios for Euro-Mediterranean agricultural trade liberalization (see table 1). This approach has also been retained in the EU-MED AGPOL project "Impacts of agricultural trade liberalization between the EU and Mediterranean Countries", which contemplates a full and a partial liberalization scénario.

As the EU Ministers of Foreign Affairs recognised in The Hague (November 2004), any Euro-Mediterranean Agricultural Pact must combine an asymmetric and reciprocal trade liberalization, as well as accompanying measures in order to modernise the agricultural sector of the MPC's. These accompanying measures should be included in the Action Plans and be monitored by the ENP, so to face the competition with European producers in continental agriculture. To date, the progress of Euro-Mediterranean agricultural liberalization is insufficient, but it is obvious that the decisive moment for liberalization is coming, and that short term concrete measures should be applied. This is precisely the aim of the Road Map for Euro-Mediterranean agricultural liberalization presented by the Commission in 2005 and adopted by consensus in Rabat by high officials of the European Commission and the MPC's, except Israel and Syria.

The Barcelona Process strategy of trade liberalization initially relied on free trade in manufactures, where the burden of adjustment falls entirely in MPC's, making the Euro-Mediterranean FTA (EMFTA) an incomplete FTA. However, the Barcelona Declaration included a commitment to expand the EMFTA to agricultural trade. Moving forward to include agricultural trade in the EMFTA has proven to be very difficult. For instance, the 2003 EU-Morocco Agricultural Agreement limited the concessions granted by the EU in fruits and vegetables (mainly tomatoes) by asking reciprocity in cereals, meat and dairy products. This framework of limited inclusion of agricultural trade in the EMFTA changed after the launching of the ENP, which implies a much broader perspective than a FTA.

The proposal by the European Commission of a ENP in the year 2003, and its subsequent developments[1], has attracted a lot of attention from both academics and EU Mediterranean Member States (MS) officials. The initiative has received a lukewarm political reception in many MPC's, and even open opposition by countries like Egypt. Only Israel, Jordan, Lebanon, Morocco, the Palestinian Authority and Tunisia have shown interest to date in proceeding beyond current Association Agreements (AA) to develop ENP Action Plans. The economic objective of the ENP is to offer MPC's "a stake in the European Single Market (ESM)". This means MPC's taking on the obligations of the relevant chapters of the ESM acquis communautaire, including agricultural trade.

For sure, full participation of MPC's in an agricultural ESM is not politically nor economically feasible in the short-medium run. Let's consider the political economy effect of a more open EU-MPC's agricultural trade in the latter group of countries. With unrestricted and fully reciprocal agricultural trade liberalization, the winners will be agricultural exporters of Mediterranean products and urban consumers, while the losers will be traditional agricultural producers and rural population in general (we could include migrants working in the EU Mediterranean agricultural sector, who will be forced to return to their home countries or to move to different activities). So, full reciprocal liberalization does not seem advisable. On the contrary, asymmetrical liberalization complemented with, or made conditional to, rural development programs, can minimize the losses of rural population and traditional agricultural producers, while preserving winners support (FEMISE, 2003).

If well targeted, such a measure could benefit the poorest segments of MPC's (poverty is mainly a rural phenomenon, while urban poor would benefit from reduced prices in staples), without harming MPC's agricultural exporters. Moreover, agricultural liberalization can be made conditional to the improvement of agricultural land tenure regimes. Agricultural land cannot be owned by foreigners in most MPC's, and the renting

[1] Communication from the Commission to the Council and the European Parliament, *Wider Europe - Neighbourhood: A New Framework for Relations with our Eastern and Southern Neighbours*, Brussels 11 March 2003, COM (2003) 104 final; and Communication from the Commission, *European Neighbourhood Policy Strategy Paper*, Brussels 12 May 2004, COM (2004) 373 final.

regime is barely attractive (for instance, in a very well publicised move, the Moroccan government has offer new agricultural lands for rent, but the conditions does not provide the incentives for EU producer de-localising production in the country, mainly due to long renting periods). The de-localisation of export-oriented agricultural production (something that has already happen in Mexico) can also help to trigger support for reforms among agricultural workers.

Box 1: The Pillars of a Euro-Mediterranean Agricultural Pact

- Reciprocal, gradual and asymmetrical trade liberalization
- Supporting modernization in the EM agricultural sector
- Building administrative capacity and making support procedures transparent in order to fight rural poverty
- Fostering rural development in MPC's
- Improving EU-MPC's agricultural cooperation
- Balancing the gains and losses of agricultural liberalization
  - Focusing support in MPC's traditional agriculture
  - Upgrading EU Mediterranean producers structures

Source: FEMISE (2003)

Along this line, the FEMISE network has proposed an asymmetrical, reciprocal an gradual agricultural trade liberalization, supported by financial support to MPC's traditional agriculture and conditioned to a clear commitment by MPC's governments to implement rural development and agricultural extension policies. On its 2003 report on agricultural liberalization, the FEMISE also found great complementarities between the ENP and the contents of a Euro-Mediterranean Agricultural Pact, which main contents have been summarized in box 1.

I.2. The European Neighbourhood Policy and agriculture in MPC's

As we have already mentioned, the most recent ENP Mediterranean AP's (Lebanon, p. 11) already refers to the Road Map as the guideline of agricultural trade liberalization, which should be coherent with the modernization of MPC's agriculture and rural development. So, it is interesting to analyse the agricultural contents of the ENP AP's for Mediterranean countries, and to what extent they are coherent with the elements of the Road Map that the Agricultural Pact implies. This task is conducted in the coming sections of the paper**.**

For implementing the ENP the Commission has proposed the following method in the ENP Strategy Paper (p. 3):

"…together with partner countries, to define a set of priorities, whose fulfilment will bring them closer to the EU. These priorities will be incorporated in jointly agreed Action Plans, covering a number of key areas for specific action: political dialogue and reform; trade and measures preparing partners for gradually obtaining a stake in the EU's Internal Market; justice and home affairs; energy, transport, information society, environment and research and innovation; and social policy and people-to-people contacts"

The most attractive economic figure explicitly included in the ENP is "obtaining a stake in the EU's Internal Market". It is not clear in the Commission's documents what does it really means, and what degree of participation in the ESM it will imply. The ENP Strategy Paper (p. 14) conceives it as "based on legislative and regulatory approximation, the participation in a number of EU programmes and improved interconnection and physical links with the EU". Furthermore, the Strategy Paper conceive the ENP as an extension of the Barcelona Process' (BP) AA, which potential would not have been yet realised: for the Commission (2004, p. 7) ENP objective is to "enable the EU and its partners to attain the full benefit of the structures which are in place". Moreover, the ENP "will be implemented through the Barcelona process and the AA with each partner country" (op. cit., p. 6).

It is interesting to note that, with the only exception of the FEMISE (2003) paper on agricultural liberalization, there have not been to date much, if any, discussion on the implications of ENP on agriculture. As we have seen, agricultural trade inclusion in the EMFTA has certainly been limited. So, completion of EMFTA by introducing agricultural trade would be the first step towards MPC's gradual participation in the agricultural chapter of the ESM. There may be some ambiguities in the Commission's proposal of "obtaining a stake in the EU's Internal Market", but the means to achieve such a stake are clearly defined: legislative convergence towards EU's *acquis communautaire*. This is why we have conceptualised the ENP for MPC's as a policy agenda aiming at the europeanisation of

MPC's *formal* economic institutions, and insisted that including agriculture in a sensible way is essential for the sustainability and completeness of the EMFTA (Escribano, 2006).

However, not every part of the relevant agricultural *acquis communautaire* needs to be adopted. In fact, agriculture is not included in the European Economic Area (EEA), the initial model for the Wider Europe/ENP initiative. For instance, the CAP-related acquis communautaire is not adopted by EEA EFTA countries, and agricultural trade proceeds through specific trade agreements, much in the same way as happens with the last EU-Morocco agricultural trade agreement. So, the stake in the ESM will clearly not automatically include free access to EU agricultural markets, a central issue for many MPC's. Even EEA treatment for MPC's agricultural exports seems difficult to achieve, because agricultural trade by EFTA EEA countries is rather limited and remains subjected to similar agricultural policies, Sanitary and Phyto-Sanitary (SPS) regulations, and cost structures than those prevailing in the EU. But harmonization of standards in the agricultural sector is a critical area for legislative convergence and a pre-requisite to any participation in the European agricultural market.

However, trade liberalization (asymmetric, gradual and reciprocal) and legislative approximation in standards is not sufficient to achieve integration of Euro-Mediterranean agricultural markets. Supporting measures are also important in order to prepare MPC's agriculture to face increasing competition from EU producers in continental products, and to unleash MPC's export potential in Mediterranean agriculture. These measures should be designed to foster modernization of the agricultural sector in MPC's, and require the reform of agricultural policies and institutions. These reforms should face the low productivity levels in traditional agriculture, but also bottlenecks in MPC's export agriculture related to supply infrastructures. Modernization of MPC's agricultural sector will imply in the medium run the reduction of the labour force employed in agriculture. Rural exodus towards already congestioned cities is a predictable outcome that should be prevented. Reform of MPC's agricultural sector has to be accompanied by rural development programs in order to upgrade rural living conditions, to diminish rural poverty and to diversify economic activities in rural areas.

All of these dimensions (trade liberalization, legislative approximation in standards, agricultural reforms and rural development) are included in most ENP Action Plans with MPC's. However, as we will see in the next section, agricultural measures identified and proposed in the Action Plans are fragmentary and biased towards trade facilitation. As happens with other areas of the Action Plans, they provide vaguely defined 'wish lists' which monitoring and implementation are not well specified, and where progress is difficult to asses. They do not form a coherent framework for agricultural reform in MPC's, nor a clear and well specified strategy towards the integration of MPC's and EU's agricultural sectors.

I.3. Agricultural liberalization and accompanying measures in Mediterranean ENP Action Plans

ENP Action Plans for Mediterranean countries include four kinds of measures related to agriculture. Most are focused on trade issues, like agricultural trade liberalization and technical regulations and standards. By contrast, wider agricultural policy reform is only contemplated in the Lebanese and Moroccan Action Plans. Rural development is decoupled from agriculture to be considered as a 'regional' issue, and it appears superficially in ENP Action Plans more like a mantra than as a concrete and well defined strategy.

Table 2 presents the agricultural trade liberalization content of Mediterranean Action Plans. As can be seen, in all of them the trade liberalization component is prominent when compared with the other vectors identified by the literature and compromised by the Rabat Road Map. In the Israel Action Plan, by comparison with the AA, agriculture trade liberalization commitments are very vague: its wording is plagued with euphemisms and mere intentions, and only concerns processed agricultural products. In fact, concerning agricultural trade the Israel Action Plan try to address the limits of the EU-Israel FTA. As far as Action Plans are negotiated and co-owned by the EU ant the neighbour country, there are no concessions on an issue on which both parties are reluctant to further liberalise agricultural trade.

For Arab MPC's, the agricultural contents of Action Plans seems, in principle, more important. Explicitly (Jordan, Palestinian Authority and Tunisia) or implicitly, the Action Plans perspectives are "deepening trade and economic relations, extending them progressively to cover agriculture, and to provide the conditions for increasing investment and exports". This is an important policy goal, coherent with the Road Map and the Agricultural Pact approaches. It calls for the inclusion of agriculture in the EMFTA, but also recognises that freer trade should be backed with measures to upgrade MPC's agricultural supply structures and resources.

To achieve that objective, Action Plans contemplates some loosely specified trade reforms for countries like Jordan, Lebanon and Morocco. For the rest of the countries these reforms are not even mentioned. For Jordan and Lebanon, the emphasis is "to enhance export potential by further liberalisation of trade in agriculture and modernisation of the SPS systems" (we will concentrate on the latter in the coming pages). The Lebanese Action Plan also highlights the need to "identify and adopt accompanying measures for structural, institutional, legal and administrative support to ease access to export markets, including approximation of technical legislation". Concerning the FTA, it calls for progressive liberalization of agricultural trade, including processed products and fisheries. Being to date the only Action Plan negotiated after the launching of the Rabat Road Map, it is also the only one to mention it as a guideline.

Table 2: Agricultural trade liberalization in the ENP Action Plans

	Perspectives	**Reforms**	**FTA**
Israel			The Parties will examine trade with a view to improve reciprocal market access for processed agricultural products
Jordan	Deepening trade and economic relations, extending them progressively to cover agriculture, and to provide the conditions for increasing investment and exports	Enhance export potential by further liberalisation of trade in agriculture and modernisation of the SPS systems	
Lebanon		Enhance export potential by further liberalisation and modernisation of SPS systems Identify and adopt accompanying measures for structural, institutional, legal and administrative support to ease access to export markets, including approximation of technical legislation.	Further progressive liberalisation of trade in agriculture, processed agricultural products and fisheries, building on the Rabat roadmap and in coherence with the reform process in agriculture and rural development
Morocco		Ensure a coherent agricultural policy (including sustainable rural development and product quality policy) with the aim of convergence towards a FTA	Medium term: Continue the liberalisation of agricultural and processed agricultural products in accordance with Art. 10 of the AA
Palestinian Authority	Deepening trade relations, extending them progressively to cover agriculture and to provide the conditions for increasing investment and exports		Proceed with gradual liberalisation of trade in agricultural and fishery products
Tunisia	Deepening trade relations which will be progressively extended to cover agriculture and to create favourable conditions for an increase in investment and export		

The Moroccan and the Lebanese Action Plans are the only ones that link trade liberalization with agricultural policy reform and rural development. Perhaps the better defined path of reform is found in the Moroccan Action Plan, which calls for a "coherent agricultural policy (including sustainable rural development and product quality policy) with the aim of convergence towards a FTA". In the FTA domain, the Moroccan Action Plan committed to "continue the liberalisation of agricultural and processed agricultural products in accordance with Art. 10 of the AA". This has already been done through the 2003 EU-Morocco Agricultural Agreement and ongoing negotiations following the Road Map approach. But in practice, the commercial elements continue to be the central ones, and there are no significant innovations on the rural development or the agricultural policy reform fronts.

So, concerning agricultural policy reform and rural development as necessary accompanying measures to the agricultural deepening of the FTA, the commitments by the Action Plans are scarce. Only the Moroccan and Lebanese Action plans include a concrete list of agricultural policy reforms, summarised in table 3. In both cases the policy reform agenda includes modernization of export-oriented supply structures and rural development issues.

Among the modernizing measures identified for Morocco we can list the improvement of agricultural structures, including marketing chains, the promotion of quality, incentives for private agricultural investment, research on improvements in productivity and quality, sectoral agricultural policy reforms, and land tenure reform. The Action Plan also contemplates rural development measures, like improving rural infrastructure, diversification of rural economic activities and of socio-economic measures to accompany the previous reforms. This an impressive list of policy reforms, most of which have failed to be introduced in Morocco since independence. However, the Action Plan do not mention how to achieve these reforms, how to finance it, or what are the priorities and its timing.

Table 3: Agricultural Reforms in the EU/Morocco and EU/Lebanon Action Plans.

Morocco	**Lebanon**
-improve agricultural structures and marketing chains; -develop and improve rural infrastructure; -diversification of rural economic activities; -development and promotion of quality products; -private-sector investment incentives; -research on improvements in productivity and quality -introduction of socio-economic measures to accompany the various reforms; -support the introduction of sectoral agricultural policy reforms; -support land tenure reform	–identify and adopt accompanying measures providing for the structural, institutional, legal and administrative support to ease access to export markets, including approximation of technical legislation. –identify and adopt measures in rural development and quality of production. –to encourage private investment. –strengthen the administrative capacity of the land cadastre. –address the role of agricultural research centres in improving productivity, food safety and quality. –promote the use of modern technology in different production phases -enhance the management of the demand on water

The reforms included in the Lebanese Action Plan are quite similar, perhaps with a greater bias towards export-oriented agriculture. Approximation of legislation is explicitly mentioned, but as a tool to ease access to export markets. In general institutional upgrading is prominent, including the administrative capacity of the land cadastre and the role of agricultural research centres. Modernization measures also focus on promoting the use of modern technologies, quality and safety, encouraging private investment. A crucial point, amazingly absent in other Action Plans is the need to improve the management of water resources. Finally, rural development is mentioned, but without any operative strategy for its implementation.

The last set of measures concerning agricultural trade included in the ENP Action Plans refers to Sanitary and Phyto-Sanitary (SPS) issues, summarised in table 4. These are the most important provisions in the EU/Israel ENP Action Plan. For Israel, the ENP Country Report (p. 19) highlights that Israel "lacks and updated phyto-sanitary legislation", as requested in Article 46 of the AA and by WTO rules, that "causes disruption to trade flows". For instance, for vegetables, the system in place in Israel mainly consists of import permits and additional phytosanitary declarations, provoking incertitude on EU exporters and making administrative procedures

cumbersome to them. Sadeh (2002, p. 209) warns that "Israeli importers of plants and vegetables from the EC share this concern and complain that the Israeli authorities make it very difficult to obtain a license".

Regarding Kosher food, non-Kosher meat cannot be imported in Israel, but the EU correctly understood that this is a sensitive issue and it is not even mentioned in the ENP Action Plan or the ENP Country Report. However, European Commission's officials have also expressed their concerns on Kosher requirements being instrumented in a discriminatory manner for imports from the EU when compared with imports from the US. Israel has also issued an import ban on live bovines coming from the EU, because of Bovine Encephalopathy (BSE), in spite of the measures introduced by the EU since 1989, that the latter understand provide the highest standard of consumer protection worldwide (including Israeli SPS)[i].

On the Israeli side, EU's SPS are seen as having a protective dimension, and Israeli officials have tried to obtain equivalence agreements like the ones the EU has signed with other industrial countries. As happens with industrial standards, the ENP Action Plan approach consists on looking for convergence of Israeli legislation over the EU's acquis communautaire, instead of signing an equivalence bilateral agreement. In order to achieve it, the ENP Action Plan calls for increased co-operation between EU and Israel accreditation bodies and in the field of international standards for fruits and vegetables. This is a common feature of all Mediterranean Action Plans.

The ENP Action Plans for other MPC's are quite similar, as shown in table 4. The shared objective is "to promote food safety and facilitate trade". In order to attain these goals, they mention the need to work towards full implementation of the WTO agreement on the application of the SPS measures and an active participation in relevant international bodies (OIE, IPPC, Codex Alimentarius). They also call for a gradual legislative approximation towards the principles of the EU legislation on SPS, food and animal traceability and hygiene. They consider as well strengthening regulation to prevent the placing on the market of unauthorized substances, including plant protection products, and ensure the monitoring of residues of these substances.

Table 4: Actions on Agricultural Technical regulations in ENP Action Plans:

Sanitary and Phyto-Sanitary (SPS) matters, and food safety

Israel
Improve co-operation on SPS matters as well as on food safety – Explore possible areas of co-operation between Israel and the European Commission in the field of SPS issues, while taking into account of the different conditions prevailing on both sides – Exchange of information on and, as appropriate, explore the possibility to increase convergence, of Israeli legislation with EU legislation on sanitary (live animals and animal products) and of phyto-sanitary issues (plant hygiene, plant variety and quality), – Identify the scope for increased convergence of food legislation in compliance with EU food safety principles. Exchange of views regarding foodstuff labelling requirements in order to assess the possibility of adapting Israeli legislation – Exchange of views on the setting-up of an animal and plant identification and traceability system – Exchange of information regarding the placing on the market of substances dangerous to human health, including plant protection products and the ensuring of monitoring of residues of these substances in live animals, animal products and plant products for food and feed – Explore the scope for co-operation between EU and Israeli accreditation bodies (inter alia, on issues related to organic agriculture) – Increase co-operation in the field of international marketing standards for fruits and vegetables
Jordan
Increase food safety for Jordanian and European consumers. Reforms and modernisation of SPS *sectors* – Continue work towards full implementation of the WTO agreement on the application of the SPS measures and active participation in relevant international bodies (OIE, IPPC, Codex Alimentarius). – Draw up a list of measures for gradual legislative approximation towards the principles of the EU legislation: SPS, food and animal traceability and hygiene. – Develop a food policy and an action plan – Strengthen regulation to prevent the placing on the market of unauthorized substances, including plant protection products and ensure the monitoring of residues of these substances in live animals, animal products and plant products for food and feed. – Explore the possible reorganisation of the Jordan food safety control system under a unique Food Safety authority and the development of an official risk assessment and management structures and inspection services. Strengthening of the general SPS controls. Work towards the interconnection of the national rapid verification/action system for dangerous goods with the Rapid Alert System for Food and Feed. – Take steps to increase participation of stakeholders in the Jordan food policy

formulation and enforcement
Lebanon
Increase food safety and facilitate trade through reform and modernisation of the SPS sectors – Upon accession to the WTO, implement the WTO Agreement on the Application of SPS measures and participate in relevant international bodies. – Exchange information on and explore possible areas of convergence with EU practice in the field of SPS issues. – Progressive fulfilment of EU requirements on animal health and for the processing of animal products. – In the medium-term, draw up a first list of measures for gradual convergence towards EU general food safety principles and requirements; start approximation of Lebanese legislation.
Morocco
Improve the health safety of food for consumers and facilitate trade in agricultural products with the EU –Exchange know-how and experience on upgrading food legislation, including the preparation of guides to food hygiene best practices. –Cooperation to strengthening animal, plant and food health supervisory structures, including laboratories. – Pursue implementation of the obligations arising from the WTO agreement on the application of SPS measures and active participation in the work of the corresponding international organisations (IOE, IPPC/EPPO, Codex Alimentarius). – Progressive approximation to EU veterinary and phytosanitary rules. –Convergence towards progressive application of rules on food hygiene and food safety in agricultural and food production and on the labelling of food products -Regulate and, if necessary, ban the sale of certain substances, including phytopharmaceuticals, without creating unnecessary barriers to trade, and introduce schemes to monitor residues of pharmaceuticals in animals, products of animal origin, plant products, food products and animal feed. – Establish a phytosanitary statute with regard to the organisms mentioned in Directive 2000/29/EC. Implement equivalent control measures, if necessary. – Examine the possibility of cooperation under the early warning system (Regulation (EC) 178/2002). – Establish and develop a national institute of food safety

Tunisia
Improve the health safety of food and facilitate trade in agricultural products with the EU on the basis of reforms and modernisation of the veterinary and plant health sectors – Continue implementation of requirements under the WTO agreement on SPS measures and agreements with other relevant international bodies (OIE, IPPC, Codex Alimentarius); – Gradually implement EU animal and plant health rules relating to imports of live animals, products of animal origin, plants and plant products. Ensure controls at production level, not just on the finished product; – Progressively apply the EU's food safety rules for the production of agricultural and food products and for production level controls; – Introduce an animal traceability system; – Help organise public campaigns to eradicate certain diseases or harmful organisms identified in the Community acquis which are present in Tunisia; – Develop a strategy on institution-building, including laboratories; – Regulate and, if necessary, ban the sale of certain substances, including phytopharmaceuticals, and guarantee the monitoring of the residues of these substances in animals, products of animal origin, plant products, food products and animal feed, without creating unnecessary barriers to trade

However, there are also country-specific measures. For Jordan, the Action Plan committed to develop a food policy and an specific action plan on this issue. On food safety, the Jordanian Action Plan is quite detailed, with the general aim of strengthening the SPS controls. It calls for exploring the possible reorganisation of the Jordan food safety control system under a unique Food Safety authority, the development of an official risk assessment and management structures, and inspection services. It also mention the need to work towards the interconnection of the national rapid verification/action system for dangerous goods with the Rapid Alert System for Food and Feed. A final provision is to increase participation of stakeholders in the Jordan food policy formulation and enforcement.

The EU/Morocco Action Plan is also comparatively detailed in its provisions on technical regulations. Among the concrete measures, the Morocco Action Plan asks for cooperation on upgrading food legislation and health supervisory structures, including laboratories; to establish a phytosanitary statute with regard to the organisms mentioned in Directive 2000/29/EC; to examine the possibility of

cooperation under the early warning system; and to establish and develop a national institute of food safety. The EU/Tunisia Action Plan also introduce some detailed measures, like ensuring controls at production level, and not just on the finished product; introducing an animal traceability system; helping organise public campaigns to eradicate diseases or harmful organisms identified in the Community acquis which are present in Tunisia; and to develop a strategy on institution-building, including laboratories.

As can be seen, the best specified measures are directly related to facilitate agricultural trade by the completion of the EMFTA in agricultural matters, and its deepening by including the convergence of MPC's technical regulations towards the Community acquis. References to rural development or agricultural policy reform are scarce, with the only exception of Lebanon and Morocco. So, the agricultural coverage of the Action Plans is far from incorporating the elements of the proposed Euro-Mediterranean Agricultural Pact or mentioned as the principles of the Rabat Road Map. The ENP Action Plans do not establish a coherent and comprehensive agricultural strategy, on which needed trade promotion issues are not complemented by concrete action towards the modernisation of MPC's agricultural sectors, nor by agreed policy reform measures.

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CHAPTER 2

QUALITATIVE ASPECTS OF THE TURKISH EXPERIENCEE ON THE ADAPTATION OF AGRICULTURAL AND AGRO-INDUSTRIAL ACQUIS

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This chapter aims to review and bring together many aspects of the Turkish adaptation on the EU CAP scheme and related problems. As we know, the basic responsibility of the candidates at the start of the accession negotiations may be summarized as the "adjustment of mentality" to become a proper member, rather than concentrating on the possible flow of funds from the Union.

Therefore, the study tries to identify major elements in the pre-accession period through the description of agricultural environment in Turkey and many aspects of the adaptation of the Turkish agriculture to the EU CAP regime.

This paper is organized as follows: Section 1 sets the scene by providing a brief overview of Turkish agriculture. Section 2 describes the evolving policy environment. Sections 3 explain in detail the adaptation problems. Section 4 focuses on the agricultural trade liberalization issues in the light of the Sixth Ministerial Conference in Hong Kong in December 2005, and related agricultural trade liberalization issues in Third Mediterranean Countries. Section 5 concludes.

Introduction

For major periods of European history, Turkey has been an important factor of European politics. Turkey is a member of all other important European organizations and has since the Second World War played an important role in contributing to the shaping of European policies.

As a part of this strategy, In 1963 Turkey and the EEC enacted an Association Agreement containing a membership perspective. As scheduled by this Agreement a customs union was formed in 1995, and in Helsinki in December 1999, the European Council decided that Turkey is a candidate for accession to the EU. At the Copenhagen European Council in December 2002 concluded that "if the European Council in December 2004, on the basis of a report and a recommendation from the Commission, decides that Turkey fulfils the Copenhagen political criteria, the European Union will open accession negotiations with Turkey without delay". The European Council reaffirmed these conclusions in June 2004.

In its 1998 Report the Commission considered that Turkey had put considerable effort into establishing the necessary conditions for the custom union to function properly by 31 December 2000. Since the entry into force of the customs union, there has been free movement of industrial products between Turkey and the Community.

The October 1999 and November 2000 Reports stated that although the free movement of industrial goods was satisfactory, efforts to transpose technical Community legislation and strengthen administrative structure should continue. The November 2001 Report noted that Turkey had made some progress in aligning its legislation with the *acquis* but it had made limited progress in the field of customs. In its October 2002 Report, the Commission stated that Turkey had made further progress in aligning its legislation with the acquis, particularly through the adoption of horizontal legislation in the field of conformity assessment and market surveillance and some progress had been made in the field of customs. The November 2003 Report noted little progress in the alignment of Turkey's legislation with the Community acquis, in the field of customs union. Turkey had made progress, in transposing the acquis with regard to the free movement of goods, particularly regarding the sector-specific legislation.

The October 2004 Report notes that Turkey has made further progress in the area of free movement of goods, particularly in the alignment of sector specific legislation and it asked to step up its efforts to remove technical barriers to trade and to ensure correct implementation of the acquis and compliance with the obligations arising from the Customs Union. The November 2005 Report stated that, in spite of the progress

made, the free movement of goods is not yet completely effective in Turkey. Alignment with the chapter on freedom of movement for workers has not resulted in any improvement and there has been very little progress as regards the movement of services and capital. The November 2006 Report noted that Turkey started to enforce the International Convention on the Harmonization of Frontier Controls of Goods as of June 2000 and amended its duty relief legislation but did not align it with the acquis. For a high level of alignment, in some areas such as free trade zones, customs duty relief, fight against counterfeit goods, and post-clearance, legislation was not yet aligned. Turkey has to abolish duty–free shops at arrivals. On the other hand, further efforts are needed to strengthen administrative capacity, including the timely preparation for IT-interconnectivity and operating with the Community IT systems[2].

Community Acquis on Free Movement of Goods

The Association Agreement between the Community and Turkey and the Additional Protocol of 1970 set out the fundamental objectives of the association, which include the setting-up of a custom union in three successive stages. The completion of the final phase of the customs union on 31 December 1995 required Turkey to incorporate a large part of the Community acquis, including the provision on the free movement of goods. The European Community has developed a " New Approach" for harmonization instead of imposing technical solutions; European Community legislation simply defines the minimum requirements that products must meet. In the final phase of completing the custom union, Turkey has eliminated all customs duties and charges having similar effects, as well as all quantitative restrictions and similar measures on industrial products from the Community.

I.1. A Brief Overview of Turkish Agriculture

I.1.1 Agriculture in the economy

Agriculture in Turkey employs one-third of the labor force but generates less than 12 per cent of GDP, which implies huge inefficiencies. As a major employer, farm sector

[2] Commission of the EU, Turkey 2006 Progress Report, COM (2006) 649 final, 8.11.2006, p.69-70.

has kept its multi-functional role in the economy by the farm activities and labor force providers. Since 1980, however, the share of agriculture in GDP has declined from 22 % to 9.1% in 2006 and the share of agricultural products in total exports fell from 57 % in 1980 to 9.3 % in 2006 (see Table 1). This indicates in increasing importance of the industrial sector since the early 1990s. The gross value added of agricultural sector (GVA at constant prices) grew by 3.8 % in 2000 but 0.5 % in the 2006. Agriculture is an important contributor to foreign trade as well and supplies 9% of total exports and accounts for 3.9 % of total imports.

Table 1: Selected Indicators, 1996-2006

	1996-97	**1998-99**	**2000-01**	**2002-03**	**2004-05**	**2006**
Growth and Accumulation						
GDP (USD billion)	**186.0**	**192.3**	**172.8**	**212.5**	**333,1**	**390,4**
Real GDP Growth (percent)	**7.3**	**-0.8**	**-0.0**	**6.9**	**8.2**	**6.0**
GDP per capita (USD)	**2,932**	**2,928**	**2,543**	**3044**	**4,649**	**5,349**
Real GDP per capita Growth (percent)	**5,3**	**-2,6**	**-1,8**	**2,6**	**6,7**	**4,7**
GDP per capita PPP (USD)	**5,685**	**5,729**	**5,990**	**6,679**	**7,885**	**8,959**
Gross Fixed Investments (USD billion)	**48.6**	**45.5**	**36.55**	**33.9**	**62.5**	**81.1**
Share of ag.in Gross fixed inv.(percent)	**5.8**	**5.1**	**4.3**	**7.8**	**8.0**	**6.5**
Distribution						
Inflation-CPI (percent)	**89.4**	**69.3**	**53.1**	**22.7**	**8.5**	**9.7**
Unemployment Rate-Turkey (percent)	**6.2**	**7.2**	**7.4**	**10.4**	**10.3**	**9.9**
Unemployment Rate-Rural (percent)	**3.5**	**3.5**	**4.3**	**6.1**	**6.3**	**6.6**
Unemployment in Agriculture (million)	**8.9**	**9.0**	**7.9**	**7.3**	**6.8**	**6.3**
Share of ag. in Employment (percent)	**44.1**	**41.0**	**36.8**	**34.4**	**31.7**	**28.4**
Share of ag. in GDP (percent)	**15.7**	**16.4**	**13.1**	**11.6**	**10.7**	**9.1**
Growth of Agriculture in VA (percent	**1.0**	**1.5**	**-1.4**	**2.1**	**3.8**	**0.5**
Agricultural VA per employed (USD)	**3,253**	**3,517**	**2,897**	**3,396**	**5,168**	**5,833**
Trade Openness						
Imports/GDP	**24.8**	**22.5**	**27.9**	**28.4**	**32.2**	**34.7**
Exports/GDP	**13.3**	**13.9**	**17.7**	**19.6**	**20.5**	**21.4**
Exports/ Imports	**53.6**	**61.8**	**63.4**	**69.0**	**63.7**	**61.6**
Stock of External Debt (USD billion)	**81.7**	**99.7**	**116.1**	**137.4**	**166.4**	**198.3**

Agri.imports/Total import	**10.6**	**8.9**	**7.5**	**5.7**	**4.3**	**3.9**
Agri.exports/ Total export	**21.1**	**17.7**	**13.9**	**10.5**	**10.2**	**9.3**

Sources: (1996-2000 data from Çakmak E.H, 2004:.2) ; (2001-2006 data from SPO: Turkish State Planning Organization 2007 Program ,Under secretariat of the Prime Ministry for Foreign Trade: http://www.dtm.gov.tr/Ab/ingilizce/sta/stamenu.htm

II.1.2 Structure of Farming

An increasing urbanization of Turkey has led to a decline of the rural population from 62% in 1970 to 34% in 2006. The agricultural population is declining: since 1985 more people have lived in urban regions than in rural areas. Farms in Turkey are generally small, fragmented and family-owned.

Table 2: Value of Agricultural Production, (2000)

Product	**Value (US $ millions)**	**Percentage Distribution**
Crops	28,163	68,48
Livestock	10,600	25,77
Forestry	1,101	2,68
Fishing	1,246	3,03
Total	41,129	100,00

Source: SPO, Turkish State Planning Organization.

The average cultivated area per holding was about 5.2 ha in 1991, and it increased to about 6 ha in 2006. Farm size is a limiting factor for agricultural productivity. Over 85 percent of enterprises are less than 10 hectares[3]. (See Table 2). This corresponds to 42 percent of the total cultivated land. Land fragmentation is a serious drawback to mechanized agriculture and to increasing production. Percentage distribution of value of marketable crop production may be seen in Table 2. The field crops engage about 70 % of agricultural area in volume, but its share is less in value size.

[3] The 2001 General Agricultural Census is the seventh conducted in Turkey, after those carried out in 1927, 1950, 1963,1970,1980 and 1991. A decision has been taken by a decree that agricultural censuses be held in the years ending with 1.

Table 3: Distribution of Agricultural Holdings According to Land Sizes

Size of Holdings (ha)	Holdings Number	Holding %	Total Area ha	Total Area %
Without land	54 523	1.7	-	
Under 0.5	178 006	5.8	48 199	0.0
0.5-1	290 461	9.4	195 247	1.0
1-2	539 816	17.5	737 802	4.0
2-5	950 840	31.0	2 953 162	16.0
5-10	560 049	18.2	3 812 703	20.6
10-20	327 363	10.6	4 388 440	23.8
20-50	153 685	4.9	4 207 550	22.8
50-100	17 429	0.00	1 121 855	6.0
100-250	4 109	0.00	547 593	2.9
250-500	222	0.00	69 554	0.0
500 ha and over	57	0.00	352 617	1.9
Total	3 076 650	100	18 434 822	100

Note: The figures on the numbers of holdings and area are from the 2001 census.
Source: FAO (Food and Agriculture Organization Statistical Database.

Table 4: Agricultural Holdings and Parcel Distribution 2001

	Number of holdings	Number of parcels
Holdings consisting of :		
1 parcel	588 766	588 766
2 parcels	634 141	1 268 285
3 parcels	485 352	1 456 054
4 – 5 parcels	615 313	2 722 080
6 – 9 parcels	484 520	3 449 708
10 parcels and over	214 035	2 838 512
Total holdings with land	3 022 127	12 323 405

Source: FAO (Food and Agriculture Organization Statistical Database) and author calculations

.

Table 5: Number and Area of Holdings and Gini's Index of Concentration in selected Countries

	Census Year	Number of holdings	Area of Holdings (ha)	Average Size (ha)	Gini's Index of concentration
USA	**87**	**2 087 753**	**330 311 617**	**186.95**	**0.74**
Canada	**91**	**280 043**	**97 753 700**	**349.07**	**0.64**
France	**88**	**1 016 755**	**31 385 606**	**31.46**	**0.53**
Germany	**95**	**566 300**	**17 156 300**	**30.26**	**0.68**
Italy	**90**	**3 023 344**	**22 702 356**	**7.51**	**0.78**
Spain	**89**	**2 264 344**	**42 939 208**	**18.79**	**0.86**
Italy	**90**	**3 023 344**	**22 702 356**	**7.51**	**0.78**
Grece	**95**	**802 400**	**3 578 200**	**4.46**	**0.57**
Egypt	**90**	**3 475 502**	**3 297 281**	**0.95**	**0.65**
Israel	**95**	**25 448**	**314 230**	**12.35**	**n.a**
Turkey	**91**	**4 068 402**	**23 451 099**	**5.76**	**0.61**

Notes: 1990's Round of Agricultural Censuses, FAO.
Source: FAO (Food and Agriculture Organization Statistical Database).

Table 6: Land Use in Turkey, 1995 and 2000

	1995 (Thousand ha)	Percentage Distribution	2000 (Thousand ha)	Percentage Distribution
Arable Land	24,373	31.5	23,826	30.8
Area sown	18,464	23.8	18,207	23.5
Veget.gardens	785	1.0	793	1.0
Fallow Land	5,124	6.6	4,826	6.2
Perm. crops	2,461	3.2	2,553	3.3
Vineyards	565	0.7	535	0.7
Orchards	1,340	1.7	1,418	1.8
Olive groves	556	0.7	600	0.8
Perm. Meadows and pastures	12,659	16.3	12,671	16.4
Total Agri. Land	39,493	51.0	39,050	50.4
Forest and woodland	20,199	26.1	20,703	26.7
Other land	17,271	22.3	17,210	22.2
Total land	76,963	99.3	76,963	993

area				
Total area	77,482	100	77,482	100

Source: FAO (Food and Agriculture Organization Statistical Database)

A small number of efficient farm enterprises grow fruit, vegetables and nuts for export. But the vast majority of farms are tiny and they barely yield enough to sustain their owners. Field crops occupy 87 percent of cultivated area.

II.1.3 Labor in Agriculture

In the last years the combination of severe factors led to an important decrease of the labor force in the agricultural sector. The labor force survey reports that in 2006, 5.1 % of the total labor force in the EU-25 is employed in agriculture, hunting, forestry and fisheries (EU-15): 3.9% (Eurostat, 2006).

Table 7: The Share of Sectoral Employment in Turkey (%)

Employment	**1980**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
Agriculture	**50.9**	**37.6**	**34.9**	**33.9**	**34.0**	**29.5**	**27.3**
Industry	**13.9**	**17.5**	**18.5**	**18.2**	**18.3**	**19.4**	**19.7**
Services	**29.8**	**39.7**	**42.1**	**43.4**	**43.0**	**45.8**	**47.3**
Construction	**5.4**	**5.2**	**4.5**	**4.6**	**4.70**	**5.3**	**5.7**

Source: World Bank, SIS; SPO.

The share of the agricultural sector in total employment which was 50.9 % in 1980, went down to 34.0 % in 2004 and 27.3 % 2006. However, the fact that the work force left the agricultural sector could not be employed adequately in industry and services sectors led to a decrease in employment rates in the mentioned period. With ongoing trends in population growth and population growth and urbanization, the economy experienced a marked change in structure, in which agriculture as the primary source of output and employment was displaced by more urban-based manufacturing and services. Regarding labor productivity in agriculture, table 7 reveals that the contribution of agriculture has been negligible over time. Furthermore, relative contributions of services and industry to labor productivity growth are not out of line with the range seen in OECD countries[4]

Table 8: Sectoral Contributions to Labor Productivity Growth in Turkey, % (1973-03)

[4] World Bank, (2006), Turkey: Country Economic Memorandum Promoting Sustained Growth and Convergence with the European Union**,** p.24

	Total Economy	Industry	Services	Agricultura
1973-1980	1.96	0.65	1.49	-0.15
1981-1990	3.21	1.29	2.03	-0.11
1991-2003	2.17	0.88	1.33	-0.03

Source: World Bank, (2006), Turkey: Country Economic Memorandum Promoting Sustained Growth and Convergence with the European Union, p.24

II.1.4 Agro-ecological zones

Turkey is characterized by extreme geo-climatic diversity, which permits the production of a wide range of livestock and crops. For practical reasons to reflect the similarities of pastoral and animal husbandry systems, a classification has been developed by State Institute of Statistics. Fallowing is the figure of nine agricultural zones (AZ) in Turkey; (SIS, 1994). (1) Central North, (2) Aegean, (3) Marmara and Thrace, (4) Mediterranean, (5) North East, (6) South East, (7) Black Sea, (8) Central East, and (9) Central South.

As it is described in the Figure1 agricultural production in Turkey is highly diversified due to variety of soils and agro-climatic conditions. The structure of production presents a challenging diversity with the regions having both common products and regional specialties. The techniques of production for the common products are quite different among regions because of the differences in climate and resource endowments.

Figure 1: Agricultural Zones of Turkey

Source: Alptekin Karagöz

Table 9: Regional Agricultural Output Pattern of Turkey

Regions	Principal Products
Central-North	Cereals, rice, vegetables, pulses, fruits
Aegean	Olives, grapes, cotton, tobacco, pulses, vegetables
Marmara	Sunflower, rice, roots, sugar beets.
Mediterranean	Cotton, cereals, citrus, rice, vegetables, pulses
North-East	Fodder, wheat, tubers, pulses, livestock
South-East	Fodder, cereals, tubers, vegetables, pulses, grapes, livestock, pistachio, fruits
Black Sea	Hazelnuts, tea, rice, tobacco
Central-East	Fodder, cereals, fruits, tobacco, sugar, beets.
Central-South	Cereals, sugar beets, grapes, pulses, vegetables, tubers, livestock

Source: MARA

II.2. Evolving Policy Environment

The main objectives of agricultural policies defined in the Government's Five Year Development Plans, may be summarized as follows: Ensure adequate level of nutrition, raise self-sufficiency, increase yield and output, reduce the vulnerability of production to adverse weather conditions, provide adequate, stable income for those working in the agricultural sector and develop rural areas. These objectives demonstrate important similarity with those of CAP objectives.

In pursuit of this objective, the support measures cover price support scheme for the crops sector, quantitative restrictions and tariffs for livestock sector and input subsidies and credit allocations for yield and income improvements. Government price support for most of the major crops (such as grains, cotton, oilseeds, sugar beet, tobacco, hazelnut, and tea) is now changing because of the reform program on agricultural policies. In the past, theses price supports have been announced by decree each year and related state-owned enterprises and agricultural sales cooperative unions were commissioned to buy at the announced floor prices.

For some crops, a system of "deficiency payments" or premiums was introduced in 1993 in place of floor prices. This is one of the important steps, which attempt to change ongoing policy. The High Planning Council started to announce an intervention and a target price for those crops. In that new regime, target price moved

in parallel with the world price. Farmers selling their crop to agricultural Sales Cooperatives Unions received the difference between the price obtained and the target price, in the form of a payment from the Turkish Bank of Agriculture. This is a state-owned bank and the Treasury reimburses the payment. The deficiency payments cover only sunflower seed, soybean, cotton, and olive oil.

Input subsidies were the second important instrument of agricultural support scheme. The most important were fertilizer, irrigation and credit subsidies. In the past, interest rates on loans from the Turkish Bank of Agriculture have been significantly negative in real terms, because short-term investment credit for agriculture have long been subsidized by the government at interest rates well below inflation and commercial rates Furthermore, the unpaid loans of the Agricultural Sales Cooperative Unions have been covered as "duty losses" of the Treasury. Subsidies for manufacturers and consumers of fertilizers were set until recently as a percentage of market price (about 40-50 % of market price) but since 1997, according to the government decision on the fertilizer subsidy regime, it has been fixed to a nominal amount of Turkish lira (TL per kilogram). Consequently, the result was the reduction of the fertilizer subsidy substantially in real terms, and high inflation rate has also eroded its value. On the other hand, fertilizer amount used for pasture improvement is negligible because it is still not widely accepted in the country, nevertheless, pastures are considered common areas so the farmers do not invest in fertilizers for this purpose.

Concerning irrigation subsidies, the governments have been investing heavily in irrigation and financing supports.

II.2.1 Food Security and Supply Control Measures

Turkey is a country that has maintained a relatively high level of food self-sufficiency and security since 1960s. Most of the achievements in this respect took place prior to the 1960s, with extensive government intervention in all aspects of the most important agricultural markets. Currently, food security problems relate to achieving a nutritionally balanced diet. The household food security situation has paralleled developments on the supply side, as Turkey has been consistently among those countries having a high food security status over the past 25 years. Although the

growth in per capita food production for the 1961-1992 period was modest, food availability for human consumption was already at a high level, over 2800 calories per person at the beginning of the period and rising still further to about 3400 calories by 1992. Food balance sheets show satisfactory aggregate food availability, but unequal distribution among socio-economic; gender and age groups remain problems in many areas. The prevalence of malnutrition has decreased in the last two decades but is still high in some small, extremely poor areas. Micro-nutrition deficiencies persist, in particular those of iron, calcium and riboflavin, and are attributed to inadequate intakes of milk and milk products, meat and meat products.

The sustainable use of natural resources, through more appropriate agriculture practices, is seen as a precondition for ensuring future food security. Priority development areas have been established to promote self-sustained development in disadvantaged areas.

According to the supply control scheme, tobacco, hazelnuts and tea have been under area or production control: The State–Owned Sugar Company through contracts has indirectly controlled sugar beet output to some extent with growers. Tobacco farmers have received payments to compensate for the area controls, and tea producers to compensate for lost production from pruning. On the other hand, agricultural producers have also received general services either free or at subsidized prices. Agricultural services for improving the production basis are mainly research, training and extension services, inspection, and pest and disease control and land improvements.

Concerning consumer protection and subsidies, they do not benefit directly from subsidies. But they are protected indirectly through price controls, market intervention, and a lower value-added tax on food.

II.2.2 Agricultural Trade Policy

Historically, Turkey is a net exporter in agricultural products (excluding farm inputs). However historical trade flows and mutual competitiveness in the agricultural products are affected by the unstable macroeconomic conditions and mismanagement

of the agricultural policies of Turkey prior to stabilization program. A recent analysis on agricultural competitiveness and comparative trade flows (Çagatay and Guzel, 2003) showed that fruits and vegetables sectors have a highest competitiveness value but contrary to expectations, for the important sectors such as cereals, beverages and tobacco, the index has a negative value and comparative disadvantage of Turkey in international market. In the last ten years, Turkey's agricultural export to the EU has increased by almost 10 % and the EU accounts for more than half Turkey's fruit and vegetables exports.

In 1996, Turkey established a Custom Union on industrial products with the EU on the way of full membership and agriculture was not included in the Custom Union because of the free circulation of agricultural products in the origin Treaty (Rome Treaty) has been covered by the Common Agricultural Policy (CAP) due to the specific nature of agriculture. As a non-beneficiary of the CAP support regime, Turkish agricultural products were outside the CAP regime and continued to be the subject of preferential trade agreements between Turkey and EU, as it was before the Custom Union.

Preferential trade agreements are classified in two product groups: First are the agricultural products, and second are highly processed agricultural products. EU definition of agricultural products (called Annex II products) comprises primary agricultural products and slightly processed agricultural products such as flour, olive oil, and fruit juices. Preferences granted to Turkey comprise reduced MFN tariff rate and zero tariff rate with no application of entry price for the products that EU applies MFN tariff and/or entry price. Around 60 percent of Turkey's agricultural exports to the EU faced no trade barrier, however the high percentage of preferential exports of Turkey may be misleading since the overall protection of the EU for the agricultural sector remains high, and for some major export products originating in Turkey (fruits, vegetables and processed products) seasonal ad valorem tariffs and tariff quota rates are applied (Grethe, 2004).

Preferential trade agreements on highly processed agricultural products (non-Annex I and Table 2) did not expand the volume of mutual exports and imports (Grethe, 2004). The tariff on the industrial component of the product is zero by the custom

union, and the agricultural component is subject to tariff reflecting the preference granted for the basic product. Consequently, the overlap of the highly processed products and agricultural products may be cited as the major reason for limited trade volume.

As for the market access, conditions for agricultural commodities imported from the EU, the preferential regime applied by Turkey to imports of agricultural products originating in the EU is determined by Decision No. 1/98 of the EC–Turkey Association Council of 1998. Under this decision, Turkey must grant a large number of commodities duty-free access to the Turkish market up to the quota limits specified in the decision.

A look at the quota levels and trade data for the agricultural commodities specified in Decision No.1/98 of the EC-Turkey Association Council reveals that for most of the commodities the quota limits have been exceeded. Thus out of quota tariff rates are, in general, applicable to imports of these commodities from the EU.

As the table 10 shows that with the applied most–favored nation (MFN) tariff rates for the major agricultural products during 2002, three sectors are highly protected in Turkey. These three sectors with highest simple average tariff rates applied to imports from third countries are the products made from meat, fish, and crustacean (HS16) with a tariff rate of 132.70 %; meat and edible offal (HS 02), 116.52 %; and milk and dairy products (HS 04), 105.20 %.

Table 10: Most-Favored-Nation Tariff Rates of EU and Turkey, 2002

Agricultural Commodities	Highest Simple Average Tariff Rates %
Meat and edible offal (HS 02)	116.52
Milk and dairy products (HS 04)	99.60
Products made from meat, Fish, crustacean (HS 16)	76.90

Source: Togan, Bayaner, and Nash, 2005.

Agricultural Commodities	Highest Weighted Average Tariff Rates %
Edible fruits and citrus fruits (HS 08)	**120.17**
Milk and dairy products (HS 04)	**101.79**
Meat and edible offal	**71.40**

(HS 02)	

***Source*: Togan, Bayaner, and Nash, 2005.**

On the other hand, the three sectors with the highest weighted average tariff rates applied to imports from third countries are products made from meat, fish and crustaceans (HS 16) with a tariff rate of 124.08 %; sugar and sweets (HS 17), 124.8 %; and edible fruits and citrus fruits (HS 08), 120.17 %. (Hoekman and Togan, 2005: 45-47)

To align its tariff schedule with the current EU schedule, Turkey would have to increase its tariffs on cereals; processed tobacco and substitutes; residues of the food industry and fodders; alcoholic and nonalcoholic beverages; cotton; and vegetable plaiting materials. In all other categories, Turkey would have to decrease its tariff rate. (Hoekman and Togan, 2005: 45-47).

Decisions No. 1/72, 1/80, and 1/98 of the EC-Turkey Association Councils of 1972, 1980, and 1998 determines the preferential regime applied by the EU to imports of agricultural products originating in Turkey, respectively. Under these decisions, the European Community free from ad valorem duties imports almost all of the agricultural commodities originating in Turkey, and the EU applies tariff quotas only for a relatively small number of commodities. On the other side, the EU applies an entry price system and specific duties, as long as the value of consignment falls below the entry price, for about 30 fruits and vegetables such as tomatoes, artichokes, courgettes, tangerines, lemons and apples.

II.2.3 Agricultural Trade Policy and WTO Commitments

The main instrument of the Turkish trade policy is the tariff. In terms of ad valorem tariffs, Turkey uses specific, mixed, compound and formula duties. According to the Uruguay Round commitments, about 46% of all tariff lines (36% of all non-agricultural lines) were bound. By 2005, final bindings for non-agricultural products will range from zero to 102 %. Many applied tariffs are currently well below bound levels.

As it is indicated above, regarding to the industrial products and the industrial component of processed agricultural commodities, Turkey applies the EU common external tariff under the EU-Turkey customs union agreements. Average weighted tariffs on non-agricultural goods imported from third countries feel in 1996 following the introduction of the custom union from about 15% to 5.6 %, and further to 4.4% in 2003. Under the EU-Turkey custom union, Turkey applies the same rules of origin as the EU regarding third country trade as a partner of the EU common commercial policy. (Oskam et al, 2004). Finally, for agricultural products, all duties in Turkey were bound under the Uruguay Round Agreement, and Turkey undertook to reduce them by an average of 24% (and a minimum of 10% for each tariff line) over the period 1995-2004. According to the rationalization and greater transparency principle launched since Uruguay Round negotiation, there is a strong tendency in Turkey towards positive tariff escalation in the agriculture and food tariff structure.

In some cases (cereals, beef, dairy) Turkey's tariff binding for agricultural products are higher than those of the EU. Turkey's adoption of the EU's common external tariff (CET) would lead to a lowering of these tariffs. According to Grethe (2003) there were 40 products or products categories for which EU tariff bindings appear to be more than 5 % points above those of Turkey. If Turkey has been importing these products from other WTO members in the future under the Common Commercial Tariff regime, increasing tariffs on these products might provoke claims for compensation from other WTO members.

Among products for which Turkey's tariffs are lower than those of the EU are fresh or chilled tomatoes, olive oil, sugar, animal feed and various animal feed ingredients.

Regarding domestic support under the Uruguay Round Agricultural Agreement commitments, Turkey's domestic support was declared either as qualifying for the "green box " or as *de minimis* support[5]. Neither of these categories of support are bound in the WTO. Instead of using the standard methodology of the Aggregate Measure of Support (AMS) for calculating the value of domestic support for its

[5] Product –specific support amounting to less than 10% of the value of that output in the base period.

Uruguay Round Agricultural Agreement schedules, Turkey calculated an Equivalent Measure of Support, which is to be used only when the calculation of an AMS is not practicable. According to Grethe (2003:85-88), Turkey's EMS calculations were performed, suggesting that it yielded artificially low estimates of the relevant domestic support.

As we know that some of the WTO rules regarding "permissible" types and levels of agricultural support are still under discussion within the Doha Development Round negotiations, it is difficult to predict what rules will apply in 2015 and beyond.

II.2.4 The Effects of Customs Union in Agriculture

As it has been said before, Turkey was a net exporter in agricultural products in the past but it may be misleading to base the impact of market opening in agriculture only on the past trends. Çakmak and Kasnakoglu (2002) and Grethe (2004) conducted impact analysis of custom union and membership using two disaggregated sector-specific modeling approach with different methodologies. The difficulties encountered in these studies come from the structure of production that presents a challenging diversity with the regions having both common products and regional specialties. The techniques of production for the common products are quite different among regions because of the differences in climate and resource endowments. In this complexity, interactions among products, regions, and techniques of production will determine the impact of various changes in agricultural policies when Turkey starts opening the market in agricultural products and eventually becomes a member of EU. Çakmak and Kasnakoglu (2002) constructed a regional, partial equilibrium, static optimization model, called TASM-EU (Turkish Agricultural Sector Model). Grethe (2004), on the other hand designed a statistic comparative model comprising iso-elastic behavioral functions of farm supply at a regional level with some processing activities: TURKSIM (Turkish Simulation Model).

TASM-EU (Çakmak and Kasnakoglu, 2002) takes into account as a base period, the average of years 1997,1998 and 1999. All policies and input–output relations existing in the base period are incorporated in the model. This model response to the changes in the policy environment, like world price, subsidies, trade measures etc., is through

changes in the returns and costs of products due to the calibration method used in the model. This is a non-linear optimization model. They constructed two scenarios. First scenario describes no membership situation (Out-EU) with possible domestic and trade policies in 2005, population and income growth from the base period to 2005, and world price estimates. Second scenario describes membership situation (In-EU): There are three different simulations because the recent enlargement process of EU indicated that the conditions of integration may change as the access time approaches. The first two are related to the uncertainties of accession, and the third is dependent on the domestic production environment in Turkey. The model does not include structural and rural policies and also assumes that Turkey will comply with all quality, food safety, and healthy standards of EU. On the other hand the model does not incorporate possible changes in the income of the consumers due to the EU membership. Finally EU membership shows its impact immediately in the model with the implementation of CAP in Turkey. (Çakmak and Kasnakoglu, 2002).

According to the three simulations in the model, all EU policies, but compensatory payments are incorporated in the first simulation (In-EU1). This simulation reflects the custom union in agricultural products. The second simulation (In-EU2) includes the compensatory payments. The third simulation (In-EU3) is aimed to measure the impact of the ongoing domestic agricultural policy reform.

Çakmak and Kasnakoglu indicate that the agricultural policies in Turkey, as well as in the EU, are continuously changing and the accession conditions of the past enlargements displayed major differences. Consequently, the results of the simulation are valid only under the assumptions of the policy environment and the expected values of exogenous parameters.

The general results, including the welfare measures may be summarized as follows: Total surplus is expected to increase in 2005 by 20 % without the membership. More than half of the increase is due to the growth in income and upgraded agricultural resources. Membership of EU in 2005 will bring an additional 1% increase in total surplus. Set-aside requirement to be eligible for the area payments declines the total welfare, whereas productivity improvement in livestock production increases the welfare impact of the membership.

Similar results of simulations in total surplus are significantly different for the producers and consumers. No membership scenario causes 15 % increase in the producers' surplus. The basic cause of this increase is due to the fact that the increase in the demand is not matched by the increase in production. The negative impact of the removal of fertilizer price subsidy on producers is matched by positive impact of irrigated area expansion and changes in cropping pattern.

The welfare results are totally different in membership and no-membership scenarios. Producers' surplus decreases by 16 %, whereas the consumers' surplus increases by 12% if Turkey becomes a member in 2005. The overall results are similar to the welfare impacts. Assuming that the EU and Turkish agricultural policies remain intact, the membership will be beneficial to the consumers and will hurt the producers. The price of important products, such as cereals and oilseeds in policy formulation in both and Turkey, are expected to be close to the world prices in EU and hence in Turkey too.

Fort the impact on production volume, the results may be summarized as follows: The membership brings about 10 percent contractions in overall production level. The major source of contraction is the decrease in livestock production. In case of membership scenario, the livestock price level declines by about 40 % that in turn causes 30 % reduction in livestock production. Crop production shows relatively better performance in the EU membership scenario. The volume of crop production excluding the orchards products goes up by half of a percent, the total increase by almost 1 % (Çakmak and Kasnakoglu, 2002).

For the impact of the membership on trade, the authors indicate that the membership may have two different effects: First, the quantity and value of trade may change as a result of membership. Second, the direction of trade may be affected. Turkey's net exports of the production included in the model in the base period reach USD 2 billion. With almost no trade in livestock products, almost all is coming from the crop production.

As it is indicated before, an other regional partial equilibrium model of Turkey's agricultural sector has been conducted by Grethe (2004). This comparative static model consists of definitional and behavioral equations. They are constant elasticity functions and the supply and demand elasticities are synthetic, based on the literature, author's estimates, and experts' interviews. Similarly, the base period of model is 1997-99 averages, three scenarios have been constructed by projecting from 1997 to 2006: Status quo, liberalization, and customs union. Supply side of the model includes 29 plant and five animal products, with processing activities in sunflower, soybeans and cotton. Demand side of the model is split into feed demand, human demand both in primary and processed forms, and seed demand. Human demand occurs at the national level for household income quintiles. Domestic price formation is generally dependent on CIF-FOB spread, transportation cost and quality margin.

Under the customs union scenario, the loss in producer surplus is about EUR 1 billion, equivalent to 3.7 % of production value compared to the status quo scenario of 2006.The gain in consumer welfare is higher than the loss of the producers (EUR 1,5 billion). According to Grethe, cereal prices decline significantly under the customs union scenario with slight decline in vegetable prices, and price increase in the other plant crops. The drop in animal products prices by almost 11 % is reflected to the domestic production and to rather high increase in consumption. Turkey remains a net exporter of plant products, but becomes a net importer in the whole mainly due to the liberalization of trade in animal products. The results of TASM-EU and TURKSIM point out similar developments in the aggregate (see for details, Grethe, 2004).

II.2.5 Agricultural Policy Reforms

EU membership requires not only the alignment of necessary legislation but also development of the judicial and administrative capacity to implement and enforce the "*acquis communautaire*". Therefore a candidate country must bring its institutions, management capacity and administrative and judicial systems up to Union standards. The implementation of the pre-accession strategy, defined by the Helsinki European Council, is now well under way. In this new phase, Turkey is encouraged to intensify and accelerate the process of political and economic reforms in line with the accession partnership priorities. This entails further constitutional, legislative, administrative

and judicial reforms aimed at bringing Turkey closer to EU standards. In preparation for joining the EU and adopting regulations and policies an institutional reform is under the reform agenda. The negotiating framework specifies 35 chapters. Each chapter needs to be unanimously opened and closed by the Council. On 4 September 2006, the European Parliament voted on report concerning Turkey's progress on preparing for membership.

Agricultural chapter includes the setting up management systems such as paying agency and Integrated Administration and Control System and also the capacity to implement rural development actions. The proper application of these systems is essential for the functioning of the Common Agricultural Policy. As regards direct aid mechanisms, state aid provisions, rural development measures and other financial support systems needs to be harmonized and aligned gradually with the EU approach that gives priority to direct support measures.

In 2001, on the basis of Accession Partnership, Council of Minister approved the National Program for the Adoption of the Acquis (NPAA) containing Turkey's commitments to the European Union with regard to harmonization. A Preliminary National Development Plan for the period 2004-2006 was established for programming pre-accession financial assistance for economic and social cohesion with the EU. Turkey prepared its first Pre-Accession Economic Program (PEP) in 2001 and successive regular PEP's covers the recent economic developments as well a projections and forecast for 2006-2010.

On the institutional side, there is no direct Turkish legislation that corresponds to an Integrated Administration and Control System-IACS. However, there are some regulations within the framework of the National Farmer Registration System and the Animal Identification and Registration System for bovine animals that have some similarities to IACS. Turkey has currently no operational Paying Agency. However, the efforts about it are continuing.

Agricultural Reform Implementation Project

Actually, Turkey started to replace support schemes that distort the market mechanism with those involving direct payments in 1995 and removed price and input subsidies initiating Direct Income Support (DIS) Scheme in 2001. The year 2004 was launched as the principal support instrument for the agricultural sector, at the same year Agricultural Strategy Paper (ASP) was adopted for 2006-2010 period and the year 2005 was the transition year for implementing ASP.

Therefore, the structural reforms implemented in the agricultural sector since 2000 are aimed at improving efficiency and competitiveness and achieving effective utilization of resources. The ultimate objectives of the reform in the agriculture sector are to acquire a well-organized, highly competitive and sustainable structure based on the principle of Common Agricultural Policy and the World Trade Organization obligations and efficient use of resources by considering economic, social, environmental and international aspects. Agricultural Reform Program-2000, a part from abolishing administered prices, input and credit subsidies, targets to restructure agricultural state economic enterprises (SEE) and agricultural sales cooperatives and finally to restructure agricultural production. In order to support the reform program, a project named Agricultural Reform Implementation Project (ARIP) was put into implementation in the same year. The main objective of the reform project is establishing a farmer registration system and a related land registration-cadastral system in order to carry out policy changes effectively. The project is funded by a 600 million dollars loan, of which 200 million dollars is the program loan, provided by the World Bank. The principal aim of the ARIP was to diminish both the efficiency costs and the budgetary burden of support to agriculture. ARIP focused on three main objectives:

The first was to phase out the government intervention in the output, credit and fertilizer markets and the introduction of direct income support (DIS) for farmers through per hectare payment independent from the crop choice.
The second objective closely related to the output price support of the first issue, has been the commercialization and privatization of state economic enterprises, including Turkish Sugar Company (TURKSEKER) and Turkish Alcohol and Tobacco Company (TEKEL) and quasi–governmental Agricultural Sales Cooperative Unions

(ASCUs) which in the past intervened to support certain commodity prices on behalf of the government.

One-time alternative crop payments formed the third objective. It provide grants to farmers who require assistance in switching out of surplus crops to net imported products. These reforms are intended to increase the efficiency of the agricultural sector and thereby help Turkey meet the preconditions for accession to the EU.

As it is indicated before, implementation of ARIP began in 2000 with a pilot program of income support payments applied to four regions. For preparing a farm registry, all agricultural land users in pilot program regions, received $50 per hectare of agricultural land, up to a maximum of 20 hectares per farmer. The program was extended all regions in 2000-2002. Table 11 shows the evolution of the intervention prices and direct payments for selected commodities over the period 1998-2002. The increase in the financial cost of the intervention can be easily seen in Table 11.

Table 11: Evolution of the Intervention Prices and Direct Payments for Selected Commodities in Turkey between 1998-2002, (US $ millions).

	1998	**1999**	**2000**	**2001**	**2002**
Market price support					
Cereal	425.8	356.7	183.0	27.8	0,0
Tobacco	276.9	146.6	81.8	43.3	26.7
Sugar beet	245.2	141.6	70.5	40.1	0,0
Payments based on inputs used					
Fertilizer	476.7	283.6	153.4	60.5	0,0
Pesticides	33.0	24.7	19.2	14.7	0.0
Seed	6.6	3.4	4.6	0.8	0.0
Development of animal husbandry	0.0	0.0	19.2	31.9	50.1a
Incentive premiums:					
Milk	31.5	25.6	19.2	9.8	0.0
Compensation payment					
Tea	13.8	7.1	25.2	22.1	26.7
Natural disaster relief	29.7	37.2	22.4	0,0	0.0
Credit subsidy	1,663.2	1,675.3	562.7	274.8	0.0
Deficiency payments	0.0	265.8	298.2	280	145.1
Direct income support	0.0	0.0	0.0	68.1	1.159,0
Total	3,202.4	2,922.6	1,459.6	874,4	1,357.5

a. with milk premium.

Source: Turkish Ministry of Agriculture and Rural Affairs

DIS payments will be ongoing but should become more explicitly targeted because DIS allows the government to disengage from its current support mechanism and to turn the farmers safety net (more targeted towards the poor farmers).

Removal of price support to fertilizer started before the 2000 Reform plan. Fertilizer subsidy has been held constant in nominal terms since 1997. The procurement prices

of grains (especially wheat) by Soil Products Office (TMO) have been linked to world prices and price supports for grains were reduced, with the aim of eliminating the supports completely by 2002. More explicitly, since 2002, grain support prices were not announced by a decree of the government, The Turkish Grain Board (TMO) announced its purchasing prices based on production, its stock, and expected market conditions.

Finally, Agricultural Strategy Paper (ASP) designs a new scheme on agricultural policy reform for the period 2006-2010. Main principles of ASP may be summarized as follows:

Economic efficiency;
Reducing regional differences;
Food safety and security,
Sustainability;
Harmonization with EU and WTO legislation,
And market mechanism.

Agricultural support instruments are listed under 7 headings in the ASP:
Direct Income Support Scheme (DIS),
Premium Payments (for cereals and oleaginous seeds and raw cotton crops),
Livestock Premium Payments
Farmer Transition Program (for tobacco and hazelnut)
Environmentally Based Agricultural Land Protection Program (ÇATAK)
Agricultural Insurance Payments
Rural Development Grants

Direct Income Support scheme can be categorized in two main groups: Direct income support scheme and other direct payments scheme. All support payment schemes for crop production is being linked with the National Farmer Registration System (NFRS). Support payments will be determined in accordance with factors related to the region, enterprise, land, crop, farmer system, contract farming, environmental issues, annual development programs and budgetary allocations. Quality, standard and

hygiene are the essential criterias to be use in determining the scope of the support and payment amounts.

There were substantial improvements on the application of ASP: Before its implementation, National Farmer Registration System (NFRS) has been used for only DIS but after ASP, NFRS used for every crop support schemes. Moreover, it has been updated anytime within the year. Briefly, under the NFRS there are six support scheme mechanisms.[6]

In DIS scheme, basic DIS payments are made to the farmers cultivating or sustaining their lands for agricultural use. Additional DIS payments are granted to the farmers who undertake soil analysis, utilize organic farming or certified seed on their land and farmers must be associated with agricultural activity for minimum one production season (8-10 months) on the same land. Concerning payment criteria, basic and additional DIS payments are made on per hectare basis considering the land size of the applicant farmers.

Farmers are eligible for DIS payments for land up to and including 50 hectares. Farmers are ineligible for DIS payments for land under 0.1 hectares. DIS payments per hectare were Euro 91.5 in 2001, euro 94.5 in 2002, 92.6 in 2003 and 2004. On the other hand, deserted or stranded agricultural land with no current use, state owned land; forest areas and communal property such as pastures are ineligible for DIS payments. Eligible DIS beneficiaries must comply with minimum land management, crop rotation and arable stubble management conditions and standards. DIS payment is not made for areas under environmentally based agricultural land projection program.

Comparable factors are as follows:

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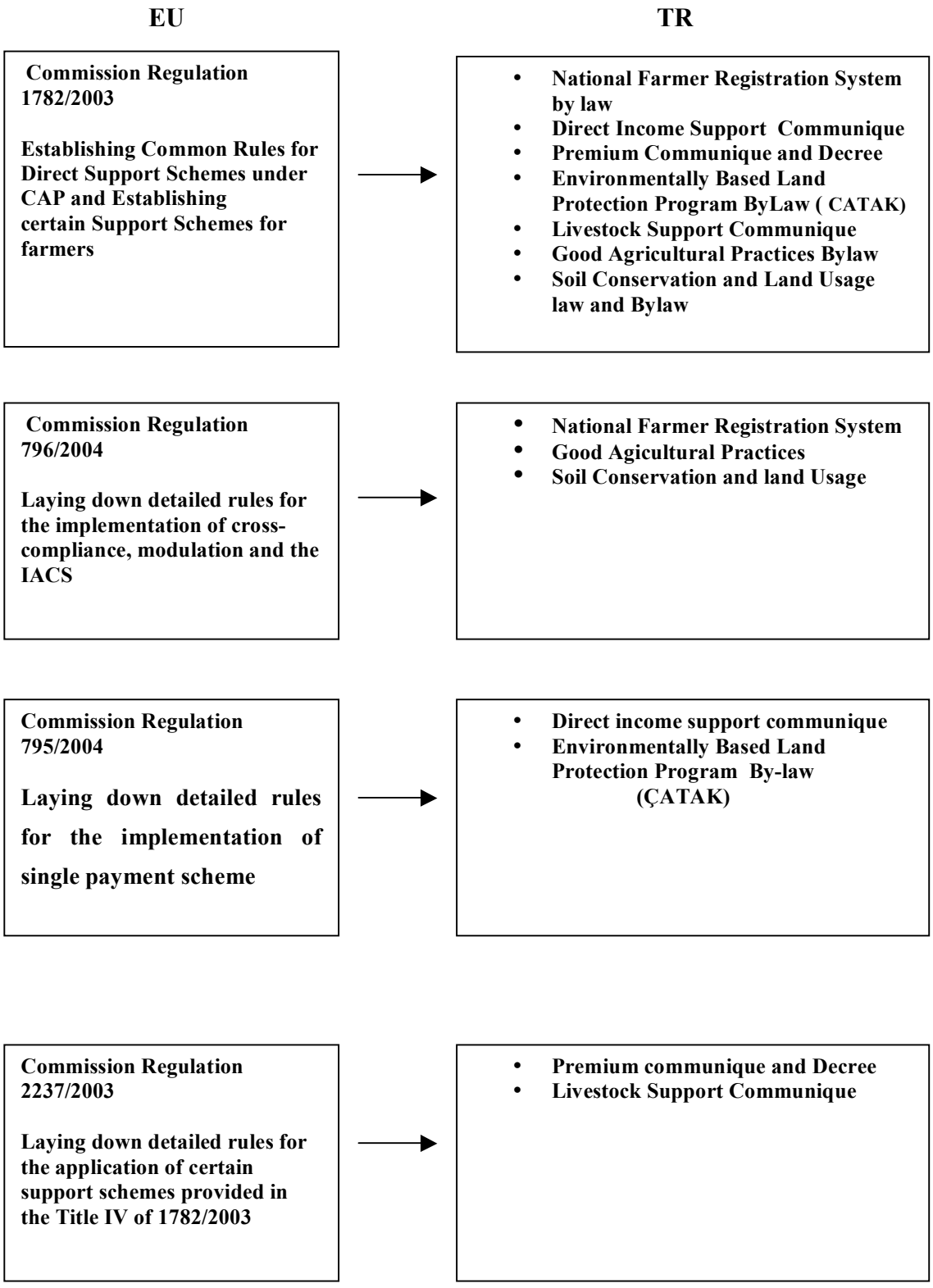
[6] Support Scheme I (SP) is for DIS; SP II, for additional DIS, SP III, for farmer transition, SP IV, for area based, diesel and fertilizer; SP V, for general premium; SP VI for cereals premium

DIS and other area based payments as well as premium payments (all type of crop supports) are linked to the NFRS.
DIS payments are still independent of the crop type and quantity of agricultural production.
Production technologies, which aim to increase quality and yield, are supported.
NFRS and other systems are initiated, strengthened and integrated in order to establish IACS infrastructure in Turkey.
ÇATAK legislation is published.
Good Agricultural Practices legislation is published.

Main differences are as follows:

Farmer Advisory System has not been established yet.
DIS scheme is associated only with crops.
Livestock supports are not linked with animal identification and registration systems.
There exists no specific legislation covering all these support instruments

Figure 2: Comparison of EU –Turkish Legislation



II.2.6 Institutional Development on the Way of EU Accession

Implementing Agencies for Agricultural Policies

Turkey's key institutions responsible for the formulation and implementation of agricultural policy, in the context of implementation of the acquis, are the Ministry of Agriculture and Rural Affairs (MARA) , MIT (Ministry of Industry and Trade), Turkish Bank of Agriculture (Ziraat Bank) and Treasury. The main task of MARA is to assist in the elaboration and implementation of agricultural policies, particularly services such as inspection and quarantine, rural development and small-scale irrigation activities, research and development. As regards administrative capacity MARA has to be strengthened at central and local level. Reinforcement is particularly essential for implementing at the general control task and achieving the EU requirements related to animal identification and animal diseases.

MARA carries out a commercial function through an affiliated state economic enterprise, the Turkish Grain Board (TMO). Under the Agricultural Reform Implementation Project the prices of the TMO will be increasingly linked to the world price (with a margin equal to the tariff) in order to allow state procurement to function only as a " buyer of last resort". For more than six decades, the TMO has fonctioned as a buffer stock agency in order to stabilize the grain prices received by producers and paid by consumers. TMO's new purchase and sales pricing policies have been very succesful in eliminating its deficit (TMO 2002).

The Turkish Bank of Agriculture is the principal supplier of agricultural credit for crop and livestock production. Gradual efforts to subsidize the credits to agriculture through the agricultural sales cooperatives unions (ASCUs) have been successful. Actually, all of these loans, in the past, carried negative real interest rates, with losses covered by the Treasury.

The agricultural credit cooperatives were the affiliated institutions of the Turkish Bank of Agriculture for the distribution of subsidized credit to small farmers. They were the only source of production credit for those small farmers. However, the cost

effectiveness of their activities was never a concern and the Turkish Bank of Agriculture provided all of their financial requirements. Recently, about 500 branches of this bank were closed in rural areas and the credit subsidy was eliminated. Today, under the Agricultural Reform Implementation Project, the status and main tasks of the agricultural sales cooperatives unions have been changed and financial aid is granted to assist for their restructuring and transformation. More and more, they become independent, self-managed cooperatives that sell and process members' production.

Horizontal Issues:

Implementation of the Integrated Administration and Control System of payments (IACS)

According to the agricultural acquis, European Union member states must meet certain requirements for creating a safe and transparent payment mechanism in their financial bodies. In particular, the payment agencies must be accredited and must offer sufficient guarantees that the admissibility of claims and compliance with European Community rules are checked before payment is authorized. Similarly, the payments effected are correctly and fully recorded in accounts.

Consequently, the European Union introduced an integrated administration and control system for combating fraud and ensuring an effective direct payments scheme. According to the acquis, the IACS must have a computerized database, an alphanumeric identification system for agricultural parcels, and a system for identifying and recording animals. Under the ARIP and DIS program, Turkey will have to strengthen some institutions: Two approaches have been used to build an adequate registry of farmers. The first approach is based on the existing land registry records and the second is based on certificates of farmers. The database of farm registry system developed by MARA and related organization, includes information on the number of farmers, their demographic characteristics and assets, the number and the size of land parcels, and land use. All province and districts are provided an online connection to the MARA Registration Center. Under the ARIP and ASP, the National Farm Registration system has been established where 2.75 million farmers and 17 million hectares land are registered. In addition to the farmer registry, a Geographic Information System (GIS)

and Remote Sensing Department was established within MARA to classify a map agricultural land use planning purposes. According to the European Commission Report, despite the considerable achievements on this topic, Turkey has not accomplished all requirements of the IACS system. Similarly, EU member states have been required to accomplish their land register and parcel identification control system based on GIS analysis of digital images. Over time, Turkey could adopt this system from the outset.

IACS implementation started in 2004. Within the framework of Turkish–European Union pre-accession financial cooperation program, a project on preparation for the implementation of EU common agricultural policy has been prepared. The project consists of two sub-projects: One hand, the designing of a functioning IACS and LPIS and on other hand, support for preparation of rural development plans and strengthening institutional capacity for implementation of the plan. The first project includes establishment of IACS and LPIS. It covers the identification of olive groves, vineyard and nuts areas aims[7] to provide support for the Ministry of Agriculture and Rural Affaire (MARA) in establishing the main elements of IACS according to EU norms. The project will begin with a pilot project, and then nationwide application will be implemented.

2006 Progress Report stated that good progress has been made on horizontal measures[8]: in the area of standardization, the number of mandatory standards declined significantly, in particular concerning the new approach The remaining mandatory standards are only 29 in 2006 from 300 in 2005 and they are mainly in the area of construction products. Turkish Standards Institute (TSE) further adopted EN standards of the European Committee for Standardization (CEN), the European Committee for Electro Technical Standardization (CENELEC) and the European Telecommunications Standards Institute (ETSI). About 90 % of (CEN) and 88 % of CENELEC standards were now adopted.

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[7] Council Regulation: 1782/2003 concerning olive and vineyard registration system.

[8] Commission of the EU, Turkey 2006 Progress Report, COM (2006) 649 final, 8.11.2006, p.32-33.

Regarding accreditation, some progress has been realized: TURKAK, the national accreditation agency, signed the multilateral agreements (MLA) of the European Accreditation Cooperation (EA) on calibration laboratories, testing laboratories, quality system certification bodies and inspection bodies.

However, the identification and the removal of provisions contrary to the general principles of free circulation of products and mutual recognition has not been completed. Regarding market surveillance, Ministry of Industry and Trade's efforts are in progress; nevertheless, an effective market surveillance system in conformity with the new approach principles is not yet in place nationwide.

Food Safety and Quality Standards Policy

Food legislation of the EU includes general rules for hygiene and control, food labeling, food additives, food packaging, and genetically modified foods. According to the acquis, each member state must have appropriate administrative structures to inspect and control the implementation of all food legislation. Under these requirements, European agro-industrials must be trained in inspection by Hazard Analysis and Critical Control Point system (HACCP).

On specific rules for food, legislation in the areas of labeling, presentation and advertising, additives and purity criteria, extraction solvents, quick frozen foodstuffs and irradiated food, is mostly in line with the acquis and implemented. Alignment in the area of mineral waters is quite advanced. The legislation relating to food for particular nutritional uses is in line with the acquis and has been implemented. On contaminants, the regulation on setting up the maximum limit for certain contaminants is in place and the legislation on official controls of contaminans is in line with the acquis. The plan on prevention of aflatoxin contamination continued to be implemented[9].

As regards flavorings and implementing legislation regarding food contact materials, the transposition of the acquis remains to be completed. Transposition of the acquis on food supplements has not yet started. The regulation on market control of foodstuffs and

[9] Commission of the EU, Turkey 2006 Progress Report, COM (2006) 649 final, 8.11.2006, p.45.

packing material is not fully aligned. On genetically modified organisms and novel foods, transposition of the acquis needs to be completed.

According to Togan et al (2003:34), food legislation in Turkey has updated continuously since 1985. The harmonization of "Good Agricultural Practices" has been completed, and the regulation on Agricultural Quarantine has been in force and regularly strengthened. Turkey has served and continues to serve as a model, the European food control legislation. Among many progress on this way, the most important are as follows:

Upgrading and establishing monitoring laboratories.
Accreditation by the Accreditation Council 2001
Food Analyses Performance Assessment Scheme (FASAS)
Food Safety Codex 1997
Recognition and implementation of international guides on food certification by Turkish Standards Organization (TSE) 1994.
Hazard Analysis at Critical Control Points (HACCP)
EUREPGAP 2004[10],

Another important study related to the food safety is that of Alpay et al.(2001). This study is not focused on safety and quality standards but on their effects on the export performance of firms. The study collected data by using the face-to-face interviews with 100 firms in 5 different food sub-sectors in Turkey and constructed indexes measuring the compliance with quality and safety standards, vertical integration and environmental performance. This study confirmed that higher quality and safety standards have a positive effect on firms' export performance.

[10]EUREPGAP is a private sector body that sets voluntary standards for the certification of agricultural products around the globe. The EUREPGAP standard is primarily designed to maintain consumer confidence in food quality and food safety. Other important goals are to minimize detrimental environmental impacts of farming operations, optimize the use of inputs and to ensure a responsible approach to worker health and safety.

On the other hand, MARA take over the responsibility for implementing food safety legislation, at present The General Directorate of Protection and Control within MARA administers 81 Provincial Directorates, 39 Provincial Control Laboratories and one Food Control and Research Institute. About 1000 food analysts were carrying out food control inspection services. Actually this does not say very much about the level of food safety in practice. However, certification level on the fruits and vegetable growers is important because they export these products. By march 2004 there were farmers certified by EUREPGAP with a total area of 2.905 ha and certification was growing rapidly and 102 farmers have been certificated [11]

As a conclusion, there is an important progress on food safety and food quality in Turkey, particularly the legislation is increasingly oriented towards EU standards and the ongoing legislative and other efforts have focused on establishing an effective food safety system based on the objective of the White Paper prepared by European Commission on this issue. Moreover trade openness and the preparation for EU accession may have a positive influence on the implementation of the food safety standards on wide- nation perspective in Turkey.

Rural development, agro-environmental measures and forestry

The development of rural areas and agriculture has been realized by heavy government intervention in the sector, which was often inefficient. This may have occurred under the divers implicit or explicit support measures such as trade controls government intervention, strong government involvement in marketing, input subsidies, credit and fertilizers subsidies, Concerning rural development, a National Strategy was adopted on which an Action Plan and the financial Pre-Accession Assistance (IPARD) need to be built. MARA has been designated as the Managing Authority for IPARD program. Policies dealing with food quality and food safety started to develop in the mid-1990's, due to the custom union with the EU.

[11] www.eurep.org

Veterinary and phito-sanitary issues, including food safety

Concerning general foodstuffs policy, some progress has been made in transposition and implementation. But, as regards participation in the Rapid Alert System for Food and Feed, the lack of proper monitoring of alerts, and an insufficient network for information between the central and local units, remain[12].

Veterinary legislation addresses animal health, animal welfare, animal identification and registration, internal market control systems, external border controls, and public health requirements for establishments in relation to animal products. Similarly, phytosanitary legislation includes plant health, seeds and plant hygiene. Additionally, animal feed legislation includes the safety of feed materials and additives, labeling, contaminants in feed, controls, and inspections.

Turkey has concentrated on fighting disease outbreaks, such as Avian Influenza. The first avian influenza (AI) outbreaked in October 2005 was handled efficiently with the help of a contingency plan. Information among the international organizations and particularly information to the EU on AI was provided in a transparent manner. Also, the technical capacity of the AI reference laboratories increased. However, according to the Commission, vaccination campaigns against the new disease have been implemented[13]. For other diseases, vaccination campaigns continued to be implemented[14].

Significant improvement has been made on the preparation of the national residue-monitoring plan. All active substances required by EU legislation have been included in the annual plans. The residue plan has been approved by the EU for milk and milk products and poultry. The identification and registration of bovines and the registration

[12] Commission of the EU, Turkey 2006 Progress Report, COM (2006) 649 final, 8.11.2006, p.44.

[13] For food and mount disease.

[14] Such as brucellosis, sheep and goat plague, anthrax, sheep and goat pox, bluetongue.

of their movements are in progress, however compliance with the acquis needs to be assessed

Some weaknesses reported by the Commission may be summarized as follows: the registration of bovine and caprine animals at the preparatory level. Regarding the financing of veterinary inspection and controls, Turkey's current system is not in line with EU practices. Implementation concerning the veterinary checks on third country imports is not in line with EU rules. Furthermore, the controls of movement of live animals, requires attention. Revision of the food law as the clear definition of competences between the central authorities and municipalities are necessary to prevent gaps in hygiene and food controls and to ensure implementation of the acquis Concerning phytosanitary issues limited progress has been made. Turkey has not aligned its legislation on quality of seeds and propagating materials, plant health, and plant protection and agricultural quarantine[15].

However, an inspection manual was prepared and inspection at the borders were unified, the diagnostic capacity of plant health institutes was increased and brought in line with EU standards, pest risk analysis started to be implemented.

II.3. Adaptation Problems

II.3.1 The Most Important Differences Between Turkey end EU and The Subsequent Problems of Adaptation

Large Number of Small-Scale Agricultural Enterprises Farm

Farms in Turkey are generally small, family-owned and fragmented. The average size of farm is small and is about 6 hectares**.** The majority of existing farms have difficulties in adapting themselves to the conditions of the market economy. Subsistence and semi-subsistence farming is an important characteristic of Turkish agriculture.

[15] Commission of the EU, Turkey 2006 Progress Report, COM (2006) 649 final, 8.11.2006, p.45.

The existence of small farms in Turkey is closely connected with a very large "dispersing of agricultural production". Small farms can produce small amounts of goods, which make the organization of the agricultural market (especially purchasing centers of agricultural products and their processing) difficult. Once farm and land registers are completed, there will be more accurate information regarding the extent and use of agricultural land. Consequently, estimates of land used vary significantly. According to the SIS estimates (SIS; 2001), agricultural land has declined slightly and fallow land more so, between 1980-2000, but the area of vegetable gardens has increased, the area of olive trees and vineyards has decreased, the area of fruit and nut trees has remained constant. Native pastures have decreased.

Large employment in agriculture- hidden agricultural unemployment

In rural areas, the main economic activity is agriculture and household members take part in the family work. As a consequence, self-employment and unpaid family workers are dominant in agricultural production. In 2005, self-employment and unpaid family workers constituted 42.4% and 50.8 % of total agricultural employment, and 37.1 % and 37.4 % of total rural employment respectively. Participation of women to agricultural production in 2005, was around 81.9 % and 75.3 % of women were working as unpaid family workers[16]. Apart from the officially registered unemployment, there is also the so-called hidden unemployment in Turkish agriculture.

With low education level, people living on farms are much less prepared to participate in economic and social life than other groups of people living in the country, and they have more difficulties in finding new jobs, when they are made redundant. Turkey not only lags behind the level expected from EU members but also shows a significant gender inequality. The existing gender inequality, seems to originate largely from the highly participation of women in agricultural production.

Levels of Technology in agriculture

[16] Femise, Economic Research Forum, Turkey Country Profile, The Road Ahead for Turkey, August 2005, p.131.

Turkey's agricultural technology system is under-performing. Current agricultural research and technology policy needs to be designed, coordinated and implemented. Mechanization of agriculture in Turkey means mainly the possession of tractors and agricultural machinery. Such mechanization is expensive and little effective.

During the 1980s, new equipments manufactured on larger scale, are equipment for greenhouses, drying equipment, silage machines, rotary harrows. After 1980's reforms, the number of tractors produced and sold in Turkey stayed roughly constant, while the companies producing tractors fell from 11 in 1984 to 3 in 1994. One possible interpretation is that liberalization sped exit for firms too small to be efficient (Gisselquist, D et al, 2002: 19). Turkey exports non-tractor agricultural machinery. Imports are most important for tractors and some other specialized large machines such as combined harvesters. In 1980's Turkey fit the single-channel model insofar as government maintained a near monopoly on research and technology transfer in agriculture. But reforms from the 1980s allowed multiple new private channels for technology transfer. Before reforms private individuals broke the law to introduce new technology through smuggled inputs, including cotton, wheat, and vegetable seeds and poultry vaccines.

At present, regarding the use of mechanization, big farms in Turkey can boast of good or very good levels of mechanization. These farms are usually large; they also acquire high profits from agriculture and continue buying new agricultural equipment. On the other hand, the majority of small farmers have no means to buy machines because their income is low and prices of farm products, compared with the prices of the machines, are low.

In order to reduce the costs of agricultural production connected with the large number of tractors used in Turkish agriculture and to improve mechanization in small and medium farms, methods of using the machinery collectively, similar to those already existing in the EU, should be introduced.

Significant regional differences in agriculture

Nine agricultural regions are usually recognized in Turkey on the basis of natural, socio-economic differences (see Figure 1**)** These regions differ basically in most agricultural features, namely farm size, level of mechanization, capacity and effectiveness. Agriculture activity in western regions is already quite similar to agriculture in the European Union. The farms here are relatively large and are well equipped with machines, they are generally highly efficient and the majority of their production is sold on the market. But the agriculture of the southeastern part of the country is in absolute contrast. Here, inefficient farming activity is predominating. The main reasons are the high population density in agriculture and small and fragmented land use and the lack of jobs outside agriculture. The farms in those regions produce mainly for their own needs. Throughout the last years, the agriculture of this part of the country has not shown any positive changes. Small farms do not use any fertilizers or new grain varieties. The majority does not buy agricultural machines or make investments. Unfavorable economical situation of farms faced with low income and threat from strong competition of agricultural products coming from the European Union remain.

II.3.2 Chances of Turkish agriculture connected with the integration into the EU

For many Turkish farmers the integration into the European Union will be a great challenge with results that cannot be predicted today, there are fears that after abolishing duties in mutual economical contracts, the deficit will be even higher as the competition will increase.

What changes can be expected after the integration of Turkish agriculture into EU structures?

Firstly, reforms will be accelerated, not only in agriculture but also in the whole food industry and institutions co-operating with the industry (trade, banks, scientific research, etc.).

Another effect of the integration into the EU will definitely be an increase of efficiency, a decrease of production costs and the improvement of quality standards. Producer groups and machine-sharing groups will be set up faster.

The free access of agricultural products to the European market will also be an advantage. Turkish agriculture can also achieve high competitiveness in producing ecological food, for which there is a great demand in Western Europe. The fact that in many parts of the country there are excellent conditions for organizing a large-scale production of ecological food is also emphasized.

Direct subsidies: Such subsidies could be given only to those farms which will meet EU production quality.

Preconditions to structural changes of agriculture in Turkey

Turkish agriculture has been undergoing systemic transformation for over 10 years, with the national economy structure. The assessment criteria of such transformations also changed with time. Under previous economic reforms, the economic structure has been evaluated basis on the planned development criteria. Such criteria included features such as efficiency, cohesiveness, flexibility, harmony, etc. Structural reform plans initiated by the governments concern several sectors in agriculture banking, social security etc.

One of the most urgent and difficult tasks the government and the society are facing now is the deep restructuring of agriculture and the acceleration of economic development of rural areas.

Turkish agriculture is characterized with considerable production capacity, the structure of which, however, is higly inadequate. The production capacity was generated under condition of extensive farming and is insufficiently adapted to market conditions. Structural defects of this capacity include low mechanization or low share of sophisticated technologies.

The future shape of the European model of agriculture

The agricultural sector in the EU and in Turkey is constantly confronted with new challenges. Discussions on the future shape of the Common Agricultural Policy concern both the current and the future EU and Turkish citizens.

Agriculture favors not only the production of high quality and safe food as well as non-food products but it helps as well stabilizing the rural settlements by maintaining employment in rural areas. Besides, it also creates a part of the sustainable development concept. Furthermore, it encourages the development of tourism in rural areas.

II.3.3. Legislative Reform or Arrangements

There are many legislative arrangements in agriculture and food sector (from the Pasture Law to the Food Law) were adopted recent years by the Parliament.

The Pasture Law (Law No: 4342)

Pastures play a very important role in ruminant feeding[17]. Pastures have been the basic source of forage for thousands of years[18]. Decrease in the pasture area has been due to mechanization of agriculture and ploughing of pasture to gain cropland[19]. Pasture degradation is the most important factor reducing productivity.

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[17] About 69 % of crude protein, 62 percent of starch and 33 percent of roughage needs of the ruminant livestock are provided by pasture (Genckan et al, 1989).

[18] At the beginning of twentieth century when 12 million people were living in Turkey, a relatively small number of animals were grazed on natural grazing and there was no serious pasture management problem. After the Second World War animal numbers remained almost the same, while grazing areas were reduced. The pasture resource has reduced from 56 % of total land area in 1940 to 16 % in 2000. However, recovery of degraded pasture occurs slowly (Keskin, 2001)

[19] Because of long years of over-grazing the pastures have not only lost productivity but also their quality. As a result of the above-mentioned negative impacts, pastures are far from being able to fulfill their main functions. Plant cover of the pastures in semi arid zones (south eastern

As a result of emigration from rural areas to, urban area, the number of people involved in agriculture declined to 28.4 % in 2006. This is a result of changes in animal composition and more sedentary system causing shortage of labor force and the decreasing productivity of grazing areas.

The land tenure system is, and has been, one of the major constraints of grassland management. Common areas are grazed free of charge, therefore they are not managed properly. Boundaries of pastures are not clearly determined and assigned to village communities. In the absence of tenure, the users have no incentives to invest in rangeland resources. In accordance with the new Pasture Law, cadastral work to define the boundaries of pastures is continuing and is expected to have a positive impact on pasture management and rehabilitation. The Great Assembly of Turkey enacted The Pasture Law (Law No: 4342) in 1998. This Law brings a series of new regulations to major issues of pastures. Assignment of grazing areas to villages or municipalities after defining their boundaries; enabling suitable management and use of these areas according to determined rules and procedures; development of their productivity through applying improvement programs; development of a system of supervision of utilization for better protection of the pasture.

The new law removes the gaps in the previous regulations on use of natural grazing by giving shared responsibilities and power to Ministry of Agriculture and Rural Affairs and to the users. Pasture Commissions and Technical Committees were set up at Provincial Agricultural Directorates to supervise pasture management and improvement. Likewise, village communities or pasture management commissions are planned to be established at the villages.

The establishment of Pasture Law in 1998 has contributed to pasture improvement in registered areas with some rehabilitation of degraded pasture.

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and central part), has reduced dramatically and is now unable to hold the soil, causing severe wind and water erosion problems.

Legislative Arrangements for Improvement of the Ruminant Sector

The Ministry of Agriculture and Rural Affairs (MARA) issued a Decision (Decision No 2000/467) on May 10, 2000, to support the ruminant sector in Turkey between 2000-2005. The Decision covers the following items.

a) Forage crops production projects approved by the MARA: For perennial forage crops up to 30 percent of total investment including equipment expenses (fertilizer and transport excluded) will be directly supported by the Ministry. The support will be up to 20 percent for annual crops. For the project to be eligible, the area sown to perennial and annual forages should be between 1-50 ha and 2.5-100 ha respectively.

b) Purchase of breeding animals: Farmers purchasing certified pure bred dairy cattle, raised by local holdings or General Directorate of State Farms will be directly supported up to 30 percent of the total cost.

c) Artificial insemination: Holdings receiving artificial insemination service will be supported up to 50 percent of the total artificial insemination costs.

d) Newly established artificial insemination enterprises: Equipment cost of newly established artificial insemination enterprises will be supported up to 50 percent of the total investment.

FSS Farm Structural Survey Arrangement

A Farm Accountancy Data Network does not exist yet however, Turkish Institute of Statistics support technically a pilot project covering 9 provinces in Turkey.

Consumer information on food Safety

MARA is the main decision making body in Turkey in the field of food safety veterinary and phytosanitary issues. Three kinds of laboratories[20] operate and control the food sector. There are also private laboratories operating with the authorization of Mara. The latest evaluation Report of Turkey by the European Commission Screening

[20] The veterinary Control and Research Institutes laboratories ; The Provincial Control Laboratories ; Phytosanitary Laboratories.

Report Turkey: Chapter 11/ Agriculture and Rural Development is detailing progress already accomplished as well as highlighting the considerable efforts still needed. The improvement of food distribution systems, particularly of street foods, is seen as one of the means to improve access to a safe diet. New food safety arrangements cover a GAP System (Good Agricultural Practices), a GMP System (Good Manufacturing Practices) and a GHP (Good Hygienic Products). Among the other new food legislation which is almost fully harmonized with respective EU legislation, HACCP (Hazard Analysis Critical Control Points) and RA (Risk Analysis) Risk evaluation, management, and communication are close to the food safety approach of EU.

Quality Policy Arrangement

The scope of the Turkish legislation on quality policy is wider then the scope of the EU, because it includes industrial products handcraft and mining. In 1995, for more specifying agricultural products a Food Safety Codex was adopted by the Parliament. This arrangement is fully parallel to the Total Quality System which cover ISO 14000; OHSAS 18001; SA 8000. The quality system standards series includes ISO 9001: 2000.

Agro– Industry

Turkish agro-industry brings together the producers of varying status and size. They range from small individual units and small and large cooperatives, to multi-national organizations. SPO reports 28.000 enterprises in the food industry, of which many belong to the small-scale sized manufacturing (SPO, 2006) Rapid growth and increase in domestic demand occurred throughout the 1980s, led to the rapid development in the agro industry. Among many branches, the most important are dried fruit and vegetables industry, frozen fruit and vegetables industry, dehydrated vegetable industry, fruit juice and concentrates industry, tomato processing industry, dairy products industry, vegetable oils industry, sugar and chocolate confectionery industry, pastry and milling industry, healthy food and organic agricultural products.

According to the 2004 data, the Turkish food industry contributes around 5 % of GNP and accounts for 20 % of total production of the manufacturing sector. The Turkish food industry has retained a stable share in total manufacturing production over the last few

years, from 20,1 % in 2000 to 20.9 % in 2004. During the 1990's this share was increasing, with the production of processed food growing by about 5 % per year. From 1990 to 2000, the share of the food industry in total manufacturing industry value added increased from 13 to 16 % (Rehber, 2004:87). However, the share in manufacturing industry export has declined from 6 % in 2000 to 4.9 % in 2002 (SPO, 2004). According to the SPO estimation, 10 % of the food sector enterprises are relatively modern and large and most of them are small to medium-size enterprises. Similarly, one out of the six enterprises uses modern technology for production and quality control. As a result, food sector enterprises should increase their adaptation level on the EU food quality norms.

Economic liberalization efforts since 1980's stimulated the private sector to invest in the food sector and today, Turkish food sector is dominated by the private sector, but in a few branches of the food industry, such as the sugar, meat and tea industries, there are still state-owned enterprises, although these state enterprises do not have the monopoly power and as private enterprises coexist at the production and the marketing stages. In the mid 1990's, state owned enterprises in the milk and a number of meat combine (EBK) were privatized. EBK had dominant position in the meat and fish market, but now control less than 3 % of production (Sarigedik, 2004). On the other hand, privatization in the sugar sector is not yet scheduled. But the government monopoly of the production of alcoholic beverage (Wine, beer and distilled beverage) ended in 2003. Now, beer and wine are mainly manufactured by the private sector (SPO, 2004).

Regarding to the performance of the food industry, SPO reports that food industry accounts for 20 % of total production in the manufacturing sector, its share in value added is 16 %. Moreover, generally low capacity problem is significant in the food industry. One of the reason of this weakness become partly from the downward impact of the past economic crises on the capacity utilization. This may be observed by the figures announced by the TUIK[21] (in the past DIE), one the other hand, the fact that state-ownership is still important in the sector and their inefficiency production caused duty losses and there are responsible of the general low capacity.

[21] TUIK, (Turkish Statistical Institute –Turkstat) www.turkstat.gov.tr

II.4. Agricultural Trade Liberalization

The Euro-Mediterranean Conference of Ministers of Foreign Affairs, held in Barcelona on 27-28 November 1995, has started a vision of " dialogue, exchange and cooperation guaranteeing peace, stability and prosperity " in the Mediterranean basin, between the EU and third Mediterranean Countries (Non-European Member Mediterranean States). Called briefly Barcelona Process, was conceived as resting on three pillars: a political and security partnership, an economic and financial partnership, and a social human and cultural partnership. More specifically the second pillar is dedicated to the creation of an area of shared prosperity through the establishment of the Euro-Mediterranean Free Trade Area by the target date 2010. The free trade area will be established through Euro-Mediterranean Association Agreements and Free Trade Agreements between Mediterranean partners[22].

Following Customs Union's entry into force in 1996 Turkey started to sign free trade agreements with its trade partners in Central and East Europe. At present, Turkey has 9 free trade agreements in force. Finally, in this framework, Turkey recently concluded many agreements establishing free trade areas with third Mediterranean countries: Israel (1996), Morocco (2004), Tunisia (2004), (Palestine (2004) and Syria (2004), Egypt (2005). Preferential Agreements signed with Palestine and Tunisia are in force as of 1 June 2005 and 1 July 2005 respectively.

[22] Association Agreements are in force between the EU and Tunisia (since 1998), Israel (2000), Morocco (2000), Jordan (2002), Egypt (2004) and on an interim basis with Palestinian Authority (1997). Euro-Mediterranean Agreements were signed with Algeria in December 2001, and with Lebanon in January 2002. With the conclusion of the negotiations between the EU and Syria, The European Union has completed in 2005 the network of bilateral Euro - Med Association Agreements with its Mediterranean Partners.

Table 13: Turkey's Trade with the Non European Member Mediterranean Countries (Million US $)

	2003			2004			Change (%) 2003/2004		
Country	Export	Import	Volume	Export	Import	Volume	Export	Import	Volume
Morocco	**181**	**77**	**258**	**330**	**106**	**436**	**82,4**	**37,4**	**68,9**
Algeria	**573**	**1.082**	**1.655**	**806**	**1.256**	**2.062**	**40,7**	**16,1**	**24,6**
Tunisia	**220**	**98**	**318**	**256**	**100**	**356**	**16,2**	**2,3**	**11,9**
Egypt	**346**	**189**	**535**	**473**	**255**	**728**	**36,7**	**34,8**	**36,0**
Lebanon	**148**	**72**	**220**	**234**	**146**	**381**	**58,4**	**103,8**	**73,2**
Syria	**411**	**413**	**824**	**395**	**358**	**752**	**-3,9**	**-13,5**	**-8,7**
Israel	**1.083**	**459**	**1.542**	**1.311**	**714**	**2.025**	**21,1**	**55,4**	**31,3**
Palestine	**6**	**0**	**6**	**9**	**1**	**10**	**50,4**	**0,0**	**48,3**
Jordan	**150**	**17**	**167**	**229**	**14**	**244**	**53,0**	**-16,0**	**46,0**
Regional Total	3.118	2.408	5.526	4.044	2.950	6.994	29,7	22,5	26,6
World T	47.253	69.340	116.593	63.075	97.362	160.437	33,5	40,4	37,6

***Source*: Undersecretaries for Foreign Trade- General Directorate of EU Affairs.**

Table 13: Turkey's Trade with the Non European Members Mediterranean Countries (Million US $) (suite)

	2004			2005			Change (%) 2004/2005		
Country	Export	Import	Volume	Export	Import	Volume	Export	Import	Volume
Morocco	**166**	**44**	**210**	**208**	**72**	**280**	**25,3**	**63,6**	**33,3**
Algeria	**345**	**567**	**912**	**418**	**843**	**1261**	**21,2**	**48,7**	**38,3**
Tunisia	**118**	**26**	**144**	**143**	**37**	**180**	**21,2**	**42,3**	**25,0**
Egypt	**223**	**128**	**351**	**344**	**127**	**471**	**54,3**	**-0,8**	**34,2**
Lebanon	**98**	**64**	**162**	**74**	**76**	**150**	**-24,5**	**18,8**	**-7,4**
Syria	**186**	**251**	**437**	**277**	**152**	**429**	**48,9**	**-39,4**	**-1,8**
Israel	**597**	**334**	**931**	**724**	**402**	**1126**	**21,3**	**20,4**	**20,9**
Palestine	**5**	**0**	**5**	**4**	**0**	**4**	**-20,0**	**…**	**-20,0**
Jordan	**103**	**6**	**109**	**135**	**19**	**154**	**31,1**	**216,7**	**41,3**
Regional Total	1.994	1.420	3.414	2.327	1.728	4.055	16,7	21,7	18,8
World Total	29.019	45.312	74.331	34.973	54.980	89.953	20,5	21,3	21,0

***Source*: Undersecretaries for Foreign Trade- General Directorate of EU Affairs.**

As it can be seen from the Table 13, the share of the Mediterranean countries constitutes 3-4% of Turkey's total imports. Main import products from the region are petroleum

and natural gas. The share of industrial products is far from showing its real potential. These countries can compete with EU and Central and European Countries and increase their share in the Turkish market only through establishing preferential agreements.

Turkish exports also show similar trends as its imports and constitutes only 6-7% of Turkey's total exports. A share of 4-5 % in the trade volume implies a very poor trade relationship between partners. The economic rational of the Barcelona Process have two key features: First, gradual introduction of free trade, as a vehicle towards greater competitiveness; second, substantial financial and technical support from EU to others, was " economic transition programs ", as vehicles towards institutional and policy reform.

Free Trade Agreement concluded in 1996, between Turkey and Israel suggests to establish gradually a free trade area in conformity with their existing committeemen's to the main trade partners: European Community and Euro Mediterranean Parties and WTO. This agreement suggest to promote, through the expansion of reciprocal trade in goods and services the harmonious development of the economic relations between Turkey and Israel and also to provide fair conditions of competition for trade between two countries. Chapter I of the Agreement set out custom duties and quantitative restrictions on imports and exports and related measures having equivalent effects.

And chapter II covers agricultural and processed agricultural and fishery products originating in the parties falling within Chapters 1-24 of the Harmonized Commodity Description and Coding System as well as the products listed in Annex I of the agreement. Therefore, by this agreement Turkey and Israel have granted a preferential treatment to each other, in agricultural and fishery products listed in Annex I and Annex II of the Protocol A in compliance with the provision of Protocol B on rules of Origin of the Agreement. (See. Annex B1-a and B1-b).

In 2004, Turkey and Morocco concluded a free trade agreement which sets out the preferences given for industrial products and also agricultural products This agreement contain two protocols: Protocol I covers customs duties and charges having equivalent effect on imports applicable in Turkey to products originating in Morocco and they shall be abolished upon the entry into force of this Agreement. On the other hand, parallel to

the Cooperation Agreement between Morocco and the EU, custom duties and charges having equivalent effect on a group of sensitive industrial products (List I and II of Protocol) originating from Turkey will be dismantled gradually under a period of nine years.

Protocol II covers preferential trade in agricultural products. This protocol has two annex: Annex I sets out arrangement applicable to the importation into Morocco of agricultural products originating in Turkey. And Annex II sets out arrangements applicable to the importation into Turkey of agricultural products originating in Morocco.

But the scope of mutual concessions in agriculture is limited. Nevertheless, by taking into account the development of bilateral trade in agriculture and the consequences of the multilateral trade negotiations, the parties shall examine the possibilities of granting each other further concession within the Joint Committee. On the other hand, the products classification systems in Morocco and Turkey are not the same and it could be possible to encounter differences between product codes applied by Turkey and Morocco[23].

In 22.12.2004, after three rounds of negotiation, an association agreement establishing a free trade area has been concluded between Turkey and Syria. This agreement has similar provisions with the Agreement that was initiated between the EU and Syria on 19.12.2004 as far as trade issues are concerned. According to the agreement Turkey abolished in its side, all the custom duties and measures having equivalent effects on industrial products. And, Syria will abolish the custom duties according to the established timetable of 12 years.
For the agricultural products, the Agreement suggests exchange of concessions in basic agricultural and processed agricultural products and fisheries listed in Table A and B of the Protocol I. (see. Annex B3-a and Annex B3).

[23] see. Web site of the Moroccan Custom Administration http://www.douane.gov.ma/tarif/-tarif.htm and http://www.douane.gov.ma/adil/principal.htm

Similarly, on November 2004, Turkey has concluded an association agreement establishing a free trade area with Tunisia, which has been entered into force on 1 July 2005. With this agreement, the parties aims at strengthening cooperation, removing barriers to trade, including the agricultural trade establishing appropriate conditions for competition and promoting bilateral investment. Therefore, a free trade area will be created within nine years after the entry into force of the agreement (2014). Concerning the industrial products, Turkey has abolished all customs duties on industrial products originating from Tunisia, whereas Tunisia will remove its tariffs progressively. All these exchange of concessions are set out under Protocol I and for agricultural trade concessions, the Protocol II is in application. This protocol establishes preferential trade regime with concessions for a given number of agricultural, fishery and processed agricultural products on the basis of tariff quotas.
(See. Annex B4-a and Annex B4-b).

On 27 December 2005, one more free trade agreement establishing a preferential regime for industrial and agricultural products has been concluded between Egypt and Turkey. Similarly, Protocol II of the related agreement establishes preferential regime for agricultural trade and sets out arrangements for importation of certain agricultural products into the contracting parties. (See. Annex B5-a and Annex B5-b). On the other hand, the new model of Pan-Euro Mediterranean system of cumulation of origin will be in application in Egypt and Turkey.

Finally, on 20 July 2004, an interim free trade Agreement has been signed between Turkey and Palestine. This agreement does not initially set out a preferential regime for the agricultural products. However, the main objectives of the Agreement are the enhancement of the level economic cooperation between the parties, abolition of restrictions in bilateral trade, creation of a competition environment, encouragement of mutual investments and improvement of the positions of parties' positions in the third country markets through collaboration. Therefore, the scope of the agreement is not yet over the technical assistance collaboration.

II.5. Conclusion

As a culmination point, in the process of its liberalization efforts, Turkey signed a Customs Union agreement with the European Union in March 1995, which had been put

into effect in January 1996. Among many other details, this agreement covers the following broad objectives: (1) all tariffs on Turkish imports of mining and industrial products form the European Union were eliminated; (2) Turkey has agreed to adopt the European common external tariff rates on mining and industrial products, and (3) the existing export quotas on Turkey's textile and clothing exports to the European Union under the "Voluntary Export Restraint Scheme" were eliminated. Turkey has always interpreted the Customs Union agreement as a final step toward, full membership to the European Union.

As such, Turkey remains the single country outside the European Union with complete integration of its commodity markets under the Customs Union. As a consequence of this agreement, Turkey's weighted rates of protection for imports of industrial products originating from European Union and EFTA member states have fallen from 5.9 % to 0 % and from 10.8 % to 6 % for similar goods originating from the third countries.

Turkey is now taking steps for adaptation to the European Union's Preferential Trade Agreements concluded with third countries. It has already signed free trade agreements with the all the candidate countries from Central and Eastern Europe as well as EFTA and South Mediterranean non-EU members' countries.

The Customs Union as put into effect in 1995 does not cover agricultural goods and free circulation of agricultural products will only be realized upon Turkey's alignment of its policies to the European Union's Common Agricultural Policy. However, in the period between the signing of the Agreement and the adoption of the Customs Union decision, the European Union granted certain concessions to Turkey.

As a result, prior to the Protocol dated 25 April 1997, 71 % of the agricultural exports benefited from the exemptions and 5 % benefited from the reductions. Hence in total, 76 % of Turkey's exports benefited from the concession (Bayar, 1999).[24]

[24] Bayar, A. (1999), " The Impact of the Customs Union on the Turkish Economy ", Free University of the Brussels, mimeo

The basic objectives of agricultural policies in Turkey are to ensure balanced and adequate nutrition and to access quality and safe food of the increasing population by taking food security principle into account; to build an agricultural structure, which is economically, socially and environmentally sustainable, highly competitive and in line with the EU; to ensure the effective use and development of natural resources. In this regard, accession to the EU implies some major changes, both in the incentive structure for agricultural production and in the institutions of the sector.

Under its current reform program (ARIP), Turkey has made a good start in this adjustment process. By bringing agricultural prices, more in line with world prices, the reforms aims to make Turkish agriculture more efficient. Actually, one important difference between Turkey and the EU member's countries is that the prices for many major agricultural products in Turkey will have to be reduced at some point, between now and accession and farmer's partially compensation would be by means of an incentive-neutral, WTO–compatible direct income support system that is fully consistent with the mechanisms of the CAP.

On the other hand, as for institutions, Turkey has made a good start in some areas and the establishment of DIS system lays the foundation for a system to administer direct payments under the CAP, moreover the financial management system of the DIS should be an important step on which to build the Integrated Administrative and Control System of payments. However some important improvements will be needed such as the establishment of GIS analysis of digital images system implying that GIS maps will have to be prepared for all of Turkey.

Despite the some notable achievements, food safety and quality standards and also veterinary border controls have to be improved. This could be feasible by a good investment program and a support scheme from the EU and international community, in the period leading up to accession. For instance, Turkey also must establish its quality-infrastructure on the wide-nation level like generic term encompassing the operators and operation of standardization, testing, certification, inspection, and accreditation. Recently, Turkey has taken major steps to align with the *acquis*. Law 4073, on the Preparation and Implementation of Technical Legislation on Products, entered into

force in January 2002. This framework law provides the legal basis for harmonization with the EU legislation.

In order the improve the productivity and quality in plant production, a new Seed Law enacted in 2006, is in line with the EU harmonization process and takes into account international seed system and advanced technologies.

The Extension and Control of Organic Agriculture Project, in order to develop training dissemination and building institutional capacity in the field of organic agriculture, has been implemented since 1997.

Concerning livestock sector, woks on the alignment of national legislation with the related EU legislation are underway. A building an animal identity system started in 2005 and now sheep and goats population are included in the system.

Agricultural Reform Implementation Project (ARIP), which was initiated in 2000, has been extended to 2007. The project gives priority now to accelerate works on the cadastral and land consolidation issues (Farmer Registration System -NFRS).

IACS (Integrated Agriculture and Control System) and Land Parcel Identification System were initiated in 2005, as part of the Project on the Preparation for Implementation of EU's Common Agriculture Policy. In this regard, EU-Turkey Financial Cooperation 2004 Program, gives priority to support Farm Accounting Data Network Project in 2007.

In order to align with the EU's Common Agricultural Policy and EU rural development policies, Ninth Development Plan (2007-2013) aims to decrease development disparities on rural-urban and among regions in the country. On this issue, a basic legal foundation, for granting the rural development founds (IPARD) to Turkey for the period 2007-2013, has been created. Many rural development projects, mostly funded by foreign loans and grants have been carried out in Turkey and some of them currently being implemented (Village-based Participatory Investment Program with 16 pilot provinces in the context of ARIP).

In the trade liberalization field, according to the World Bank report[25], Turkey's trade openness, as measured by sum of export and imports over GDP, sharply increased between 1993 and 2003, from 33 to 59 %. Greater trade openness was supported by the Custom Union with the EU and simultaneous multilateral (MFN) and regional liberalization, as a result of which, countries average applied tariff rates and non-tariff barriers on industrial imports, were sharply reduced. Trade openness remains below that in most new members and some other emerging economies (Malaysia, Thailand, Ireland, Estonia, Slovakia, Hungary, Czech, Litvania) and remains the same as older EU member's countries (Germany, France, France, United Kingdom, Spain, Italy, Greece).

Following Customs Union's entry into force in 1996 Turkey started to sign free trade agreements with its trade partners in Central and East Europe. At present, Turkey has 9 free trade agreements in force. Finally, in this framework, Turkey recently concluded many agreements establishing free trade areas with third Mediterranean countries: Israel (1996), Morocco (2004), Tunisia (2004), (Palestine (2004) and Syria (2004), Egypt (2005). Preferential Agreements signed with Palestine and Tunisia are in force as of 1 June 2005 and 1 July 2005 respectively.

As it can be seen from the Table:13, the share of the Mediterranean countries constitutes 3-4 % of Turkey's total imports. Main import products from the region are petroleum and natural gas. The share of industrial products is far from showing its real potential. These countries can compete with EU and CEEC countries and increase their share in the Turkish market only through establishing preferential agreements.

Turkish exports also show a similar trend as the imports, accounting for only 6-7% of Turkey's total exports. A share of 4-5% in the trade volume is a real sign of poor trade relations which substantially contradicts with the good political relations and geographical proximity.

Possible implications of adopting the EU acquis in agriculture by third party Mediterranean Countries can be obtained from the Turkish experience.

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[25] World Bank, (2006), Turkey: Country Economic Memorandum Promoting Sustained Growth and Convergence with the European Union, 21p.

In this respect, it may be useful to share some experiences made by Turkey, on the way of adopting the EU acquis in agriculture, but before that, for better understanding its policy orientations through the EU accession and WTO committements, it seems necessary to describe in brief the background why Turkey's name is added in this Mediterranean Project of the EU.

As we know, the idea of establishing an economic cooperation and integration among Mediterranean countries was first initiated by EU with the " the Global Mediterranean Policy" process in 1976. This process was first revised when Greece, Spain and Portugal joined the EU in 1981 and 1986 respectively. Then in 1995 Barcelona Conference was organized as a step to revitalize the EU's long-standing economic cooperation and integration project towards the Mediterranean region.

This time 12 non-members – the so-called third party- Mediterranean countries (MPCs) - participated the first Conference. Turkey was one of them and the others were Algeria, Cyprus Egypt, Israel, Jordan, Lebanon, Malta, Morocco, the Palestinian Authority, Syria and Tunisia. The political objective of the European Union in the Mediterranean region was to promote political stability among these countries by increasing economic cooperation and to do so to establish a free-trade area by 2010. Among them Cyprus and Malta have joined the EU in 2004 and in 2006 the negotiation process for Turkey's full-membership has been initiated by the EU.

This ambitious project, in my view, has some limitations on agricultural issues because of the heterogeneity of agricultural policy priorities of each third party Mediterranean country. In the past, same or similar heterogeneity constraint was remaining among the former Mediterranean countries, that were non-EU members at that time (Greece, Spain,Portugal and Malta), whereas this problem automatically solved after their accession to the EU. Today trade liberalization in agriculture among third-party Mediterranean countries is processing very slowly, notably because, the financial resources allocated to MEDA have been very small, compared to the resources devoted by the EU to promote the development of its new members from Central and Eastern Europe during the same period.

Given this situation and the outcome of the current Doha Round of negotiation's uncertainty, inclusion of the agriculture in the Euro-Med free trade area would need special attention on the related policies proposals. Actually, Doha Round trade liberalization issues would be very important and could have significant impact on the future development of Euro-Med agricultural trade. Similarly, according to the Hong-Kong Ministerial Conference, the elimination of export subsidies by 2013 could have major impact on exports of cereals from the EU. On the one hand, improved market access to the EU for fruits and vegetables could greatly benefit several MPCs, if they fulfill the specific and very complex standards in these sectors.

Agricultural trade between the EU and MPCs has a small share in total trade. Trade balance, however, is still in favor of the EU. MPCs exports, are specialized in fresh fruits and vegetables; fats and oils, processed fruits and vegetables. Whereas the EU exports to MPCs are mainly " continental products" which are dairy products, cereals and account for 23 % of EU exports to the MPC. On the other hand, extreme differentiation of situations or positions taken by MPCs in the multilateral trade negotiations, some of them seem to be pressing for the reduction of farm support and abolishing high level of protection.

The main characteristics of EU-MED trade structure may be summarized as follows: First, the asymmetry in trading power between the EU and MPC remains, second, agricultural support is much higher in the North than in the South, third, for processed agricultural products, the industrial component of tariffs has been phased out, but the agricultural element has generally not been affected by tariff dismantling. Four, the main instruments of the relevant EU trade policy are the entry price system for many fruits and vegetables and seasonal barriers to entry in the market.

More specifically, on the sectoral basis, two sectors, fruits and vegetables in Europe and cereals in most of the MPCs remain sensitive. Because, the region is a major importer of cereals as it absorbs 27 % of world cereal imports whereas the regional population is only 8.4 % of the world total. For some countries the rate of self-sufficiency is low. When the impact of global warming and climate changes are taken into account, projections indicate that most probably they will be net importer of cereals in the future. One important notion in this issue is that, cereals will keep its geo-strategic importance.

This constraint explains the reason why cereals with other basic agricultural commodities benefit from significant government support in most Southern and Eastern Mediterranean countries. According to the several sectoral studies, producers of cereals and also livestock products in Mediterranean countries could suffer significant losses from trade liberalization (Emlinger., Jacquet.; Petit.,2006) and they propose to keep tariff rate quotas and tariff system on the basis of variable levy. 2006 Annual Report of CHIEAM indicates that massive cereal imports by low-income countries raises the question of how to achieve greater food security.

In other studies trying to predict the future of the agricultural trade liberalization (Escribano, 2006) Euro-Mediterranean region is engaged in a multi-faceted process of trade liberalization. But remaining obstacle is that to further trade liberalization in agriculture would hamper the overall project: The main constrains are the reluctance of the both parties on trade liberalization in agriculture: European side and MPC.

On the European side, it is clear that European cereals and livestock producers have comparative advantages against the MPC producers and would be net winners on the potential agricultural trade liberalization in the future. However, on the Mediterranean side, MPC producers have comparative advantages on the fruit and vegetables and potentially they would be net beneficial against European producers.

As regarding to the Turkey's position in this new framework, one of the significant experience realized by Turkey in the last two decades, is the implementation of a strong reform program for restructuring agricultural policies. This program provides a transition from the traditional agriculture scheme to the modern structure of farming with rural policy development.

Turkey's Agricultural Reform Implementation Programme (ARIP) was designed to increase the efficiency of the sector and economy at large, thereby helping it meet one of the most basic pre-conditions set down by the EU: efficiency, competitiveness and sustainability in a unified agricultural market.

ARIP, as a whole, established a framework for implementation of a modern, a market oriented agricultural policy in Turkey by abolition of administered prices and of input

and credit subsidies, restructuring of agricultural state-owned enterprises and agricultural sales cooperatives, and also introducing of the direct income support scheme.

This program has been conducted by the Agricultural Strategy Paper, which have to be implemented between 2006 and 2010. The law of Agriculture also enforced this in 2006. Turkey will adapt the EU agricultural policy acquis over the period 2005- 2015, which is the possible accession date.

As we know, the CAP regime, which implemented since 1962, created a single European agricultural market, and includes single farm payment, cross compliance measures and rural development. Actually, in the CAP regime creation of a European single market scheme was essential for the member countries for the free circulation of the agricultural products, but this achievement have had many requirements such as, product quality, product specialization, marketing standards approximation and harmonization etc., More precisely, single market created their common rules with a financial support scheme (FEOGA) and contributed, on the one hand, to the improvement of farm competitiveness in the internal market and on the other hand, to the development of the rural life with an other financial support scheme (FEDER).

Concerning market integration in Turkey, complying with the CAP support regime first started with the cereal sector. All price and trade distorting support policies were abolished and a nationwide Direct Income Support (DIS) scheme was adopted. Payments were on a hectare bases. There has been a downward trend in the cereal area since 2000.

Concerning farm structure, in Turkey, family owned farm is the basic unit of agricultural production, and family members provide most of the farm labor. Last agricultural census in 2001 recorded 3 million agricultural holdings. A large number of owners cultivate a small area of the land. More precisely, about 65 % of the farms lands are 5 hectares, only 6 % of the holdings have a size larger than 20 hectares. National average size of farm holdings is 6.1 hectares. This fragmented farmland in consequence of the heritage law, have a very negative effect on the agricultural productivity and quality.

It is clear that large farms cultivate a higher proportion of the irrigated land and use efficient agricultural equipments. The large farmers benefit more from the support policies than the smaller farmers. Consequently, the lack of economy of scale on the farming structure makes clear that poorer farming could not resists to the strong competition coming from the EU internal market in which average farm size is 5 time bigger than domestic farms. The full elimination of internal support or sharp decrease on input subsidies would cause important losses of welfare to these subsistence (self-sufficient) farming. A special rural project have to be developed for attempting to an average optimal farming size in the country. Similarly, problem remains and needs to be encountered by the future rural policy scheme and it is familiar to some MPCs.

As regard the rural development policy for reducing poverty in rural areas, a framework for the existing and prospective Agriculture and Rural Development Policies is laid down in the following development plans: Long Term Strategy (2001-2023), Eighth Five–Year Development Plan (2001-2005), Medium Term Programme (2006-2008), Agricultural Strategy Paper (2006-2010). All of these development plans focus to resolve rural area problems of human resources, inefficient development and maintenance of physical, social and cultural infrastructure, high rate of hidden unemployment, insufficient diversification of agricultural and non–agricultural income generating activities, a high rate of dependence on agricultural subsistence and also low income level and relatively low quality of life for rural population and migration. Finally, National Development Strategy, which has been adopted in January 2006 (NDRS), provides the first rural development strategy plan for the country.

It is obvious that on the political economy perspective, rural development can be considered as a " public good " and the necessary institutional mechanism has to be set up also in MPCs. In fact, the future of the small farms and their competitiveness in the potential single market need to be considered locally in MPCs.

As regard the export performance of the agricultural product in the highly competitive single European market, Turkey must follow and fulfill all requirements made by the European Commission on the food quality policy. On this issue, many projects and programmes have been implemented in Turkey since 2000.

Consumer confidence in the safety and quality of the European internal food market is essential and since 2000, EU set out a legislative action plan for a pro-active new food policy. Within the framework of this policy, an outstanding progress has been made so far by implementing more than 80 separate actions outlined in the policy. This a new regulatory approach named as " From the farm to the fork" and it covers issues of animal feed, animal health and welfare, hygiene, contaminants and residues, additives, packaging, flavorings, irradiation etc,. Turkey has also made several changes in its food and hygiene policy in 2004 (New Food law No. 5179 on 5.06.2004) and food exporters are required to be registered or to be approved by the competent authorities for using "Hazard Analysis and Critical Control Points" system (HACCP). Similar progress has also been made in implementing some important standards like ISO 9000 and ISO 14000. Food exporters of MPCs have to meet all these standards and their products have to be fully in compliance with marking, labeling, certification, compliance regulations and market requirements of the EU internal market.

As regard to the institutional reforms, Turkey is in a continuous progress in adapting the EU's institutional framework to bring Turkey's formal institutions and institutional bodies closer into line with EU's *acquis communautaire.* As regards the agricultural and food sectors, progress in adopting legislation and formal rules need to be accompanied by the enforcement capacity. This is also a crucial issue for MPCs, which emphasized to by EU to improve their domestic food market.

Acronyms and Abbreviations

AAC	agricultural credit cooperatives
AMS	Aggregate Measure of Support
ARIP	Agricultural Reform Implementation Project
CAP	Common Agricultural Policy
CCT	Common Customs Tariffs
CEE	Central and Eastern European Countries
CHIEAM	Center for Advanced Mediterranean Agronomic Studies
COM	Common Organization of the Market

CPI	consumer price index
EBK	(Meat and Fish Production Combine Inc)
DIS	direct income support
EU	European Union
FTA	Free Trade Agreement
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
GNP	Gross National Product
HACCP	Hazard Analysis and Critical Control Point System
IACS	Integrated Administration and Control System
MARA	Ministry of Agriculture and Rural Affairs
MFN	Most-Favored Nations
NDRS	National Development Rural Strategy
NP	National Plan
NFRS	National Farmer Registration System
NPAA	National Program for the Adoption of the Acquis
OECD	Organization for Economic Co-operation and Development
PEP	Pre-accession Economic Program
PPP	Purchasing power parity
PSBR	public sector borrowing
SEE	State economic enterprise
SIS	State Institute of Statistic
SITC	Standard Identification Trade Classification
SPO	State Planning Organization (Turkey)
TEKEL	Tobacco and Tobacco Products, Salt, and Alcohol Industry
TMO	Soil Product Office
TSE	Turkish Standard Institute
TUİK	Turkish Statistical Institute (Türkiye İstatistik Kurumu)
UFT	Undersecretary of Foreign Trade
URAA	Uruguay Round Agreement on Agriculture
WTO	World Trade Organization

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CHAPTER 3

ANALYSIS OF RELATIVE SIMILARITY BETWEEN THE STRUCTURE OF EXPORTS OF THE MEDITERRANEAN COUNTRIES AND THE EUROPEAN UNION (ISREE)

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Introduction

As we have shown in the previous chapters, the Road Map for agricultural liberalization mainly consists on two vectors: trade liberalization and trade facilitation measures. In order to analyse the consequences of an eventual process of agricultural liberalization between the European Union and the Mediterranean Partner Countries (from now on MPC's), and to develop a useful tool for establishing an operative and comprehensive negotiation procedure, it is essential to observe the similarity of the exports among the two regions. A bigger similarity in the structure of agricultural exports between the European Union and each one of the MPC's reveals, to some extent, a higher degree of potential competition. So it is relevant to obtain a mechanism that allows policy-makers to draw a detailed 'agricultural competition map' of countries within the Euro-mediterranean region.

The economic literature has produced a good number of frequently used measures of revealed comparative advantage, almost all them derived from the Balassa Index (1965). Utkuluy Seymen (2004) offers a wide review of these alternative measures, discussing their virtues and defects. Particularly we want to point out that all these measures present some interpretive deficiencies for some ranges of values. The extreme values of this kind of ratios between exports by product(s) or origin, or between foreign trade balances, often shows results difficult to interpret, given that they can came out from totally different commercial relationships, either due to the compensation of signs or of magnitudes.

With the aim of overcoming such a shortcomings, in this chapter we intend to recur to a new approach carried out by the application of a very well-known multivariate analysis technique, Cluster analysis, also denominated Q analysis. In our view, this technique could be helpful in deepening policy-makers' insight on the characteristics of Euro-mediterranean agricultural trade when contemplating any agricultural trade liberalization process.

Cluster analysis is a procedure consisting in the aggregation of elements within homogeneous groups, considering simultaneously the information contained in wide groups of variables. Cluster analysis is frequently used in any taxonomic exercise with the objective of classifying a whole of elements (individuals, countries, etc…) in groups formed around homogeneous characteristics (Hair et al., 1999). The implementation of cluster analysis demands, in the first place, the multivariate measure of the existent "mathematical distance" among each couple of subjects and, in second term, the use of those distance measures for the progressive grouping of the subjects in segments (clusters). The selection of alternative ways of measuring that distance and the implementation of different grouping strategies drives, inevitably, to different "clustering" results. This make that technique difficult to conduct with exploratory ends and reduces it to a confirmatory procedure on which the analyst's qualitative trial is crucial.

In many cases, like in the one that occupies us in this research, the procedure should come out of a previously well-known grouping or, at least, based over an informed insight about their basic features. The cluster analysis results' are then predefined to some extent, and it is used in this manner to find that measure of multivariate distance that better fits the foreseen grouping structure; the aim of the analysis is not as much the grouping itself as the identification of a useful distance type to measure the proximity or the distance between the analysed objects.

This is, in fact, our analytical context. The similarity between the production and export structure of the different countries of the European Union and the MPC's is already well defined from the qualitative point of view since its structures are mainly conditioned by their geographical realities and environment, like altitude, orography, pluviometry

climatic conditions, etc...; this chapter contribution consists, therefore in a quantitative measure of that similarity.

The index we propose follows a similar line like the classics Similarities Index from Finger and Kreinin (1979) and the Herfindahl-Hirschman Index (HHI), used by the department of American Justice to measure the grade of concentration of a company or sector in a market. Anyway, in both indexes the calculation methodology doesn't refer to a combined multivariate group of countries and products, and in that respect its results are only partially similar.

In sum, the final contribution of our analysis is the construction of a quantitative index of relative exposure for each MPC's *vis-à-vis* each EU member state, and with the rest of the MPC's. In that manner it is possible to measure in a mathematical way the exposure degree to competition between each couple of countries regarding the similarity of its agricultural products exported to the rest of the world. This approach has also been applied to the Mediterranean countries convergence patterns by Guessoum (2006).

We are aware that, in this kind of analysis, other factors that should have been kept in mind when detailing the grade of relative exposure of a country regarding to another are to be missed (such as the coincidence in geographical areas of destination, the existence or not of appropriate distribution networks, the capacity of the countries to change the destination of their exports, the competitiveness via prices, etc…). Even so, we think that the index proposed here marks the starting point for a more in-deep analysis on the agricultural competition among different countries. It allows to determine what specific studies for each bilateral relationship should be conducted starting from the results that our index offers on the potential relative competition, seeing it *ceteris paribus* regarding other exogenous conditions.

In this regard, we find it a useful instrument in order to identify paths to be explored by agricultural negotiations on the trade facilitation and liberalization domain in the context of a Road Map for agricultural liberalization. It can be applied not only to identify items to prioritise in a liberalizing agenda, but also sectors and sub-sectors to be

tackled by any institutional or productive support, either by the EU or the MPC's concerned.

It is important to emphasize here that the procedure that has been follow in order to obtain the Index has been applied at the maximum level of detail available in the exports of agricultural products, considering the level of disaggregation of the 124 product categories available in FAOSTAT statistics. The economic literature on agricultural international trade makes it clear the consensus over this issue: analyses are only truly useful if they descends until the maximum possible level of product disaggregation (Arce and Mahía, 2004; Arce and Escribano, 2001). In this respect, we believe that it is important to find prospective methods that allow us to approach such an extensive work from an optimal cost/benefit perspective. This sheds new interest on the need to construct an Index that could allows to obtain a first-level filter to conduct better focused and detailed competition analysis for those countries and products that deserves it in terms of socio-economic significance.

III.1. Experimental design

To carry out our analysis we have started with the measuring of the relative importance of each product in the total of agricultural exports (in terms of value), according to the following details:

- **Product detail:** The exports of agricultural products have been measured at a level of detail of 124 agricultural products, according to the information given by FAO. For the cluster analysis, however, those products that were relatively irrelevant for the countries concerned by this research or those for which no price data was available in the reference period were rejected. More precisely, the initial group of 124 agricultural products was reduced to a quantitatively significant group of 113 products. For the generation of the Index of Relative Similarities in the Structure of Exports (ISREE) are used, for each country and product, the percentages of exports of that product regarding the total of agricultural products exported by the country (both in monetary values).

- **Period of reference:** The exports of each product have been selected, in volume, for the period 2000 - 2005. However, for their computation in value, we have used exclusively the prices of exports in the year 2004, the last one available in FAOSTAT. The reason why rests in the extraordinary and inconsistent fluctuations observed among countries for many agricultural prices in the period 2000 – 2003. This made the annual data not very reliable for every detailed year, country and product, even making, in many cases, very unadvisable the use of averages for the reference five year period. Since it is, in sum, about comparing the structural composition of exports among countries, the use of so volatile annual and not very consistent prices would have distorted the results. Although the choosing of a single year of reference implies some risks, it minimizes in our opinion those distortions without giving up the measuring of the importance of each product according to its export revenues, and not according to the metric volume contributed by each product. In sum, the relative importance of each product has been computed as the percentage average 2000 – 2005 that the export of that product represents, valued at 2004 prices, over the country's total agricultural exports.

- **Geographical environment:** The relative weight of each one of the 124 products over the value of agricultural exports has been measured for a total of 35 countries, a group made up of 26 European Union members states (Luxemburg has not been included), plus 9 Mediterranean countries (Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco, Tunisia and Turkey).

III.2. Methodology for the cluster analysis design applied to the construction of a Relative Similarity Index

Starting from the previously detailed data, a cluster analysis was carried out for the group of countries according to the confirmatory design pointed above. For this analysis the statistical program SPSS were used, and the final results of the resulting grouping from considering different similarity/distance measures between countries and the different strategies of hierarchical grouping were observed. Among the dozens of reviewed possibilities, we have finally decided to recur to the use of the measure Square

Chi of distances for variables of combined frequencies with the hierarchical aggregative Ward method.

- **Squared Chi distances for frequencies variables.** This measure is based on the square chi test of equality for two groups of frequencies. It implies the default measure for the recount data and it has been revealed, according to our results, as a new form of measuring the grade of similarity in the relative composition of export flows. The measure is based on the comparison between the real and the expected frequencies, that are calculated in an *ad hoc* contingency table elaborated in this context according to the expression:

$$\chi^2_{x,y} = \sqrt{\sum_{j=1}^{p} \frac{(Xj - Ej)^2}{Ej} + \sum_{j=1}^{p} \frac{(Yj - Ej)^2}{Ej}}$$

where:

Xj =% of Exports of the product (j) from country X
Yj =% of Exports of the product (j) from country Y
Exj = % of expected Exports of the product (j) from country X
Eyj = % of expected Exports of the product (j) from country Y
p = total number of products

where in turn:

$$Exj = \left(\frac{\sum_{j=1}^{p} Xj}{\sum_{j=1}^{p} Xj + \sum_{j=1}^{p} Yj} * \frac{Xj + Yj}{\sum_{j=1}^{p} Xj + \sum_{j=1}^{p} Yj} \right) * \sum_{j=1}^{p} Xj + \sum_{j=1}^{p} Yj$$

Our data analysis can be considered indeed as recount data (frequencies) to the extent that, for each country, the sum of the percentage of exports for each product is similar to the unit. This is to say that for each country we obtain a chart of distribution of relative frequencies of exports for each product over the

total exported. Based upon the above expression, the measured Square Chi of distance only takes its value insofar as the relative distributions of exports differ significantly between the two analysed countries. In theory, when the relative composition of exports coincides exactly for each couple of countries, the value of the Square Chi will be null.

- **Re-escallating the Squared Chi distance.** The value of the Square Chi obtained according to the procedure commented above does not present minimum nor maximum bench marks from a theoretical point of view for charts bigger than 2x2. However, for an intuitive understanding of the distance index between countries it becomes necessary to delimit the maximum and the minimum, then re-escallating the values obtained in such a new scale. To carry out this transformation, it is needed to select a maximum and a minimum that, in our case, have been the ones observed in the distances matrix obtained for the 9 non European countries on which the analysis is focused. On the other hand, and with the aim of interpreting the obtained value as a measure of "risk", it is indispensable to transform the distance measure in a measure of similarity (so bigger distance implies smaller competition risk). In summary, the retained transformation has been:

$$Rxy = \left[1 - \frac{(\div^2_{X,Y} - Min\div^2)}{(Max\div^2 - Min\div^2)}\right] * 100$$

Being able to interpret the measure between two countries in the following manner: the closer that measure gets to 100, the higher the relative risk, and vice versa. On the other hand, in re-escallating the index regarding the maximum and the minimum of the group of the countries considered (UE-27 and 9 MPC's), the obtained values of the indicator are comparable for relationships among different couples of countries, insofar as they are in the same scale.

- **The Ward hierarchical aggregative Method.** The consistency of the selected distance measure (Squared Chi) has been proven observing the result of using

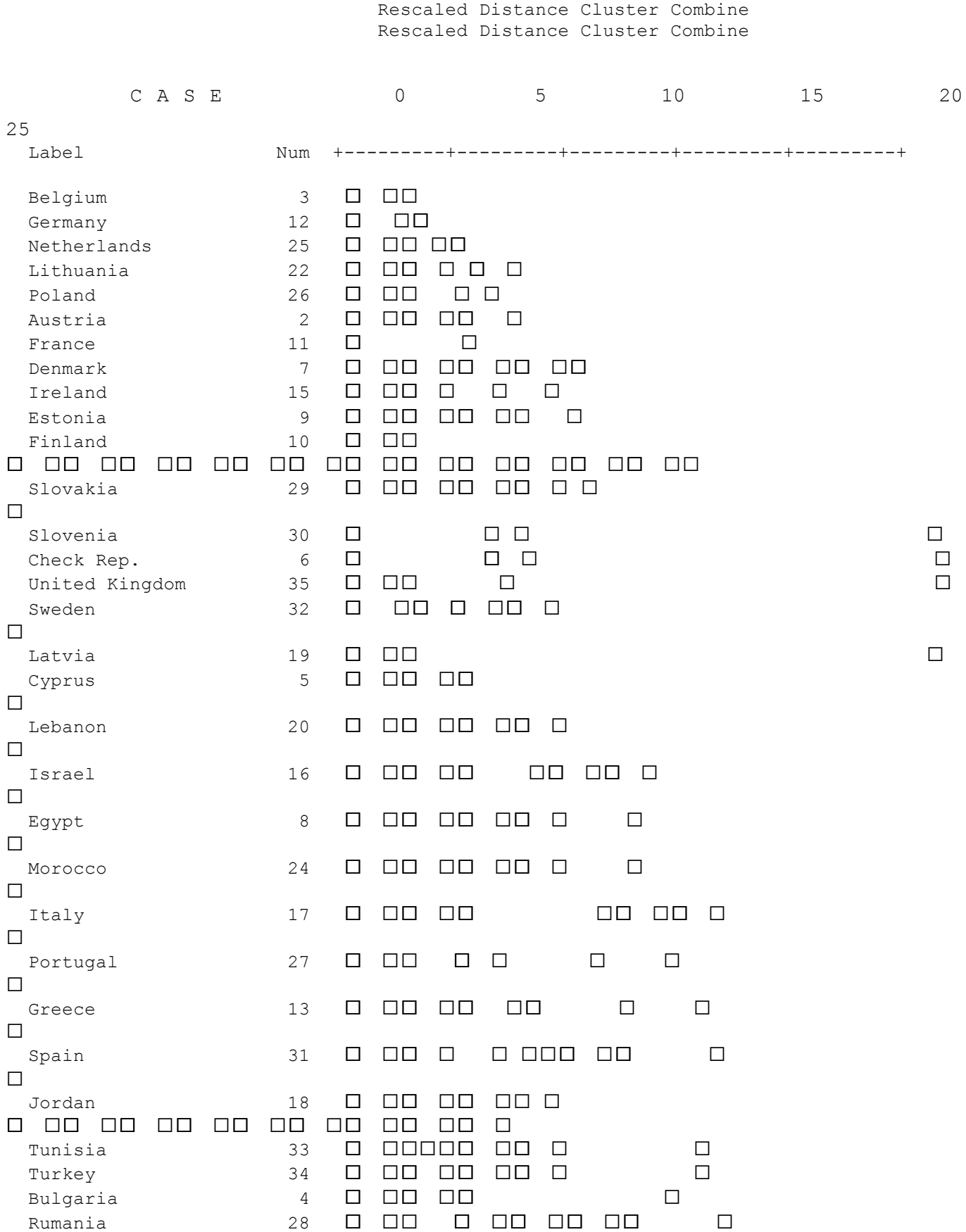
this distance measure for a Ward's aggregative procedure. The Ward's procedure is based upon the idea that the conglomerates of countries (clusters) should be formed offering the minimum information loss when melting some cases (countries) with others. The quantity of information is quantified as the square sum of distances for each case regarding the centroide of the conglomerate to which it belongs. For each conglomerate, in the successive grouping stages, the vector of the averages of all the variables is calculated. That is, the multivariate centroide, and later the distance of each case is measured regarding the centroides of each conglomerate. In each step, those conglomerates (groups of cases, countries) that give place to a smaller increase in the sum of squares of intra-conglomerate distances are united.

III.4. Results

The implementation of the analysis procedure detailed in the previous technical section, gives place to a progressive grouping of countries like the one that shows the following dendogram. The dendogram, that has to be read from left to right, shows how the successive groups of countries are being formed according to the distance measure (Squared Chi) and to the selected grouping strategy (Ward). This way, for example, it can be observed that, in a first grouping phase, couples of countries like Belgium and Germany, Austria and France, or Slovakia and Slovenia, are being formed. In a second phase, new couples or trios of countries being formed like, for example, the trio Belgium, Germany, Holland, or the Italy – Portugal couple.

The procedure is hierarchical and it finishes (to the far right of the dendogram) when all the countries unite in a single group. The horizontal axis represents the re-escalated distance that separates each country or group of countries from the rest. In that respect, for instance, it can be observed that the couple Tunisia + Turkey, in spite of having been formed in a direct way, is less similar than the one formed by Belgium and Germany, to give an example. In the same way, it can be observed that the final grouping in a single group of countries is the product of the grouping of two very distant subgroups to each other, the first one formed by the first 17 countries of the list (from Belgium to Latvia), and the second for the remaining ones (from Cyprus to Malta).

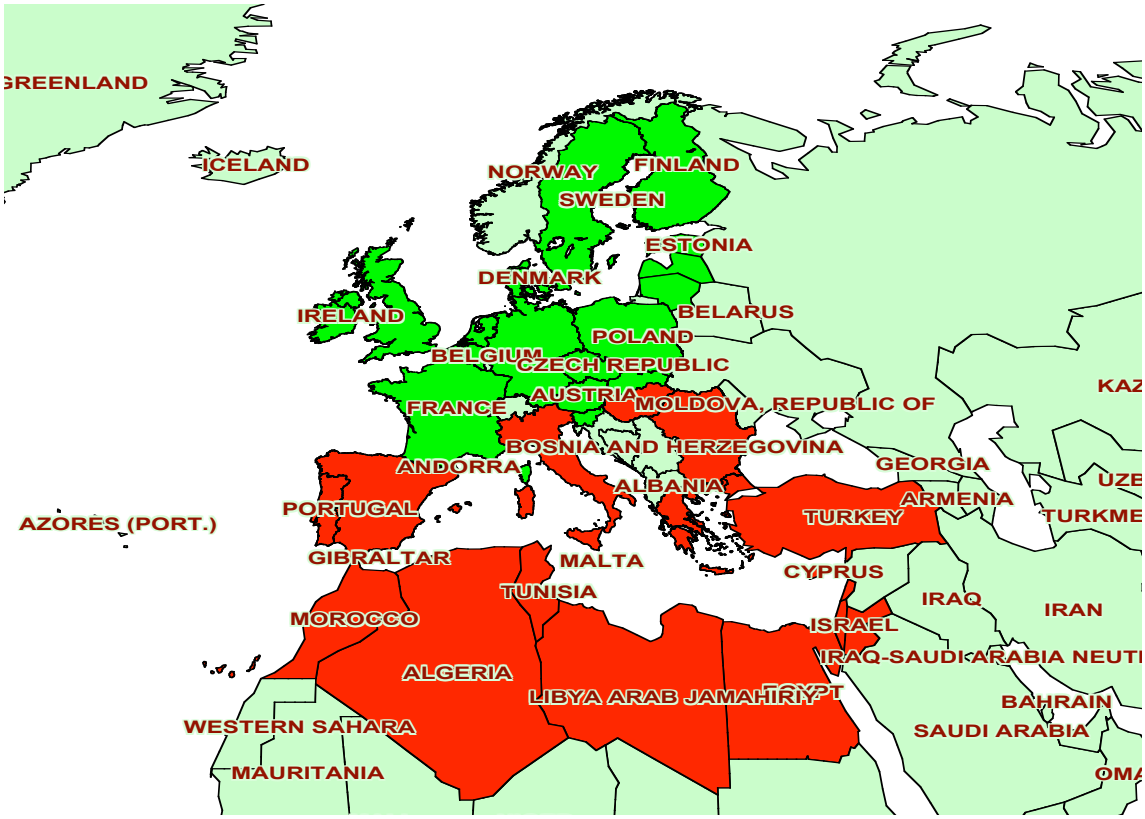
Figure 1
Cluster Dendogram (Squared Chi + Ward)



Hungary	14	□ □□ □□ □□ □□ □
Algeria	1	□ □□ □□ □□ □□ □
Libyan Arab Jamahiri	21	□ □□ □□ □□ □ □ □□
Malta	23	□ □□ □□ □□ □□

The theoretical consistency of this grouping is still verified with more clarity observing the agglomeration map, exclusively considering these two big groups. As expected, Mediterranean countries share the same export structure, which in turn distinguishes them from the rest of the European countries.

Figure 2: Territorial map of similarities among countries derived from the Cluster Analysis



In any case, the result of the grouping of the cluster analysis is not, in our analytical context, a result in itself, but a test of the robustness of the distance measure used to quantify the similarity among the relative export structures of each observed country. The cluster analysis allows, in our case, to use now the measure of distance of each

country regarding the rest and, for aggregation of distances, regarding groups of countries with whom there is a will to confront.

Using this distances matrix country versus country, we have calculated the similarity among the 8 Mediterranean countries (the distances for Libya are not considered reliable for not having enough statistical information) and the group of European countries. The following chart shows the results of these similarities on the base of the 0-100 index described above. It is logical to interpret these measures of similarity (competition risk) in a relative way, that is, comparing the obtained measure of risk for each country with that of the rest.

Chart 1: Relative risk of competition of each country regarding EU27 and EU15

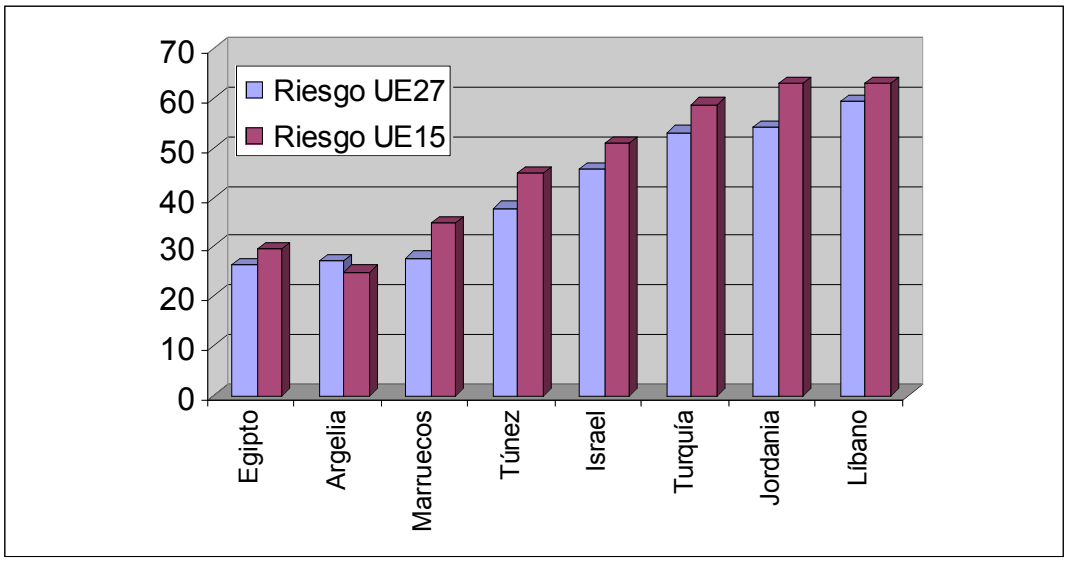
	Risk EU27	Risk EU15
Algeria	27	25
Egypt	26	30
Israel	46	51
Jordan	54	63
Lebanon	59	63
Morocco	28	35
Tunisia	38	45
Turkey	53	59

Naturally, from the own construction procedure of the index starting from the symmetrical matrix of distances, the results presented here can also be understood as symmetrical. For instance, the relative risk of competition Egypt-UE15 has a value of 70, over the adopted scale of 100, in any direction on which this potential competition is observed.

The comparison of the obtained results for each one of the 8 countries analysed shows that the risk indexes associated to the similarity of the export structure vary significantly among countries, passing of a maximum value of exposure represented by Lebanon to the minimum suggested for Egypt, always considering European Union aggregates.

This comparison is appreciated more clearly if the relative magnitudes of those indexes are observed graphically:

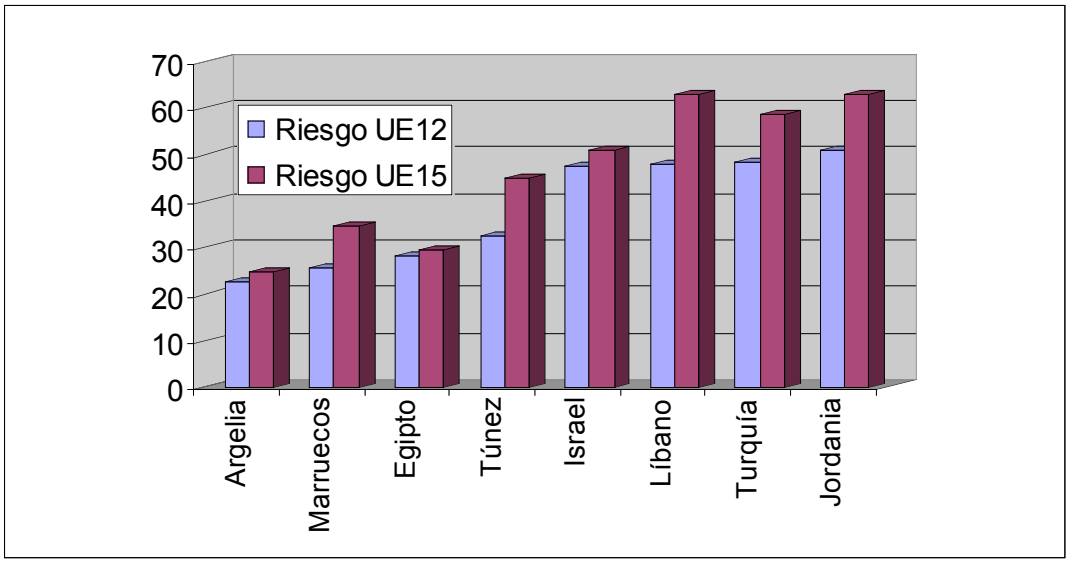
Figure 3: Relative risk of competition of each country regarding UE27 and UE15



An interesting question is to observe how the EU's exposure risk face to the Mediterranean countries is generally smaller when considering the EU27 space as a whole, than when considering the EU15 space. Evidently, this is in line with the hypothesis that the new member states have, in general terms, a less similar structure of exports (not competitive) with the Mediterranean when compared with the original UE15 group.

The following figure shows the differences in the allocation of competition when considering the new EU members or the previous ones.

Figure 4: Relative risk of competition for each country regarding EU15 and EU12



The risk measures with regard to the EU27, EU15 and EU12 just shown are elaborated starting from the average of the observed relative risk for each country regarding each one of the Europeans, without taking care of the size of each one of the European member states. This non-weighted measure could not reflect exactly the level of real exposure of the Community export structure regarding each country, to the extent that some European countries are relatively more important than others in terms of production and total agricultural exports. In the following chart a weighted correction of this same measure is shown. In this case, the total export of each European country regarding the total of community agricultural exports has been considered:

Chart 2: Weighted relative risk of competition for each country regarding EU27, EU15 and EU12

	Risk EU27	Risk EU15	Risk EU12
Algeria	30	30	34
Egypt	33	34	28
Israel	57	58	44
Jordan	66	68	45
Lebanon	69	70	60
Morocco	35	36	37
Tunisia	43	44	42
Turkey	60	61	51

From this chart it can be concluded that, for the EU group, the countries with whom a bigger agricultural competition potential could develop would be Lebanon, Jordan and Israel, where the similarity of the exports as measured with our index would reflect bigger coincidences in the total structure of exports. These would be the most complex negotiations if every concerned country interest is to play in the negotiation field. Comparatively, achieving EU-Maghreb agricultural trade liberalization should be easier inso far as concerned interests are smaller.

Even so, the calculated ratios for big EU aggregates could hide some levels of country-to-country exposure much more important than those that could be expected in this context. High bilateral exposure can block agricultural trade liberalization, so it is important for policy-makers to identify conflictual couples of countries to which a substantial part of negotiations should be address. In the following chart the "north-south" risks in the region are shown:

Chart 3: North – South ISREE

	Algeria	Egypt	Israel	Jordan	Lebanon	Morocco	Tunisia	Turkey
Austria	34	25	38	**56**	**66**	26	**51**	**70**
Belgium	27	50	**63**	**66**	**87**	36	37	**70**
Bulgaria	40	29	**59**	43	**64**	21	38	**65**
Cyprus	24	54	**96**	52	**100**	**56**	9	34
Czech Rep.	37	21	29	46	**53**	17	47	**66**
Denmark	10	11	18	39	27	6	23	29
Estonia	22	4	20	43	30	7	9	25
Finland	17	12	20	54	33	10	16	38
France	48	31	**66**	**63**	**78**	25	45	**62**
Germany	29	28	44	**63**	**65**	27	40	**66**
Greece	19	36	**59**	**71**	**68**	**76**	**93**	**66**
Hungary	41	24	55	43	**56**	19	27	38
Ireland	8	3	12	42	21	2	19	21
Italy	29	34	**76**	**82**	**84**	**57**	**70**	**72**
Latvia	29	28	41	51	**65**	29	46	**61**
Lithuania	30	23	35	**66**	46	25	26	38
Malta	9	16	27	16	**68**	0	26	19
Netherlands	36	47	**73**	**90**	**71**	35	25	49
Poland	29	35	47	52	**68**	32	34	41
Portugal	30	35	**82**	**75**	**74**	51	49	**68**
Romania	20	10	28	27	38	4	30	41
Slovakia	36	14	18	40	36	14	28	**70**
Slovenia	41	17	26	46	41	11	32	**62**
Spain	16	41	**89**	**98**	**79**	**97**	**64**	**69**
Sweden	22	27	37	44	**64**	23	45	**71**
United Kingdom	23	33	33	38	63	16	52	**70**

Note: in boldface those that are above 50

As expected, in this new chart the Mediterranean countries of both shores are those that present a bigger range of relative risk arising from similarity in its exported agricultural products. Although this fact is hardly surprising, it is useful in identifying what

countries, and to what extent, should be considered as affected in each process of bilateral agricultural liberalization at the EU-MPC's level. For example, it is clear that in order to conduct a deepening of agricultural negotiations between the European Union and Morocco, it would be necessary to count on the adverse effects mainly on Spain and, at a much more reduced level, Greece, Cyprus and Italy. A similar picture is shown for Tunisia, whose main EU competitors would be Greece, Italy and Spain.

For Turkey, its relatively diversified and advanced agriculture in the southern Mediterranean context makes potential competition wider face to most EU countries. A similar but more limited exposure picture is obtain for Israel, who do compete with most EU Mediterranean countries, mainly with Cyprus, Italy, the Netherlands, Portugal and Spain. Concerning Lebanon and Jordan, their ISREE are also high for several countries, apart from the EU Mediterranean member states. In those cases, negotiations would necessarily have to be on a variable basis.

On the opposite side, the chart gives low ISREE for Algeria and Egypt, suggesting that competition issues would not be so important in conducting agricultural trade negotiations. So, EU-Maghreb agricultural trade liberalization would be mainly a shore-to-shore dynamic, while Mashrek and Turkish agricultural trade liberalization involves a wider range of countries with its agricultural interest at stake. This supports our previous results, pointing out that EU agricultural trade liberalization *vis-à-vis* the Maghreb, Mashrek and Turkey follows different patterns, and deserve differentiated approaches.

Lastly, the use of the ISREE can also be illustrated, still in a very synthetic way, to compute the relative risk in South-South agricultural trade. The results would be, in this case, the following ones:

Chart 4: South-South ISREE

	Algeria	Egypt	Israel	Jordan	Lebanon	Morocco	Tunisia	Turkey
Algeria	100	10	28	8	10	34	32	4
Egypt		100	**54**	31	**68**	47	8	20
Israel			100	**50**	**84**	**68**	24	44
Jordan				100	46	**56**	49	36
Lebanon					100	43	31	**67**
Morocco						100	43	36
Tunisia							100	42
Turkey								100

Note: in boldface those that are above 50

As an illustrative example, it can be observed that the main areas of eventual conflict refer to couples of countries like Lebanon vs. Israel, Lebanon vs. Egypt, or Morocco vs. Israel. Israel's results reflects the difficulties that potential agricultural competition introduces in an already complicated context, indicating that sub-regional potential agricultural competition levels obstacle any measure to regionalise agricultural trade in a wider EU-Mashrek perspective. Turkey's ISREE points to a very unique situation, because the index only shows high ranks face to Lebanon. Turkish singularity again calls for a differentiated solution.

The sub-regional picture is also interesting and point to some relevant policy implications. Within the Maghreb, ISREE's are relatively low, indicating that EU-Maghreb countries agricultural trade liberalization could introduce a South-South dimension without introducing intra-maghrebí agricultural competition-related tensions. Within the Mashrek, competition seems harder, not only for the Israel's case commented above. In addition to a more complex EU-Mashrek situation, the sub-regional picture is far more prone to conflict, making it difficult to foster intra-regional agricultural trade as an eventual additional vector of EU-Mashrek liberalization. A whole Mediterranean approach looks also gloomy, given the degree of potential competition among western and eastern southern Mediterranean countries

III.5. Final Remarks

In this chapter of our research we have proposed and calculate an index of exports' structure similarity alternative to those existent in the traditional economic literature: the ISREE. This index presents some advantages regarding those developed by others authors in regard to our research:

- It takes into account a multivariate structure as for products and countries.
- It doesn't present results of difficult or confused interpretation.
- It is an starting point to discriminate among the most outstanding country-to-country relationships when beginning processes of agricultural trade liberalization (or of any other type) between the EU and other countries.

In sum, we have tried to built a useful indicator for helping the policy-makers in assessing the positive and adverse effects in a liberalization process that concerns different states with very different agricultural structures, endowing him with an easy to interpret tool to frame necessarily asymmetric negotiations, in the North-South commercial concessions dimension, as well as in eventual North-North compensatory measures, such the one proposed in the Agricultural Euro-Mediterranean Pact (Lorca et al., 2006).

Our results point out to some relevant conclusions in the formulation of a Road Map for agricultural trade liberalization:

- In a country-by-country basis, the competition picture arising from the ISREE shows that for certain countries, like Morocco or Tunisia, negotiations affects a smaller number of EU countries, making probably easy to conduct better focused agricultural trade liberalization negotiations; for Egypt and Algeria negotiations should be even easier, but for most Mashrek countries, as well as for Turkey, the multiplicity of countries affected make negotiations prospects more complex.

- From a regional perspective, developing a Road Map with Maghreb countries including a sub-regional dimension seems easier than for the Mashrek. The Turkish situation looks rather unique and would be much better approached in the Custom Union context.

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CHAPTER 4

QUANTIFICATION OF COUNTRIES' CHARACTERISTICS IN THE DESIGN OF A SPECIFIC "ROAD MAP FOR AGRICULTURAL TRADE LIBERALIZATION"

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Introduction

With the aim of generating a comparable quantitative framework to establish different "Road Maps" for each one of the MPC's, this chapter's analysis constitutes an effort in the following aspects:

- To determine a group of "fundamental vectors" to analyse the previous situation of each country face to a potential agreement for freer agricultural trade between the EU and the MPC's.
- To gather the set of available indicators from the different international sources of statistical information to measure these vectors in an approximated way.
- To generate our own indicators (factors) for each one of the vectors, trying that each one of them is represented by the minimum possible variables and, at the same time, it picks up the maximum available information in the total database (applying the technique of factorial analysis).
- To establish a interpretation guide for the generated factors.
- To analyse the similarities and dissimilarities among each country and in the whole region.
- To carry out a brief individual synthesis analysis concerning each country's situation regarding these indicators, generating an useful record to determine which matters are to be prioritised.

The database created for this study picks up more than 100 indicators, organized in subjects relative to: (i) infrastructures (water, transport infrastructures, agricultural modernization, agricultural resources, etc...); (ii) policies that concern the performance of agricultural trade (foreign trade measures, production concentration, external obstacles, tariffs, property structure, etc...); (iii) general domestic level of development; (iv) relevant external balance stability indicators (exchange rate stability, external deficits, etc...); and (v), finally, domestic governance general factors.

With this group of" vectors", we try to obtain synthetic information, but nevertheless as complete as possible, on the situation of the factors concerning the development of agriculture in each one of these countries. Also, some economic and institutional general vectors can be useful to point out policy recommendations on how the liberalization process must be managed.

The analysis' final goal will be to provide a classification method particularized for each country depending on some objective characteristics, derived from its relative situation regarding a set of indicators that summarise all the working variables.

IV.1. Database Vectors

We have denominated" vectors" to the following characteristics of each country:

- Water: as the basic factor for development of domestic agriculture, this vector frames its resources, development, availability and distribution across the space.

- Agricultural structure: including macroeconomic variables related to sector employment, its value added, concentration in crop types, etc…

- Modernization: it includes the grade of agricultural mechanization, as well as the domestic capacity to market agricultural goods more or less transformed, as indicator of the development of the incorporated value added to production.

- Agricultural policies: this vector hosts issues such as external protection of agricultural products, or the percentage of the national budget dedicated to their development.

- Transport infrastructure: given that there is no information available concerning transport infrastructures related to agricultural trade, this vector picks up the global characteristics of each country regarding their available means of transport, roads, etc... The idea is to build an approximate variable reflecting the rural situation from the general one, in order to compare it among the different countries.

- Human development: no indicators of this type exist exclusively for rural areas, but it is evident that its cultural situation, socio-economic balances and the level of poverty are all of them important factors to discriminate among the measures to implement in the different countries of the region. In this sense, we picked up the classic poverty indicators, literacy, rent distribution, etc... These can be used as a Proxy variable to estimate the levels of capital human, as well as to establish the social differences, probably more marked between the urban and rural milieu.

- Governance: it is considered as an essential factor for good practices in liberalization processes and the efficient administration of aid funds coming from the EU. It seems relevant to let attention to aspects like the level of corruption, democracy, violence, etc…, framed in this vector.

- Variables of exchange rate stability (macroeconomic): in this vector we group different measures about the stability of the national exchange rate.

In some cases, information on all the indicators is not available for all the analysed countries. To save this problem, statistical software are accustomed to omit the whole variable in which missing values appears, or to fulfil these lost values with the

variable's average value. As far as the latter option does not fit our case, and in order not to loose a great quantity of indicators we have conducted a bi-variate correlation analysis among all the variables that compose each vector, so that a lineal relationship could be established between the present and lost values when this was significant. If this relationship was not statistically acceptable, the analysis has been carried out without using that variable or, in some concrete vector, the observations referred to the country that gave place the problem. Concretely, this second case has happened in the Modernization (it has not been possible to include the Israel case) and Development vectors (it has not been possible to obtain enough information for Lebanon). In annex 1 a complete listing of the indicators employed is shown.

IV.2. Brief description of the factorial analysis methodology applied in the analysis

Factorial analysis provides the internal structure, the underlying dimensions, the transformation of a wide group of variables in a simpler transformed structure, with less dimensions but possessing the same outstanding information (common), allowing the global understanding of the phenomenon. In this sense, the starting point of factorial analysis is a big group of variables that share some relationships. Over this group, this data reduction technique is applied assuming that the variables are common manifestations of non directly observable factors. Factorial analysis is intended to estimate these non directly observable factors to be able to summarize the originally contained information in the initial variables, clarifying the relationships among variables and without an excessive loss of information.

The factor extraction method applied is the Main Components procedure. This method allows to estimate a reduced number of factors (synthetic indicators) with a minimum loss of variation. At the time, these factors are orthogonal (they are not correlated among them), being each one of them a reflection of a different group with the characteristics of the original variables.

The phases for the factorial analysis can be summarized as follows:

- Analysis of the correlations matrix among the variables.
- Extraction of the factors by means of main components.
- Rotation of the factors to maximize the differences among them.
- Estimate of the resulting factors.

Mathematically, each initial variable will be able to be explained in the following way:

$$x_{ij} = a_{i1} * F_{1j} + a_{i2} * F_{2j} + a_{i3} * F_{3j} + ... + di * U_{ij}$$

where,

xij: standardised value of the variable" i" for the " j" individual
aif: relationship between the variable" i" and the factor" f" (factorial load in factor" f").
Ffj: value of the factor" f" for the " j" individual
Di*Uij: random part of the variable "i" independent to the factors. Specificity of the variable xi, or part of their variation that doesn't share with the variation common to the rest of the variables.

Through a regression analysis or by the statistical proposals of Barlett or Anderson-Rubin, it is possible to extract the value of the factors for each one of the individuals. The final result of the analysis will produce a set of indicators (factors) that will summarize the information common to a much wider group of variables, being a useful tool to summarize information that, in another way, it would be difficult to analyse, so much for the number of variables as for the possibility of finding contradictory information in some of them given the existence of aspects that are not related with the real underlying structure of the phenomenon.

In the different phases until the obtaining of the optimal synthetic factor-indicators for the study, it is necessary to analyse first the following results:

- The relationship level among the original variables. It will only make sense to build some factors to the extent to which the relationship among the variables is high. In any other case, the loss of information would be very big. For this

phase, the study of the correlations matrix and the standard statistical tools (KMO and the Barlett sphericality test) will be used.

- Second, it is interesting to observe to what extent the information characteristic to each variable is being captured by the generated factors. Or, said otherwise, to what extent each variable shares information with the rest (it presents a high communality, varying this between 0, completely specific variable; and one, variable that shares completely its information with the rest).
- To decide the number of factors to use, the information on the quantity of common variance explained by these will be used, looking for a balance between the number of obtained factors and the quantity of additional common variance that would be explained adding one more factor. In a simple cost-benefit analysis, mathematically this situation is settled starting from the eigenvalue of the variances matrix of the main components, generally interpreting that only factors with more or equal to one eigenvalue will be considered.
- Once resolved the number of variables that will be part of the synthetic indicator that represents the factor, it makes sense to analyse the composition that each one of them presents each factor. That is to say, to determine what quality it is being measured by each one of the generated synthetic indicators[26].
- Finally we will get the factors. The obtained results for the new synthetic indicators (factors) can be difficult to interpret. Given that the main goal of this analysis it is to carry out a comparative study of the starting characteristics of countries in order to formalize different Road Maps, it makes sense to generate an easily usable measure to quantify, almost as if it was an academic score, the value of the obtained indexes. This way, we proceed to the following transformation of factors:

[26] In order to facilitate the interpretation of factors, they are rotated (ortogonals - varimax, quartimax,...- or non-ortogonals –direct oblimin). With this mathematic transformation, it is possible to group, for each factor composition, tose indicators that are more related among them.

$$Factor = \frac{Value - Max}{(Max - Min)} * 100$$

With this simple transformation, each factor will present a value of 100 for the country with the bigger initial value for that indicator, and zero for the minimum.

IV.3. Generation of the factors that compose each vector

Analysis of the "Water" Vector

Table of original Indicators

	ALGERIA	EGYPT	ISRAEL	JORDAN	LEBANON	MOROCCO	TUNISIA	TURKEY
Irrigated land (% of cropland)	6,94	99,99	45,51	18,76	32,76	15,33	7,99	19,15
Average precipitation in volume (10^9 m3/yr)	211,97	51,07	9,63	9,85	6,87	154,51	33,87	464,65
Water resources: total internal per capita (m3/inhab/yr)	342,09	24,04	112,19	118,26	1276,26	918,77	417,75	3096,78
Water resources: total external per capita) (m3/inhab/yr)	12,77	754,56	137,62	34,78	-104,49	.	39,83	-184,58
Water resources: total renewable per capita (actual) (m3/inhab/yr)	354,87	778,60	249,81	153,04	1171,76	918,77	457,58	2913,29
Dependency ratio (%)	3,60	96,91	55,09	22,73	,76	.	8,71	1,52
Water resources: total exploitable per capita (m3/inhab/yr)	240,29	663,75	244,73	.	580,96	633,63	360,98	1500,64
Agricultural water withdrawal as part of total (%)	64,91	86,38	62,44	75,25	66,67	87,38	82,01	74,23
Power irrigated area as perc of area equipped for irrigation (%)	.	85,85	.	.	.	31,75	88,07	.

	ALGERIA	EGYPT	ISRAEL	JORDAN	LEBANON	MOROCCO	TUNISIA	TURKEY
Part of area equipped for irrigation actually irrigated (%)	79,61	100,00	.	.	.	97,56	99,75	.
Area equipped for irrigation as percent of irrigation potential (%)	111,58	77,42	.	.	.	89,19	70,36	.
Area equipped for irrigation (% total arable area)	6,26	100,01	42,95	19,23	.	15,55	7,48	.
Domestic water withdrawal as part of total (%)	21,91	7,76	30,73	20,79	32,61	9,76	13,83	14,81
Industrial water withdrawal as part of total (%)	13,18	5,86	6,83	3,96	,72	2,86	4,17	10,95

The lack of information on some of the indicators proposed for water forces to carry out the factorial analysis for two subsets of countries. Of the fourteen considered indicators, only complete information exists for eight countries for the seven indicators presented next.

According to the correlations matrix among the indicators, the percentage of surface for irrigated crops (Irrigated land (% of cropland)) only maintains certain correlation, although small, with the percentage on the total of water used by agriculture. Given the significance of this variable as such, we have decided to leave it outside of the factorial analysis and to consider it in an independent way.

With the remaining variables, the main components factorial extraction allows us, with a total of three factors, to know the information of the practical entirety of the components (more than 99%).

Explained total variance

Component	Original Eigenvalues	Sum of Squared Satuation in Rotation

	Total	% of the variance	cumulative %	Total	% of the variance	cumulative %
1	3,025	50,413	50,413	2,571	42,849	42,849
2	1,935	32,248	82,660	1,939	32,318	75,166
3	,987	16,452	99,112	1,437	23,946	99,112
4	,048	,793	99,905			
5	,006	,095	100,000			
6	-9,75E-016	-1,62E-014	100,000			

Extraction method: Main Components Analysis.

In this context, the mathematical proposal for the creation of rotated factors among the most correlated ones would be the following one:

Rotated components matrix

	Componente		
	1	2	3
Average precipitation in volume (10^9 m3/yr)	,774	,157	,598
Water resources: total internal per capita (m3/inhab/yr)	,993	-,039	,081
Water resources: total renewable per capita (actual) (m3/inhab/yr)	,978	,101	,102
Agricultural water withdrawal as part of total (%)	,020	,966	-,259
Industrial water withdrawal as part of total (%)	,148	-,091	,983
Domestic water withdrawal as part of total (%)	-,088	-,981	-,172

Extraction method: Main Components Analysis.

Rotation method: Normalization Varimax with Kaiser.

a The rotation has converged in 4 iterations.

The results obtained for the factors are the following ones:

Value of the factors

	Factor 1	Factor 2	Factor 3
Algeria	1,4	28,4	100,0
Egypt	4,5	100,0	46,7
Israel	0,0	1,2	50,0

Jordan	0,3	48,2	34,1
Lebanon	43,9	0,0	0,0
Morocco	30,7	95,7	28,1
Tunisia	8,7	76,3	34,1
Turkey	100,0	54,9	71,0

(Base 100 the highest value in the factor on the region)

The interpretation of these factors could respond, in the first case, to the water resources available; in the second one, to its domestic and agricultural use; and in the third place to its industrial use.

Analysis of the "Agrarian Structure" vector

Table of original Indicators

	ALGERIA	EGYPT	ISRAEL	JORDAN	LEBANON	MOROCCO	TUNISIA	TURKEY
Agriculture, value added (% of GDP)	9,69	15,91	2,80	2,51	7,34	15,22	11,93	13,22
Employees, agriculture, female (% of female employment)	.	32,97	,75	.	.	56,95	.	60,58
Employees, agriculture, male (% of male employment)	.	27,57	3,00	.	.	39,65	.	25,98
Rural population (% of total population)	38,45	57,35	8,50	18,65	13,70	43,10	35,65	34,00
Agricultural land (% of land area)	16,79	3,39	26,18	13,08	32,63	68,16	62,11	50,81
Arable land (% of land area)	3,19	2,89	15,67	3,03	17,11	19,12	18,02	30,86
Permanent cropland (% of land area)	,26	,50	3,96	1,50	13,96	1,99	13,74	3,36
Employment in agriculture (% of total employment)	23,80	32,20	2,00	10,70	3,20	34,60	23,90	35,60
Procurement price (US$/tonne): average weighted by production volume	362,10	168,2	496,87	325,98	438,73	298,30	352,04	304,60

Excellent representation of all (communalities over 0,95) except for "permanent cropland area."

Explained total variance

Component	Original Eigenvalues			Sum of Squared Satuation in Rotation		
	Total	% of the variance	cumulative %	Total	% of the variance	cumulative %
1	3,714	53,055	53,055	3,711	53,012	53,012
2	2,289	32,703	85,758	2,292	32,746	85,758
3	,617	8,808	94,566			
4	,211	3,019	97,585			
5	,133	1,897	99,483			
6	,032	,462	99,945			
7	,004	,055	100,000			

Extraction method: Main Components Analysis.

Rotated component matrix (a)

	Component	
	1	2
Agriculture, value added (% of GDP)	,926	,266
Rural population (% of total population)	,964	- ,149
Agricultural land (% of land area)	,195	,918
Arable land (% of land area)	,037	,908
Permanent cropland (% of land area)	- ,395	,648
Employment in agriculture (% of total employment)	,968	,146
Price percept by Producer (US$/tonne): weighted average for total products	- ,891	,300

Extraction method: Main Components Analysis.

Rotation method: Normalization Varimax with Kaiser.

(a) The rotation has converged in 3 iterations.

The first factor capture the variables relative to the macro behaviour of the agricultural sector or use, while the second it captures the available agricultural natural resources.

Value of the factors

	Factor 1	Factor 2
Algeria	56,9	14,3
Egypt	100,0	0,0
Israel	0,0	48,9
Jordan	25,9	5,2
Lebanon	11,0	77,1
Morocco	86,8	83,7
Tunisia	56,4	100,0
Turkey	76,5	93,5

(Base 100 the highest value in the factor on the region)

- **Analysis of the "Modernization" vector**

Table of original Indicators

	ALGERIA	EGYPT	ISRAEL	JORDAN	LEBANON	MOROCCO	TUNISIA	TURKEY
Agricultural machinery, tractors per 100 hectares of arable land	1,28	3,09	7,20	2,18	4,75	,57	1,26	4,06
Fertilizer consumption (100 grams per hectare of arable land)	129,72	4477,	2598,21	976,80	2838,3	439,66	372,4	768,37
Propierty Structure: Land Inequality (Gini index)	,65	,69	.	,81	,69	,62	,69	,58
Feeds and seeds/ Total production (%)	19,25	14,83	45,23	44,89	21,18	17,77	25,66	17,22
Agricultural raw materials exports (% of merchandise exports)	,03	6,48	1,04	,36	3,07	1,70	,72	1,06
Agricultural raw materials imports (% of merchandise imports)	2,28	4,70	1,03	1,79	1,70	3,18	2,91	3,72
Food imports (% of merchandise imports)	24,74	25,22	5,90	18,20	18,53	12,82	8,91	3,77
Without land: Number of holdings s/ Total	5,46	18,14	.	18,42	2,07	4,32	,58	1,77
Under 1 ha: Number of holdings s/ Total	16,33	71,62	.	35,29	70,60	21,07	14,17	15,23
1 and under 5 ha: Number of holdings s/ Total	36,01	8,79	.	32,48	24,11	45,74	44,77	48,45

	ALGERIA	EGYPT	ISRAEL	JORDAN	LEBANON	MOROCCO	TUNISIA	TURKEY
5 and under 10 ha: Number of holdings s/ Total	17,71	1,01	.	7,38	1,60	16,56	16,67	18,20
10 and under 20 ha: Number of holdings s/ Total	13,97	,26	.	3,72	1,02	8,36	12,87	10,64
Food exports (% of merchandise exports)	,19	8,99	3,35	14,58	19,27	20,90	8,41	10,99
20 and under 50 ha: Number of holdings s/ Total	8,61	,12	.	2,01	,47	3,21	7,71	5,00
+ de 50 ha: Number of holdings s/ Total	1,91	,06	.	,69	,13	,74	3,22	,71
Agricultural area s/ Total: Under 1 ha	,83	42,14	.	4,31	19,62	1,95	,49	1,32
Agricultural area s/ Total: 1 and under 5 ha	10,46	28,56	.	21,84	40,48	21,94	7,20	20,02
Agricultural area s/ Total: 5 and under 10 ha	14,19	9,95	.	15,04	9,48	21,70	9,60	20,68
Agricultural area s/ Total: 10 and under 20 ha	22,42	4,82	.	14,73	10,59	21,53	14,38	23,81
Agricultural area s/ Total: 20 and under 50 ha	29,38	4,00	.	17,51	10,70	17,48	18,83	22,82
Agricultural area s/ Total: + de 50 ha	22,72	10,54	.	26,57	9,13	15,40	49,50	11,35
Yield per ha (kg/ha): products average weighted by Production Volume	8400,1	41096	27688,74	27796,7	22346,	21189,0	10039	16395

The aggregation of variables within this vector by factorial analysis generates non logical groupings from the economic perspective. For this reason, the variables on property and land exploitation by size have been excluded of the analysis, considering as relevant only a variable that captures the percentage of households and cultivated areas bigger than 20 hectares, useful to determine the grade of ownership concentration prevailing in each country.

Regarding the variable of agricultural machinery (measured by the number of tractors by hectare), again the grouping was difficult to justify theoretically, so we decided to consider it separately as another factor.

The results for the rest of the variables are the following ones:

- all the variables are captured over 80% given the communality of each one of them with the extracted factors.
- The percentage of the total variance explained with three factors is close to 90%.

Explained total variance

Component	Original Eigenvalues			Sum of Squared Satuation in Rotation		
	Total	% of the variance	Cumulative %	Total	% of the variance	cumulative %
1	3,427	42,835	42,835	3,344	41,796	41,796
2	2,420	30,255	73,089	2,496	31,195	72,991
3	1,295	16,188	89,277	1,303	16,287	89,277
4	,613	7,660	96,937			
5	,194	2,423	99,360			
6	,051	,640	100,000			
7	8,93E-017	1,12E-015	100,000			
8	-1,41E-017	-1,77E-016	100,000			

Extraction method: Main Components Analysis.

- Three factors are generated: the first one captures production resources. The second factor represent the achieved production, and the third factor captures the level of external food dependence (difference between exported and imported food).

Rotated component matrix (a)

	Component		
	1	2	3
Fertilizer consumption (100 grams per hectare of arable land)	,955		
Yield per Hc weighted by volume of production	,946		
Agricultural raw materials exports (% of merchandise exports)	,940		
feeds and seeds / Total production (%)		,925	

	Component		
	1	2	3
Property Structure Land Inequality (Gini index)		,921	
Agricultural raw materials imports (% of merchandise imports)		- ,742	
Food exports (% of merchandise exports)			,898
Food imports (% of merchandise imports)	,539		- ,668

Extraction method: Main Components Analysis.

Rotation method: Normalization Varimax with Kaiser.

(a) The rotation has converged in 4 iterations.

The indicators and selected factors would be the following ones:

Value of the factors

	Factor 1	Factor 2	Factor 3	Machinery	Agricultural Explotation more than 20 Hc (%)
Algeria	0,00	34,42	0,00	93,73	69,81
Egypt	100,00	16,96	39,69	100,00	0,00
Israel	-	-	-	-	-
Jordan	33,09	100,00	71,49	79,44	54,92
Lebanon	48,07	50,01	81,88	0,00	9,83
Morocco	24,99	20,86	100,00	55,37	34,10
Tunisia	3,62	36,32	61,81	42,79	100,00
Turkey	8,48	0,00	85,00	33,52	36,49

- **Analysis of "Agricultural Policies" vector**

Table of original Indicators

	ALGERIA	EGYPT	ISRAEL	JORDAN	LEBANON	MOROCCO	TUNISIA	TURKEY
Difference between average and applied agricultural Tariff	.	72,50	57,10	3,90	.	5,90	45,60	17,30
Share of total public expenses applied to agricultural sector	.	66,34	.	54,76	2,55	44,28	34,10	71,04
Share of total public budget for branches applied to agricultural sector	.	6,50	.	2,55	,28	3,89	7,62	2,24
MFN tariffs (simple average of ad-valorem duties): agricultural goods (AOA) (%)	23,00	66,60	17,10	18,10	19,80	46,20	65,10	42,00
MFN duty free imports in agricultural goods (AOA) (%)	12,70	.	61,40	49,30	.	.	17,10	26,50
Agricultural Average Tariff (Applied)	.	22,80	15,90	19,80	.	48,60	70,40	42,90
Agricultural Average bound Tariff	.	95,30	73,00	23,70	.	54,50	116,00	60,20
Average time to clear custom (days)	21,57	9,90	.	.	.	.	2,71	5,04
Documents for export (number)	9,00	8,00	5,00	7,00	6,00	.	6,00	7,00
Time for export (days)	15,00	20,00	15,00	24,00	22,00	.	18,00	19,00
Cost to export (US $per container)	1606,00	1014,00	340,00	720,00	969,00	.	700,00	641,50
Documents for import (number)	9,00	8,00	5,00	12,00	12,00	.	11,00	10,50
Time for import (days)	22,00	25,00	16,00	22,00	34,00	.	30,00	27,00
Cost to import (US $per container)	1886,00	1049,00	700,00	955,00	752,00	.	1500,00	667,50
Agric. Exports / Agricult. Production (%)	,92	5,90	23,91	54,66	18,39	1,38	10,94	15,71
Taxes on international trade (% of revenue)	10,93	.	,63	13,33	14,40	.	.	8,58

Out of the 14 original indicators, with factorial analysis four factors summarize total information (100% of explained total variance and 1 of communality for all the variables).

The way in which these factors aggregate is the following one:

Rotated component matrix (a)

	Component			
	1	2	3	4
Documents for export (number)	,976			
Cost to import (US $per container)	,969			
Average cheats to clear custom (days)	,957			
Cost to export (US $per container)	,917			
Share of total public expenses applied to agricultural sector	,908			
Agricultural Average Tariff (Applied)		,981		
Cheat for import (days)		,921		
Agricultural Average consolidated Tariff		,832		
MFN duty free imports in agricultural goods (AOA) (%)	- ,550	- ,780		
Cheat for export (days)			,947	
Agric. Exports / Agricult. Production (%)		- ,513	,762	
Taxes on international trade (% of revenue)			,736	
Share of total public budget for branches applied to agricultural sector				,938
MFN tariffs (simple average of ad-valorem duties): agricultural goods (AOA) (%)				,869

Extraction method: Main Components Analysis.

Rotation method: Normalization Varimax with Kaiser.

(a) The rotation has converged in 7 iterations.

The first factor captures bureaucratic obstacles to foreign trade; the second factor captures tariff protection; the third, the agricultural exports that are being carried out; and the fourth the state support to the agricultural sector.

The results of the factors are the following ones:

Value of the factors

	Factor 1	Factor 2	Factor 3	Factor 4
Algeria	100,0	50,8	22,3	31,8
Egypt	43,8	33,3	54,4	100,0
Israel	0,0	3,8	0,0	24,2
Jordan	35,3	0,0	100,0	22,8
Lebanon	21,0	100,0	66,8	0,0
Morocco	35,0	55,6	45,9	48,5
Tunisia	12,0	85,1	40,9	89,7
Turkey	36,4	35,5	62,1	94,0

- **Analysis of the "Transport Infrastructure" vector**

Table of original Indicators

	ALGERIA	EGYPT	ISRAEL	JORDAN	LEBANON	MOROCCO	TUNISIA	TURKEY
Railways, goods transported (million rhyme-km)	1987,67	4188,00	1152,67	522,00	.	5086,00	2209,67	8472,00
Railways, passengers carried (million passenger-km)	998,2	51625,6	1111,4	.	.	2221,6	1257,6	5543,8
Road traffic (million vehicle-km)	.	.	37109,75	482637,33	.	.	18117,33	53197,50
Roads, paved (% of total roads)	.	.	100	100	.	56	67	37
Roads, total network (km) / Land area (sq km)	.	.	77,54	8,26	.	12,92	12,23	46,15
Civil Aviation: Passenger-kilometres	2605,00	9000,00	.	4146,00	1749,00	6781,00	2511,00	16818,00
Merchant Shipping: Fleets	936,00	1151,00	.	69,00	229,00	504,00	186,00	5659,00
Motor Vehicles in it Uses: Commercial Vehicles	1010,00	686,00	.	177,00	102,00	460,00	298,00	1679,00
Motor Vehicles in it Uses: Passenger Cars	1739,00	1881,00	.	346,00	1371,00	1296,00	587,67	4600,00

Factor analysis offers in this case three factors to summarize the nine considered variables. The percentage of the explained total variance is superior to 87% and all the communalities are superior to 80%, except for that of the passengers transported by train (something more than 70%).

Explained total variance

Component	Original Eigenvalues			Sum of Squared Satuation in Rotation		
	Total	% of the variance	cumulative %	Total	% of the variance	cumulative %
1	5,328	59,205	59,205	5,328	59,205	59,205
2	1,421	15,789	74,995	1,421	15,789	74,995
3	1,123	12,474	87,469	1,123	12,474	87,469
4	,779	8,660	96,129			
5	,205	2,279	98,408			
6	,106	1,178	99,586			
7	,037	,414	100,000			
8	1,92E-016	2,13E-015	100,000			
9	6,04E-017	6,71E-016	100,000			

Extraction method: Main Components Analysis.

(a) When the components are correlated, the sums of the squares of the saturations cannot be added to obtain a total variance.

Rotated component matrix (a)

	Component		
	1	2	3
Motor Vehicles in it Uses: Passenger Cars	,968		
Merchant Shipping: Fleets	,951		
Railways, goods transported (million rhyme-km)	,919		
Civil Aviation: Passenger-kilometres	,915		
Motor Vehicles in it Uses: Commercial Vehicles	,892		
Roads, paved (% of total roads)	- ,791	,530	

Roads, total network (km) / Land area (sq km)		,909	
Railways, passengers carried (million passenger-km)			,857
Road traffic (million vehicle-km)			,585

Extraction method: Main Components Analysis.

Rotation method: Normalization Varimax with Kaiser.

(a) The rotation has converged in 4 iterations.

The first factor include the variables concerning the means of transport; the second factor captures the development level of road infrastructures; and the third factor the use of highways and railways.

The values for the obtained factors are the following ones:

Value of the factors

	Factor 1	Factor 2	Factor 3
ALGERIA	28,1	38,7	15,8
EGYPT	42,7	39,2	100,0
ISRAEL	23,7	100,0	17,1
JORDAN	0,0	25,7	75,4
LEBANON	19,0	28,1	27,0
MOROCCO	34,5	0,0	20,2
TUNISIA	17,0	13,4	0,0
TURKEY	100,0	33,2	32,0

- **Analysis of the "Human Development" vector**

According to the available information, for the Lebanon case an estimate of the lost values from its correlations with the rest of the variables has been carried out, in order to properly conduct factorial analysis.

Table of original Indicators

	ALGERIA	EGYPT	ISRAEL	JORDAN	LEBANON	MOROCCO	TUNISIA	TURKEY
Literacy rate, adult female (% of females ages 15 and above)	60,08	59,36	95,91	84,71	.	39,62	65,35	79,58
Literacy rate, adult male (% of males ages 15 and above)	79,57	83,02	98,46	95,08	.	65,71	83,39	95,27
Literacy rate, adult total (% of people ages 15 and above)	69,87	71,41	97,15	89,89	87,00	52,31	74,30	87,37
Literacy rate, youth female (% of females ages 15-24)	86,13	78,95	99,56	98,91	.	60,49	92,24	93,30
Literacy rate, youth male (% of males ages 15-24)	94,06	90,08	100,00	99,33	.	80,80	96,40	98,02
Literacy rate, youth total (% of people ages 15-24)	90,14	84,93	99,78	99,13	.	70,46	94,34	95,60
Human Development Index 2006	,7145	,6780	,9225	,7520	,7610	,6250	,7495	,7500
GINI index (Income distribution)	,35	,34	,36	,36	.	,40	,40	,40
Poverty gap at $1 a day (PPP) (%)	.	11,76	.	1,77	.	.	1,83	4,72
Poverty headcount ratio at $1 a day (PPP) (% of population)	.	46,98	.	9,46	.	.	8,64	17,57
Human Poverty Index (HPI-1) Value (%)	21,5	20,0	0,0	7,6	9,6	33,4	17,9	9,8
GDP per capita PPP US Dollars 2006	6603	4211	24382	5688	5837	4309	7768	7753
Expectancy of Life to birth (UNPD)	71,40	70,2	80,0	71,6	72,2	70,0	73,5	68,9

The absence of information for several indicators included in this vector forces us to not considering the Lebanon case in the analysis. Neither it is possible to use the variables of" poverty headcount ratio" and" poverty gap."

With the rest of the variables a factorial analysis is carried out that captures more than 97% of the common variance with three factors, with the information of the 12 initial

indicators being satisfactorily summarized in this way (the communalities are in all the cases over 0,95 in the factorial solution).

Explained total variance

Component	Original Eigenvalues			Sum of Squared Satuation in Rotation		
	Total	% of the variance	cumulative%	Total	% of the variance	cumulative%
1	9,141	76,177	76,177	7,268	60,566	60,566
2	1,372	11,437	87,614	3,200	26,668	87,234
3	1,153	9,612	97,226	1,199	9,992	97,226
4	,258	2,147	99,373			
5	,044	,369	99,741			
6	,031	,259	100,000			
7	1,49E-016	1,24E-015	100,000			
8	1,46E-016	1,22E-015	100,000			
9	-1,64E-017	-1,37E-016	100,000			
10	-1,86E-016	-1,55E-015	100,000			
11	-3,47E-016	-2,89E-015	100,000			
12	-3,64E-016	-3,03E-015	100,000			

Extraction method: Main Components Analysis.

Rotated component matrix (a)

	Component		
	1	2	3
Literacy rate, youth male (% of bad ages 15-24)	,955		
Literacy rate, total youth (% of people ages 15-24)	,951		
Literacy rate, youth female (% of females ages 15-24)	,948		
Literacy rate, adult male (% of bad ages 15 and above)	,939		
Literacy rate, total adult (% of people ages 15 and above)	,910		
Literacy rate, adult female (% of females ages 15 and above)	,882		
Human Poverty Index (HPI-1) it Valued (%)	- ,877		
Food consumption inequality (GINI Index CAM)	- ,845		
Expectancy of Life to birth (UNPD)		,943	

GDP per layer DPI US Dollars 2006		,934	
Human Development Index 2006	,642	,764	
GINI index (Income distribution)			,986

Extraction method: Main Components Analysis.

Rotation method: Normalization Varimax with Kaiser.

(a) The rotation has converged in 4 iterations.

The first factor captures, by adding it, the literacy indicators and, subtracting, those of poverty (inequality in the distribution of consumption and index of poverty). The second factor adds the level of relative wealth measured by GDP, life expectancy and HDI. Lastly, the last factor captures the level of inequality in the distribution of wealth.

The values for the obtained factors are the following ones:

Value of the factors

	Factor 1	Factor 2	Factor 3
ALGERIA	53,8	15,6	87,0
EGYPT	50,6	5,9	100,0
ISRAEL	80,6	100,0	59,2
JORDAN	100,0	3,0	69,6
LEBANON	-	-	-
MOROCCO	0,0	24,4	18,1
TUNISIA	71,3	26,5	0,0
TURKEY	98,3	0,0	6,2

To facilitate the interpretation of the results, instead of working with the usual Gini index (the closer to zero the better balanced the pattern of distribution; the closer to one, the worst distribution pattern) we have calculated it in an inverse scale. This way, the factor 3 can also be interpreted as presenting a better distribution pattern when approaching to 100, and a worst one when getting closer to zero.

- **Analysis of the "Governance" vector**

In this vector we include two variables that are already an integrated sum of different factors. For this reason, it could be convenient to consider them in an independent way, without carrying out new aggregations in order to obtain a more difficult to interpret indicator. We refer to the variables of Democracy Index and that of Political Stability. Anyway, it is worthwhile to comment that, among both, a significant negative correlation coefficient exists. Given the way by which these indicators are built, the direct interpretation can led to erroneous interpretations. In the case of "political stability", measured by the number of years in the power of a government, among other factors, the indicator can be higher in an authoritarian country than in a democratic one, perhaps even more so in the region concerned by our research. We then understand that this indicator is not convenient to be used in our case.

Table of original Indicators

	ALGERIA	EGYPT	ISRAEL	JORDAN	LEBANON	MOROCCO	TUNISIA	TURKEY
Voice and Accountability	24,50	17,80	70,20	28,80	31,30	28,40	13,90	43,30
Political Stability	19,20	20,20	14,40	27,90	6,30	34,60	53,80	25,50
Government Effectiveness	43,10	38,90	83,40	62,10	37,00	56,40	70,60	64,00
Regulatory Quality	27,80	35,10	78,00	62,90	51,70	47,80	58,00	57,60
Rule of Law	31,00	53,80	70,00	62,40	40,00	53,30	60,50	55,70
Control of Corruption	42,70	42,20	79,60	67,50	35,90	56,80	62,10	58,70
Democracy Index	3,17	3,90	7,28	3,92	5,82	3,90	3,06	5,70
Index of Corruption Perception	3,10	3,30	5,90	5,30	3,60	3,20	4,60	3,80

With the remaining indicators, all of them are more or less related with factors that influence companies' or sectors' economic activity, through factorial analysis we build an unique indicator that captures in a more than sufficient manner the information contained in all of them (the communalities are high in all the cases and, for the smaller ones, we would be speaking of 85% of information included).

Explained total variance

Component	Original Eigenvalues			Sum of Squared Satuation in Rotation		
	Total	% of the variance	cumulative %	Total	% of the variance	cumulative %
1	4,824	80,394	80,394	4,824	80,394	80,394
2	,623	10,383	90,777			
3	,254	4,226	95,003			
4	,179	2,985	97,988			
5	,100	1,674	99,662			
6	,020	,338	100,000			

Extraction method: Main Components Analysis.

According to the factors' component matrix, we have to highlight that it is the indicator of corruption perception the one with the less weight, although this is it more the effect of the almost 100 for 100 score given to the rest of indicators than the little consideration of the corruption perception indicator itself (it enters in the factors with a composition of 0,804).

Component Matrix (a)

	Component
	1
Control of Corruption	,959
Regulatory Quality	,942
Government Effectiveness	,940
Index of Corruption Perception	,920
Rule of Law	,887
Voice and Accountability	,706

Extraction method: Main Components Analysis.

(a) 1 extracted component

The obtained factorial results would be the following ones:

Value of the factors

	Factor	Index of Democracy
ALGERIA	0,0	2,6
EGYPT	11,4	19,9
ISRAEL	100,0	100,0
JORDAN	61,9	20,4
LEBANON	13,4	65,4
MOROCCO	31,9	19,9
TUNISIA	51,7	0,0
TURKEY	48,4	62,6

(Base 100 the highest value for the factor in the region)

In sum, the group of initial indicators is reduced now to a factor that includes the governance characteristics more related to economic activity and another variable that captures exclusively the Index of Democracy.

- **Analysis of the "Exchange Stability (macro) Variables" vector**

For this vector, given that it is only made up of two variables, it is not necessary to conduct factorial analysis. The first of the variables captures in gross terms the variability of the exchange rate measured in terms of its average appreciation/depreciation in the last five years period. The second captures to what extent the variance is important or not regarding its mean value (variation coefficient determined for the quotient between the mean and the standard deviation). Both are to be interpreted in the same way: a smaller value represents higher exchange stability.

Variables that compose the Vector

	Exchange rate: variation coefficient 2000-2006	Exchange rate:% variation. 2000-2006
ALGERIA	0,03	-1,82
EGYPT	0,19	62,57
ISRAEL	0,05	9,25
JORDAN	0,0	-0,23
LEBANON	0,0	0,03
MOROCCO	0,1	-17,25
TUNISIA	0,05	-2,98
TURKEY	0,22	129,73

IV.4. Similarity/Dissimilarity analysis among countries

As final result, we obtain a set of indicators (the less possible ones) for each"vector" of interest when designing a specific " Road Map" for each country of the region. In order to being able to carry out comparisons among the desired countries, all of them have been relativised to the maximum and the minimum of the region; that is, the whole eight countries considered in the study. Also, the factors have been built in such a way that the closer to 100, the more positive the value for that concrete factor, and vice versa.

Indicators results

		Algeria	Egypt	Israel	Jordan	Lebanon	Morocco	Tunisia	Turkey
Water	Water resources	1,40	4,50	,00	,30	43,90	30,70	8,70	100,00
	Household-agricultural water use	28,40	100,00	1,20	48,20	,00	95,70	76,30	54,90
	Industry water use	100,00	46,70	50,00	34,10	,00	28,10	34,10	71,00
Agricultural Structure	Use of Agricultural available resources	56,90	100,00	,00	25,90	11,00	86,80	56,40	76,50
	Available agricultural resources	14,30	,00	48,90	5,20	77,10	83,70	100,00	93,50

		Algeria	Egypt	Israel	Jordan	Lebanon	Morocco	Tunisia	Turkey
Modernization	Resources for production	,00	100,00	.	33,09	48,07	24,99	3,62	8,48
	Obtained production	34,42	16,96	.	100,00	50,01	20,86	36,32	,00
	External Food Dependency	,00	39,69	.	71,49	81,88	100,00	61,81	85,00
	Agricultural Machinery	93,73	100,00	.	79,44	,00	55,37	42,79	33,52
	Agricultural% Exploitations with than lives 20 Hc (%)	69,81	,00	.	54,92	9,83	34,10	100,00	36,49
Agricultural Policy	Burocracy Duties	100,00	43,80	,00	35,30	21,00	35,00	12,00	36,40
	Tariff Protection	50,80	33,30	3,80	,00	100,00	55,60	85,10	35,50
	Exports	22,30	54,40	,00	100,00	66,80	45,90	40,90	62,10
	Public Support	31,80	100,00	24,20	22,80	,00	48,50	89,70	94,00
Transport Infrastruc.	Transport means.	28,10	42,70	23,70	,00	19,00	34,50	17,00	100,00
	Road infrastructures	38,70	39,20	100,00	25,70	28,10	,00	13,40	33,20
	Use of Means	15,80	100,00	17,10	75,40	27,00	20,20	,00	32,00
Development	Human Resources	53,80	50,60	80,60	100,00	.	,00	71,30	98,30
	Wealth	15,60	5,90	100,00	3,00	.	24,40	26,50	,00
	Wealth Distribution	87,00	100,00	59,20	69,60	.	18,10	,00	6,20
Governance	Performance of Economic Activities	,00	11,40	100,00	61,90	13,40	31,90	51,70	48,40
	Index of Democracy	2,60	19,90	100,00	20,40	65,40	19,90	,00	62,60
Exchange Rate Stability	Exchange rate: variation coefficient 2000-2006	,03	,19	,05	,00	,00	,10	,05	,22
	Exchange rate:% variation 2000-2006	-1,82	62,57	9,25	- ,23	,03	-17,25	-2,98	129,73

In order to determine the degree of similarity/dissimilarity among the countries included in our research, the matrix of Euclidian distances has been built to the square and, later on, it has been normalized so that its values are to be comprised between 0 and 100. In the following table, this standardized matrix is shown.

Distances between the countries Matrix

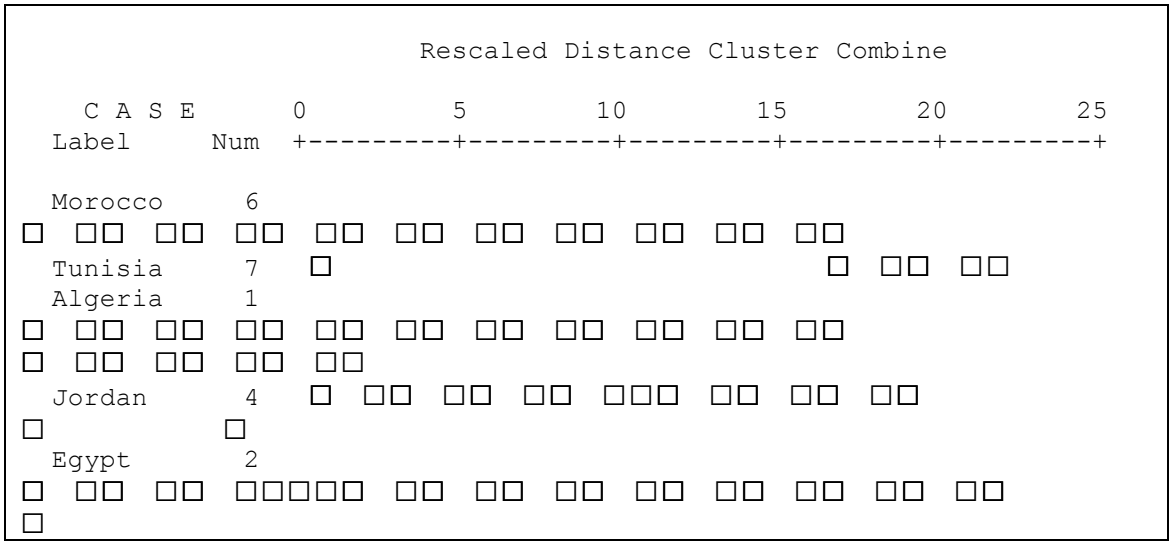
	Algeria	Egypt	Jordan	Morocco	Tunisia
Algeria	0				
Egypt	70,2	0			
Jordan	59,6	67,0	0		
Morocco	66,7	70,5	68,7	0	
Tunisia	66,7	100,0	69,7	28,0	0

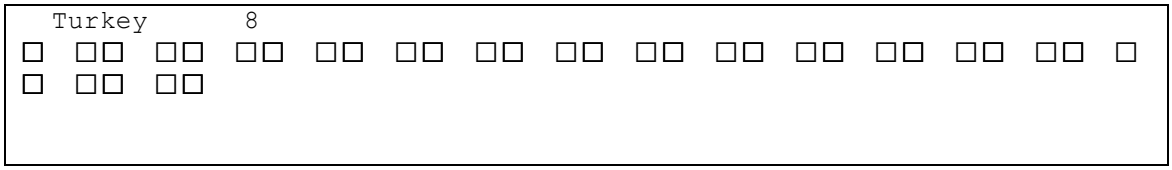
(Maximum distance 100, minimum 0)

As can be observed in the table above, the biggest distance (the dissimilarity in the global of vectors), takes place between Tunisia and Egypt. To the contrary, the biggest similarity would be between Morocco and Tunisia, being maybe this the only case in which could be a grade of significant resemblance, since the rest of the countries would show differences all of them grouped around a value 65-70 of the index; that is to say, reasonably different (they differ in two of every three observed characteristics).

To analyse with more detail these circumstances, we recur to a dendogram that observe variable to variable where those differences arise.

Dendrogram using Average Linkage (Between Groups)





With the results obtained in this dendogram, it may be confirmed that, indeed, the two only countries that share a grade of similar weaknesses/strengths are Morocco and Tunisia. At a more than considerable distance, the following “groupable” countries to these two would be Algeria and Jordan (more similar between them than the group formed by two first). Egypt and Turkey would be completely different to the rest of "groups" previously formed.

In sum, it doesn't seem appropriate to outline a" Road Map" for groups of countries, but rather creating a specific one for each country. For Morocco and Tunisia the most relevant aspects of such a Road Maps will probably be quite the same.

In this regard it is interesting to mark the most solid and the most fragile aspects in each country in an individual way. As a first decision rule, it would be necessary to classify the vectors in quartiles so that it could be determined for each country which are the analysed aspects that demand high-priority (vectors that present a value between 0 and 25), high-medium attention (vectors that present a value between 26 and 50), medium attention (vectors that present a value between 51 and 75) and low attention (vectors that present a value between 76 and 100).

It is necessary to insist here that the values for the normalization of the vectors (so that their margin is between 0 and 100) have referred in each case to the best (100) and worse (0) value of each vector in the region (the eight considered countries). This means that the countries are only being compared with the rest of the selected countries within the region. This analysis has not been made, for instance, comparing with the European countries that could mark, in several cases, much wider distances. If outside the region countries would have been included in the analysis, it is probable that any summary statistic would have tend to offer already well-known information: southern shore Mediterranean countries look like each other, in general, more than to Europe. Including

EU data would have made the scales not marking the really existent differences among the relevant countries when building a "Road Map" for agricultural trade liberalization.

In the following charts, it is shown to what degree it is needed taking corrective measures in each concrete vector for each country. These results point then to the setting of a first priority agenda in order to design a specific "Road Map." We want to stress again that this research goal is not to offer a specific design of such a Road Map, but rather proposing a methodology in order to built policy-consistent Road Maps. Sure, a relatively good situation in the southern Mediterranean context does not means that no policy reforms are needed, but to some extent it signals the path to prioritise issues.

However, from the table below we can obtain relevant insights in the general patterns of a Road Map that fits the needs of the different involved countries, and try to compare our conclusions with the ENP Action Plans approach. There are some horizontal priorities for all the countries that are clearly underestimated by Action Plans, like the water resources issue, which should be considered as a priority in any integral approach to Euro-Mediterranean agriculture, with the only exception of Turkey. However, within the water resources issue, the situation also clearly differs between countries for which agricultural water use is a priority (Algeria, Israel, Jordan and Lebanon) or not (the rest of countries). Another almost generalised issue, with few exceptions (Israel, Lebanon, Turkey), is the lack of democracy, also mentioned in ENP Country Reports, which we assume does not allow agricultural sector actors to transfer its policy preferences into their governments.

The level of obtained production is shown to be an almost common priority, too. With the exception of Israel and Jordan, the rest of the countries have problems in this respect. Concerning low productivity, mechanization would be a priority for Lebanon, Tunisia and Turkey. Another common trait is the shortcomings in the transportation system. All countries, except Israel, need to prioritise its transport infrastructures , another issue that is not mentioned in Action Plans when dealing with the agricultural sector reforms. Exchange rate stability also seems a priority for all countries with the only exception of Egypt.

But most priorities are country-specific and call for a more detailed level of negotiations. For instance, concerning tariff reduction, a significant part of any Euro-Mediterranean Agricultural Pact, our results point out that it won't be a priority for countries such as Lebanon, Morocco or Tunisia, whilst it should be a high priority for the rest of the countries. External food dependency will be a priority only for Egypt and Algeria. Export promotion seems an issue to be prioritised in Algeria, Morocco and Tunisia, relative to the rest of the countries. Concerning agricultural resources, it is a priority for most countries, with the exception of Lebanon, Morocco, Tunisia and Turkey. Reducing state support to agriculture, mainly subsidies, is a priority for most countries, including Israel, with the only exception of Egypt, Tunisia and Turkey.

So, the picture offered by our results highlights that trade-related issues are not such a high priority issue in several MPC's when compared with other non-trade related aspects. In the previous chapter of this research we have shown that different degrees of competition exposure existis within the Euro-Mediterranean area, then making it difficult to achieve a regional, or sub-regional, Road Map; only the Morocco-Tunisia couple could be interesting in exploring a joint dynamic. When adding the policy dimension, we confirm that no consistent policy framework can emerge that fits MPC's as a whole.

This case-by-case approach, on the contrary, fits well the ENP framework. But our results points to the fact that ENP Action Plan priorities are not fully consistent either with the MPC's agricultural situation. Sure, trade liberalization and trade facilitation measures are important, and MPC's need them. But issues such as water resources, transport infrastructure, state support to agriculture, food dependency or low production levels are almost absent in the ENP documents (at less in an operative manner), that tend to focus on trade-related issues.

This results reassess the significance of non-trade, accompanying issues in any Road Map for agricultural trade liberalization. It also raises some doubts about the viability of a regional approach for the implementation of such a Road Map. Finally, it shows that

ENP Action Plans do not adopt a truly country-specific approach when dealing with agriculture, and that there is much more room for fostering agricultural policy reform with a better prioritisation pattern.

	High-priority (0 - 25)	High-medium priority (26 - 50)	Medium-low priority (51 - 75)	Low priority (76 - 100)
Algeria	Resources for production External food dependence Economic activity performance Water resources Index of Democracy Exchange rate:% 2000-2006 Exchange rate: variation coefficient 2000-06 Available agricultural resources Wealth Use of Transport Means Agricultural Exports Level	Transport means Household-agricultural water use State support to agriculture Agricultural Obtained production Road infrastructure Tariff Protection	Human capital Use of available agricultural resources Agricultural Exploitation Size more than 20 Hc (%)	Level of Wealth distribution Machinery Industry water use Bureaucratic obstacles
Egypt	Available agricultural resources Agricultural Exploitation Size more than 20 Hc (%) Water resources Wealth Performance of Economic Activities Obtained production Index of Democracy	Tariff protection Road infrastructure External food dependence Means of transport Bureaucratic obstacles Industry water use Human capital	Exchange rate:% 2000-2006 Agricultural Exports Level	Exchange rate: variation coefficient 2000-2006 Household-agricultural water use Use of available Agricultural resources Resources for production Machinery State support to agriculture Use of Transport Means Wealth distribution level
Israel	Water resources Use of available agricultural resources Bureaucratic obstacles Agricultural Exports Level Household-agricultural water use Tariff Protection Use of Transport Means Exchange rate:% 2000-2006 Exchange rate: variation coefficient 2000-06 Transport means State support to agriculture	Available agricultural resources Industry water use		Human capital Road infrastructure Wealth Economic activity performance Index of Democracy

	High-priority (0 - 25)	High-medium priority (26 - 50)	Medium-low priority (51 - 75)	Low priority (76 - 100)
Jordan	Tariff protection Means of transport Exchange rate: variation coefficient 2000-2006 Water Resources Wealth Available agricultural resources Exchange rate:% cto. 2000-2006 Index of Democracy State support to agriculture Road infrastructure	Resources for the production Industry water use Bureaucratic obstacles Household-agricultural water use	Agricultural Exploitation size more than 20 Hc (%) Performance of Economic Activities Wealth distribution level External food dependence Use of Transport Means	Machinery Obtained production Agricultural Exports Level Human capital
Lebanon	Household-agricultural water use Industry water use Machinery State support to agriculture Exchange rate: variation coefficient 2000-2006 Agricultural Exploitation Size more than 20 Hc (%) Use of available Agricultural resources Exchange rate:%. 2000-2006 Performance of Economic Activities Means of transport Bureaucratic obstacles	Use of Transport Means Road infrastructure Water resources Resources for production Obtained production	Index of Democracy Agricultural Exports Level	Available agricultural resources External food dependence Tariff protection
Morocco	Road infrastructure Human capital Exchange rate:%. 2000-2006 Wealth distribution level Index of Democracy Use of Transport Means Obtained production Wealth Resources for production	Industry water use Water resources Performance of Economic Activities Agricultural Exploitation Size more than 20 Hc (%) Means of transport Bureaucratic obstacles Exchange rate: variation coefficient 2000-2006 Agricultural Exports Level State support to agriculture	Machinery Tariff protection	Available agricultural resources Use of available Agricultural resources Household-agricultural water use External food dependence

	High-priority (0 - 25)	High-medium priority (26 - 50)	Medium-low priority (51 - 75)	Low priority (76 - 100)
Tunisia	Use of Transport Means Wealth distribution level Index of Democracy Resources for production Water resources Exchange rate:% 2000-2006 Bureaucratic obstacles Road infrastructure Means of transport Exchange rate: variation coefficient 2000-2006	Wealth Industry water use Obtained production Agricultural Exports Level Machinery Performance of Economic Activities	Use of available Agricultural resources External food dependence Human capital Household-agricultural water use	Tariff protection State support to agriculture Available agricultural resources Agricultural Exploitation Size more than 20 Hc (%)
Turkey	Agricultural Obtained production Wealth Wealth Distribution Level Resources for production	Use of Transport Means Road infrastructure Machinery Tariff Protection Bureaucratic obstacles Agricultural Exploitation size more than 20 Hc (%) Economic activity performance	Household-agricultural water use Agricultural Exports Level Index of Democracy Industry water use Use of available agricultural resources	External food dependence Available agricultural resources State support to agriculture Human capital Water resources Transport means Exchange rate: variation coefficient 2000-06 Exchange rate:% 2000-2006

Note: In the case of Israel the vectors of Modernization, and Lebanon, the vectors of Development haven't been estimated because there is not enough information about their component indicators.

I ANNEX 1

Complete listing of the indicators included in each vector

Walter resources and uses
Irrigated land (% of cropland)
Average precipitation in volume (10^9 m3/yr)
Water resources: total internal per capita (m3/inhab/yr)
Water resources: total external per capita) (m3/inhab/yr)
Water resources: total renewable per capita (actual) (m3/inhab/yr)
Dependency ratio (%)
Water resources: total exploitable per capita (m3/inhab/yr)
Agricultural water withdrawal as part of total (%)
Power irrigated area as percent of area equipped for irrigation (%)
Part of area equipped for irrigation actually irrigated (%)
Area equipped for irrigation as percent of irrigation potential (%)
Area equipped for irrigation (% total arable area)
Domestic water withdrawal as part of total (%)
Industrial water withdrawal as part of total (%)
Population access to water
Development
Literacy rate, adult female (% of females ages 15 and above)
Literacy rate, adult male (% of males ages 15 and above)
Literacy rate, adult total (% of people ages 15 and above)
Literacy rate, youth female (% of females ages 15-24)
Literacy rate, youth male (% of males ages 15-24)
Literacy rate, youth total (% of people ages 15-24)
Human Development Index 2006
GINI index (Income distribution)
Poverty gap at $1 a day (PPP) (%)
Poverty headcount ratio at $1 a day (PPP) (% of population)

Human Poverty Index (HPI-1) Value (%)
Expectancy of Life to birth (UNPD)
GDP per capita PPP US Dollars 2006
Human Development Index 2006
Agricultural Structure
Agriculture, value added (% of GDP)
Employees, agriculture, female (% of female employment)
Employees, agriculture, male (% of male employment)
Rural population (% of total population)
Agricultural land (% of land area)
Arable land (% of land area)
Permanent cropland (% of land area)
Employment in agriculture (% of total employment)
Price percept by Producer (US$/tonne): weighted average for total products
Food Deficit per capita (average 2000-05)
Governance
Voice and Accountability
Political Stability
Government Effectiveness
Regulatory Quality
Rule of Law
Corruption Control
Democracy Index
Perception of Corruption Index
Infrastructure
Railways, goods transported (million ton-km)
Railways, passengers carried (million passenger-km)
Road traffic (million vehicle-km)

Roads, paved (% of total roads)
Roads, total network (km) / Land area (sq km)
Modernization
Agricultural machinery, tractors per 100 hectares of arable land
Fertilizer consumption (100 grams per hectare of arable land)
Property Structure: Land Inequality (Gini index)
Feedstuff and seeds / Total production (%)
Agricultural raw materials exports (% of merchandise exports)
Agricultural raw materials imports (% of merchandise imports)
Food imports (% of merchandise imports)
Without land: Number of holdings s/ Total
Under 1 ha: Number of holdings s/ Total
1 and under 5 ha: Number of holdings s/ Total
5 and under 10 ha: Number of holdings s/ Total
10 and under 20 ha: Number of holdings s/ Total
Food exports (% of merchandise exports)
20 and under 50 ha: Number of holdings s/ Total
+ de 50 ha: Number of holdings s/ Total
Agricultural area s/ Total: Under 1 ha
Agricultural area s/ Total: 1 and under 5 ha
Agricultural area s/ Total: 5 and under 10 ha
Agricultural area s/ Total: 10 and under 20 ha
Agricultural area s/ Total: 20 and under 50 ha
Agricultural area s/ Total: + de 50 ha
Yield per hectarea (kg/ha): products average weighted by Production Volume
Agricultural Policy

% of Public Budget to Agricultural Expenses
% of Sectoral Public Budget destinated to Agricultural sector
MFN tariffs (simple average of ad-valorem duties): agricultural goods (AOA) (%)
MFN duty free imports in agricultural goods (AOA) (%)
Average Agricultural Tariff (applied): AATA
Average Agricultural Tariff (consolidado): AATC
Diference between AATC and AATA
Average time to clear customs (days)
Documents for export (number)
Time for export (days)
Cost to export (US$ per container)
Documents for import (number)
Time for import (days)
Cost to import (US$ per container)
Agricultural Exports / Agricultural Production (%)
Taxes on international trade (% of revenue)
Unit Value of Exports (US$/Tonnes): Products average weighted by export volume
Exchange Rate Stability
Exchange rate: variance coefficient 2000-2006
Exchange rate: % of growth 2000-2006

ANNEXES TO CHAPTER 2

Annex A

A1

Figure :1 2006-2010 Agricultural Strategy Paper

Objectives and Priorities in line with the EUAccession and WTO

Sustainable development, product quality

Food security and safety

Competitiveness of agricultural holdings

Agricultural markets and and marketing

Rural development

Producer's organizations

Support Schemes in the Strategy:

Direct income support

Deficiency payments

livestock supports

Rural development supports

Alternative crop support

Crop insurance premium supports

Environmentally based agricultural land protection support (ÇATAK)

Other supports.

WTO-AA (Agricultural Trade Agreement): Commitment of Turkey:

Domestic Support: de minimis ; green box

Market Acces: MFN Tariff Rates

Export Competition: Export Subsidies; 44 products.

Implementing Bodies and Related Institutions:

MARA and its affiliated bodies:

Turkish Grain Board

DG Agricultural Enterprises

Meat and Fish Company

Tea Company

Agricultural Credits Cooperatives

A2

Table: 1 Value of Agricultural Production: 2006

(Billion Euro)	
Crop production: 22.5	**(77 %)**
Arable crops: 10.1	
Vegetables: 5.4	
Fruits: 7.0	
Animal Products: 6.5	**(23 %)**
Total: 29	

***Source*: TURKSTAT**

Table: 2 Main Agricultural Supports (Transfer Budget)

Budget Appropriation	**2005**	**2006**
Various Supports (incl.DIS)	**1.433.363**	**1.114.222**
Crop Based Payments (Premium)	**495.358**	**439.530**
Tea Support (Premium)	**67.685**	**83.987**
Livestock &Animal Husbandry Supports	**206.649**	**307.951**

Agricultural Insurance	**0**	**111. 982**
Agricultural Reform Implementation Project	**17.071**	**41.993**
Rural Development & Çatak Aids	**0**	**139.978**
Subsidized Credits Schemes for farmers∗	**40.132**	**67.189**
TOTAL	**2.260.258**	**2.306.831**

∗ Under Treasury Budget

Source: **TURKSTAT**

A3

Table: 3 Trade with the EU (25) (Million Euro)

	2001	2002	2003	2004	2005
Total Exports	2.016	1.915	2.008	2.350	1.585
Total Imports	393	586	631	647	485

***Source*:** UFT (Undersecretary of Foreign Trade)

Table: 4 Major Exports Products (Million US $)

Products	2000	2002	2004	2006
Hazelnuts (unshelled)	367	375	737	
Tobacco	357	277	395	
Other nuts	169	177	371	
Raisins	197	157	231	
Apricot (dried)	110	119	198	
Wheat Flour	65	48	197	
Tomatoes	92	78	134	
Cherry	24	52	118	

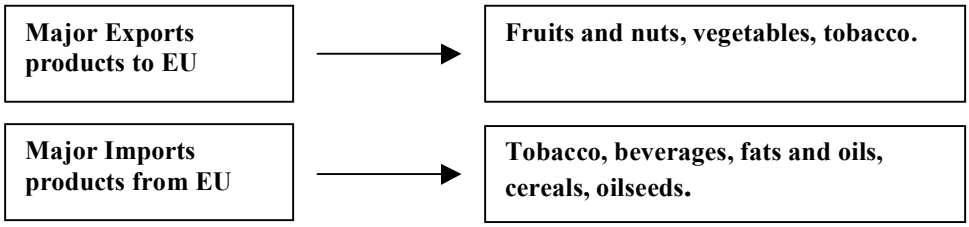
Source: UFT (Undersecretary of Foreign Trade)

Table: 5 Major Import Products (million US $)

Products	2000	2002	2004
Cotton	677	493	836
Sheep and lamb hides with wools	177	376	317
Soya beans	83	140	222
Wheat (others)	125	148	216
Palm oil	75	103	182
Corn (others)	141	131	179
Tobacco	282	149	160
Sunflower	103	42	157
Other food extracts	67	89	153
Soya bean oil, meal	116	79	143

Source: UFT (Undersecretary of Foreign Trade)

Figure: 2 Major Export and Import Products in 2006∗



∗ The other important agricultural export sectors are cereal and cereal products, sugar and sugar confectionary.

Annex B

B1-a : ANNEX I to PROTOCOL A

Arrangements applicable to the importation into Turkey of agricultural and processed agricultural products originating in *Israel.*

B1-b : ANNEX II to PROTOCOL A

Arrangements applicable to the importation into Turkey of agricultural and processed agricultural products originating in *Turkey.*

B2-a : ANNEX I: Arrangements applicable to the importation into Morocco of agricultural products originating in *Turkey*

B2-b: ANNEX II: Arrangements applicable to the importation into Turkey of agricultural products originating in *Morocco.*

B3-a : ANNEX A to Protocol I

Imports into the Syrian Arab Republic of the following products originating in the Republic of *Turkey*.

B3-b: ANNEX B to Protocol I

Imports into the Republic of Turkey of the following products originating in the *Syrian Arab Republic.*

B4-a: ANNEX A to Protocol II

Imports into the Republic of Tunisia of the following products originating in the *Republic of Turkey*.

B4-b: ANNEX B to Protocol II

Imports into the Republic of Turkey the following products originating in the *Republic of Tunisia.*

B5-a :Table A to Protocol II

Imports into the Arab Republic of Egypt of the following products originating in the *Republic of Turkey*.

B5-b: Table B to Protocol II

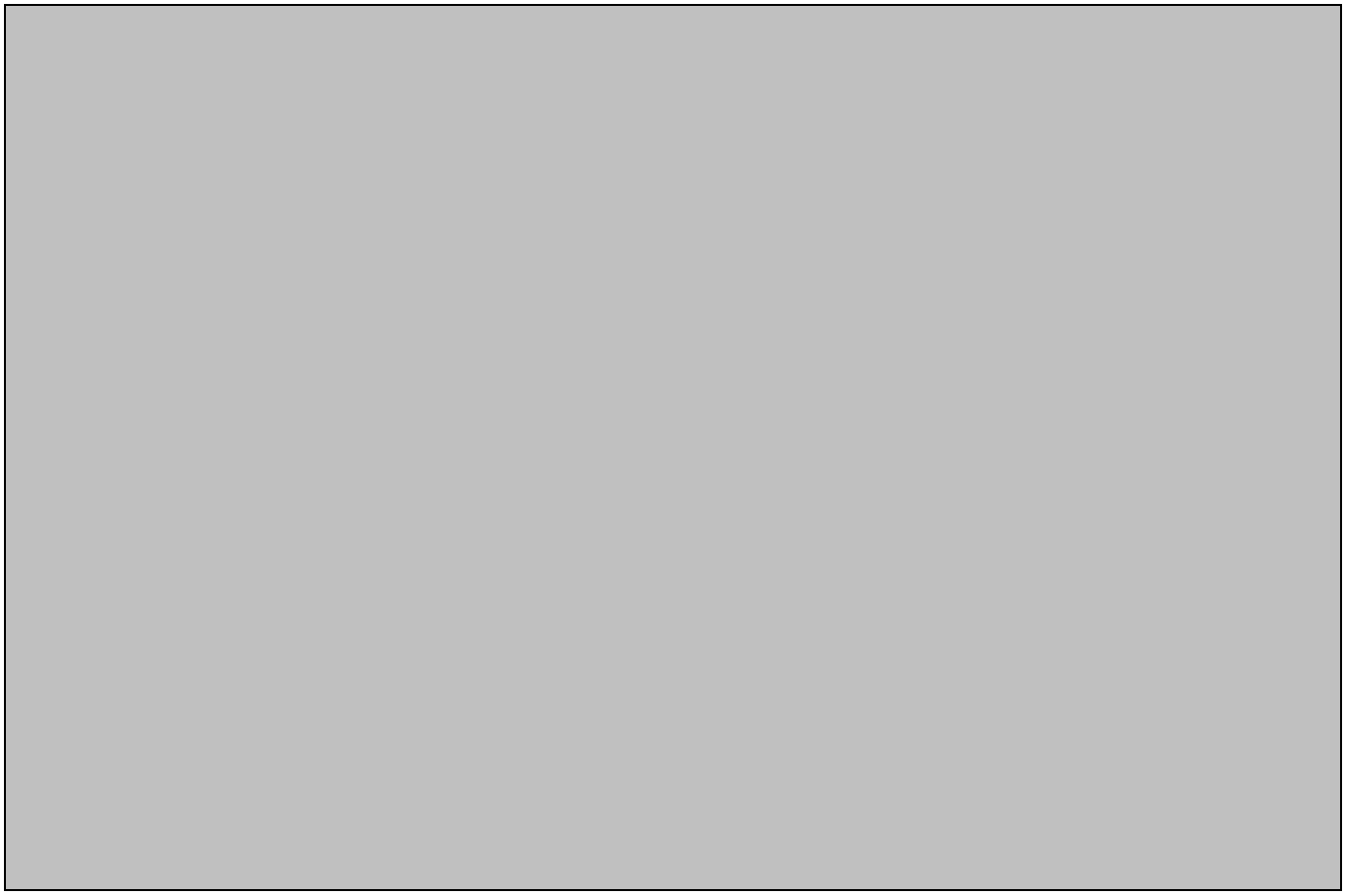
Imports into the Republic of Turkey of the following products originating in the *Arab Republic of Egypt*.

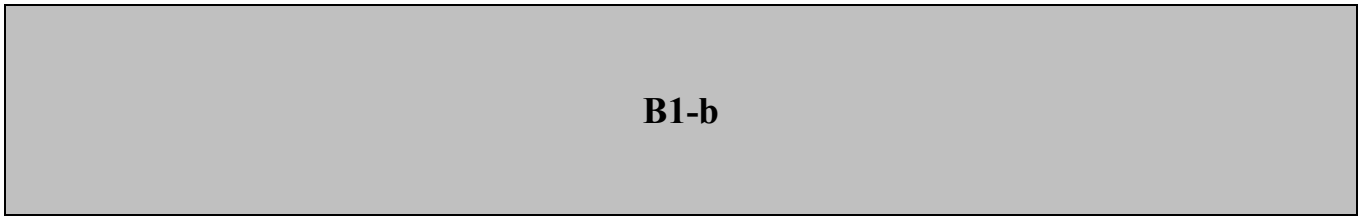
B1-a

ANNEX I TO PROTOCOL A

Israel's Customs Code	*PRODUCT DESCRIPTION*	*Duty (%) or % reduction of the MFN customs Duty*	*tariff quota (tons)*	*specific provisions*
		A	*B*	*C*
0802.21,22	Hazelnuts	0	100	
0802.50.00	Pistachio	0	100	
0804.20.90	Figs (dry)	9.6	-	
0813.10.00	Apricot (dry)	0	50	
1512.11,19	Sunflower oil	9	500	
1515.21,29	Maize oil	9	500	
1516.20	Mixtures of sunf. oil & maize oil	9	200	
1604.14	Tunas, preserved	0	15	
1605	Prepared or preserved crustaceans etc.	15 % reduction	-	
1806.32	Chocolate bars	0	-	
1806.90.90	Other chocolate confectionery	0	-	
1905.3010		10 + 0.82 NIS/kg		
1905.3090	Wafers	10+ 0.32 NIS/kg.	50	
2005.70	Canned olives	20 % red.	500	
2005.90	Other vegetables & mixture of vegetables (excluding 2005.90.30-carrots)			
2007.99	Processed hazelnuts	10	-	
2008.40	Pears (canned)			
2008.50	Apricots (canned)	10 or 12	-	Maximum 12 % duty for the products with 13.5 or 15.2 duty.Maximum 10 % duty for others.
2008.60	Cherries (canned)			
2008.70	Peaches (canned)			
2008.19	Prepared or processed hazelnuts	12 or 14	-	Maximum 12 % duty for the products with 16 % duty. Maximum 14 % duty for the products with 21.5 duty.
2102.10.31	Bakers' yeast (dry)	50 % reduction	-	
2201	Water (mineral)	50 % reduction	-	
2203	Beer	50 % reduction	-	
2402.20	Cigarettes cont. tobacco	0	-	
2403	Other manufactured tobacco	20 % reduction	-	
2905.43	Mannitol	0	-	
2905.44	D-glucitol (sorbitol)	0	-	
3302.10.29	Mixtures of oderiferous substances and mixtures	0	-	

3809	Finishing agents, dye carriers to accelerate the dyeing or fixing of dye stuffs and other products and preparations, of a kind used in the textile, paper,leather or like industries			
3809.10	With a basis of amylaceous substances	0	-	
	Other			
3809.91.00	Of a kind used in the textile or like industries	0	-	
3809.92.00	Of a kind used in the paper or like industries	0	-	
3809.93.00	Of a kind used in the leather or like industries	0	-	
3824.60	Sorbitol other than that of subheading 2905.44	0	-	
4501	Natural cork, raw or simply prepared; waste cork; crushed, granulated or ground cork;			
4501.10.00	Natural cork,raw or simply prepared.	0	-	
4501.90.00	Other	0	-	
5301	Flax, raw or processed but not spun; flax tow and waste(including yarn waste and garnetted sock)	0	-	
5302	True hemp (Cannabis sativa L.), raw or processed but not spun; tow and waste of true hemp(including yarn waste and garnetted stock)	0	-	





ANNEX II TO PROTOCOL A

Arrangements applicable to the importation into Turkey of agricultural and processed agricultural products originating in Israel

Turkey's Customs Code	***Product Description***	***Duty (%) or % red-uction of the MFNcustoms duty***	***specificduty(ecu/100kg) or % reduction***	***tariff quota (tons)***	***specific provisions***
		A	***B***	***C***	***D***
0804.40	avocados	Free	-	100	

ex.0804.50	ex. mangoes	Free	-	100	
ex.0810.90.85.00.19	ex. persimmon	Free	-	100	
1209.91	vegetable seeds	50% reduction	-	10	
1806.31	chocolate, filled	0	EA	-	see footnote 1
ex.1806.32	ex. chocolate bars	0	EA	-	see footnote 1
ex.1806.90	ex. chocolate snacks; halva with cocoa	0	EA	-	see footnote 1
1904.10.10	obtained from maize	0	55,63	-	see footnote 3
1904.10.30	obtained from rice	0	44,21	-	
1904.10.90	other	0	62,62	-	see footnote 4
1905.90.10	matzos	0	62,17	15	see footnote 5
ex.1905.40.90	ex. baked pretzels	0	EA	15	see footnote 1
2005.40.90	peas, canned		-		
2005.59.00	other, (canned beans)	50% reduction	-	500	
2005.90.00	carrots, canned		-		
ex.2005.90.70	ex.mixture of carrot and beans		-		
2005.80.00	sweet corn	0	22,19	50	see footnote 6
2008.30	citrus fruit		-		
ex.2009.11,19	ex. orange juice	25% reduction	-	300	
2009.20.11,19	grapefruit juice, density exceed.1,33 g/cm^3 at 20 0C		-		
2009.60.59,90	other(grape juice)	25% reduction	-	50	
ex.2101.11	ex. instant coffee	free		10	
ex.2106.10	ex. protein concentrates		-		
2106.10.20.00.11	*Dietic baby food(containing no milk fat,sucrose..)*		-		

2106.10.20.00.19	*other, (containing no milk fat,sucrose..)*	50% reduction	-		
2106.10.80.00.11	*Dietic baby food,other*		-	-	
2106.10.80.00.19	*other, other*	0	EA	-	see footnote 2
22.03	Beer	50% reduction	-	-	
ex.2204.21.79,80,83,84,94,98,99;	ex. kosher wines	29% reduction	-	-	
ex.2208.20.89	ex. brandy-kosher	0	50% reduction	5000 Lt	
2208.60	vodka	0	50% reduction	2500 Lt	
23.09	preparations of a kind used in animal feeding	50% reduction	-	100	
2905.43	Mannitol	0	9.04		
2905.44	D-glucitol (sorbitol)	0	1.56		
3302.10.29	Mixtures of oderiferous substances and mixtures	0	EA		
3505.20	Glues				
3505.20.10	*Containing, by weight, less than 25 % of starches or dextrins or other modified starches*		*1.39*		
3505.20.30	*Containing, by weight, 25 % or more but less than 55 % of starches*		*2.76*		
3505.20.50	*Containing, by weight, 55 % or more but less than 80 % of starches*		*4.39*		
3505.20.90	*Containing, by weight, 80 % or more of starches or dextrins*	*0*	*5.49*		
3809.10	With a basis of amylaceous substances				
3809.10.10	*Containing by weight of such substances less than 55 %...*		*2,76*		
3809.10.30	*Containing by weight of such substances less than 55 % or more but less than 70 %*		*3,84*		
3809.10.50	*Containing by weight of such substances less than 70 % or more but less than 83 %*		*4,68*		
3809.10.90	*Containing by weight of such substances 83 % or more*	*0*	*3,67*		
3824.60	Sorbitol other than that of subheading 2905.44				
3824.60.11	*Containing 2 % or less by weight of D-mannitol, calculated...*		*2.35*		
3824.60.19	*Other*	*0*	*4.48*		

3824.60.91	*Containing 2 % or less by weight of D-mannitol, calculated...*	*0*	*3.3*		
3824.60.99	*Other*	*0*	*5.28*		

1 : for those products Meursing table will be applied in parallel to the EU and target agricultural component will be achieved by 1.1.1999

2: for those products Meursing table will be applied in parallel to the EU and target agricultural component will be achieved by 1.1.1997

3: Agricultural component will be reduced to 35,86 on 1.1.1997; 21,03 on 1.1.1998 and 6,19 ECU/100 KG on 1.1.1999.

4: Agricultural component will be reduced to 45,55 on 1.1.1997; 32,75 on 1.1.1998 and 19,94 ECU/100 KG on 1.1.1999.

5: Agricultural component will be reduced to 42,3 on 1.1.1997; 27,4 on 1.1.1998 and 12,49 ECU/100 KG on 1.1.1999.

6: Agricultural component will be reduced to 14,91 on 1.1.1997; 8,91 on 1.1.1998 and 2,91 ECU/100 KG on 1.1.1999.

B 2-a / B 2-b

ANNEX I: Arrangements applicable to the importation into Morocco of agricultural products originating in Turkey

Harmonized System	BRIEF DESCRIPTION	QUOTA (TONNES)	APPLIED DUTY %
EX 040690	Other cheese (feta, kashkaval, tulum)	100	50
060110	Bulbs, tubers, tuberous roots, corms, crows and rhizoms,	20	10
EX 071320	Seeds of chickpeas of a kind used for sowing	100	10
EX 071320	Others chickpeas		40
EX 071340	***Lentil seeds of a kind used for sowing***	50	10
EX 071340	***Others lentils***	100	40
07139010	Seeds of leguminous vegetables, of a kind used for sowing	10	10
080221	Hazelnuts, fresh or dried, in shell	50	35
080222	Hazelnuts fresh or dried, shelled		35
080250	Pistachios, fresh or dried	20	35
080420	Figs, dried	20	35
080620	Dried raisins	100	35
090930	Cumin seeds	150	35
120740	Sesame seeds	150	40

ANNEX II: Arrangements applicable to the importation into Turkey of agricultural products originating in Morocco

CN CODE	BRIEF DESCRIPTION	QUOTA (TONNES)	APPLIED DUTY %
0602	Other live plants (including roots)	50	0
0603.10.30	Orchids	5	24
EX 0704.90.10	White and red cabbages	20	10
0706.90	Other	20	19
0709.20	Asparagus	10	10
0709.51	Mushrooms of the genus Agaricus	50	10
0709.60	Fruits of the genus Capsicum or of the genus Pimenta	10	10
0710.40	Sweet corn	10	EU rate
0711.30	Capers	85	18
0711.40	Cucumbers and gherkins	60	18
2001.10	Cucumbers and gherkins, prepared or preserved by vinegar or acetic acid.		20
0713.50	Broad beans and horse beans	15	10
0804.40	Avocados	50	22
0909.20	Seeds of coriander	10	15
0910	Ginger, saffron, turmeric (curcuma), thyme, bay leaves, curry and spices	10	15
1211.90	Other	10	17
1212.10	Locust beans, including locust bean seed	10	10
2008.50	Apricots (prepared or preserved, whether or not containing added sugar or other sweetening matter or spirit, not elsewhere specified or included)	10	30
2101.11	Coffee extracts, essences and concentrates	10	4
22.04	Wine of fresh grapes, including fortified wines; grape must other than that of heading 2009	500 hl	35
2302	Bran, and other residues	2.000	6

B3-a

Annex A to Protocol I

Imports into the Syrian Arab Republic of the following products originating in the Republic of Turkey shall be subject to the concessions set out below.

CN Code	Brief Product Description	Quota (tonnes)	Applied Duty (%)
0301,02,03,04,06	Live fish, fresh, chilled or frozen fish, fish fillets and other fish meat, crustaceans	1.000	0
0406.30	Processed cheese, not grated or powdered	200	0
Ex.0406.90	Other cheese; feta, kashkaval, tulum	200	0
0709.60	Fruits of the genus Capsicum or of the genus Pimenta	100	0
0710.80	Other vegetables, frozen	300	0
0802.21	Hazelnuts, in shell	100	0
0802.22	Hazelnuts, shelled	500	0
0802.40	Chestnuts	150	0
1003	Barley	10.000	0
1512.19	Sunflower-seed oil or safflower oil, other	5.000	0
1515.90	Other fixed vegetables fats and oils,other	250	0
1516.20	Vegetable fats and oils and their fractions	500	0
1517.10	Margarine	5.000	0
1517.90	Margarine, other		
1604,1605	Prepared or preserved fish, crustaceans, molluscs or other aquatic invertabrates	100	0
1704	Sugar confectionery, not containing cocoa	500	0
1805	Cocoa powder	100	0
1806	Chocolate and other food preparations containing cocoa	250	0
1902	Pasta	500	0
1905	Bakery's wares	250	0
2007.99	Other jams and jellies	50	0
2008.19	Prepared or preserved nuts	100	0
2102.10	Active yeasts	1.000	0
2104.10	Soups and broths and preparations therefor	50	0
2201,02	Waters	100.000 Lt	0

B3-b

Annex B to Protocol I

Imports into the Republic of Turkey of the following products originating in the Syrian Arab Republic shall be subject to the concessions set out below.

CN Code	Brief Product Description	Quota (tonnes)	Applied Duty (%)
0603	Cut flowers and flower buds of a kind suitable for bouquets or for ornamental purposes, fresh, dried dyed, bleached, impregnated or otherwise prepared	15	0
0703.10	Onions and shallots, fresh or chilled	100	0
0703.20	Garlic, fresh or chilled	50	0
0711.30	Capers	300	0
0712.20	Onions, dried	50	0
0806.10	Grapes, fresh	400	0
0809.20	Cherries, fresh	100	0
0809.30	Peaches, including nectarines, fresh	150	0
0909.10	Seeds of anise or badian	100	0
0909.30	Seeds of cumin	500	0
0910.99	Other spices	100	0
1211.20	Ginseng roots	100	0
1211.90	other plants and parts of plants	100	0
1507.10	Crude soya-bean oil, whether or not degummed	200	0
1512.11	Crude sunflower-seed oil or safflower oil	1.000	0
1704	Sugar confectionery, not containing cocoa	500	0
1806	Chocolate and other food preparations containing cocoa	250	0
2001.90 (except 2001.90.65)	Other vegetables, fruit, nuts and other edible parts of plants, prepared or preserved by vinegar or acetic acid	500	0
2005.90.10	Fruit of the genus Capsicum other than sweet peppers or pimentos	100	0
2007 (except 2007.99)	Jams, fruit jellies, marmalades, fruit or nut puree and fruit or nut pastes, obtained by cooking, whether or not containing added sugar other sweetening matter	100	0
Ex.2007.99	Only apricot puree and plum puree	150	0
2009.71	Apple juices	100	0
2009.79	Other apple juices	100	0
2009.80	Juice of any other single fruit or vegetable	200	0
CN Code	**Description**	**Quota (tonnes)**	**Applied Duty (%)**

2204	Wine of fresh grapes, including fortified grapes; grape musts other than that of heading 2009	30.000 Lt.	35
2306.90	Pulp and other solid material resulting from olive oil extraction	5.000	0

B4-a

Annex A to Protocol II

Imports into the Republic of Tunisia of the following products originating in the Republic of Turkey shall be subject to the concessions set out below:

CN Code	**Brief Product Description**	**Quota (tonnes)**	**Applied Duty (%)**
0713.20	Chickpeas	100	60
0713.33	Kidney beans, including white pea beans	400	25
0806.20	Grapes (dried)	50	75
0802.22	Hazelnuts (shelled)	400	35
ex 2007.99.98	Hazelnut purée and paste	50	43

B4-b

Annex B to Protocol II

Imports into the Republic of Turkey the following products originating in the Republic of Tunisia shall be subject to the concessions set out below:

CN Code	Brief Product Description	Quota (tonnes)	Applied Duty (%)
0804.10	Dates	2.000	0
0302.61	Sardines	200	0
0303.74	Mackarel		
0306.13	Shrimps and pawns	50	0
0307	Molluscs and aquatic invertebrates	100	0
ex 2103.90	Harissa	100	0
2204	Wine of fresh grapes	1.000 HL	50% of MFN

B5-a

Table A to Protocol II

Imports into the Arab Republic of Egypt of the following products originating in the Republic of Turkey shall be subject to the concessions set out below.

CN Code	Product Description	Quantity (tonnes)	Tariff Reduction from MFN Duties (%)
0802.21	Hazelnuts or filberts (Corylus spp)	2,000	100
0802.22			
0804.20	Figs	500	100
0809.20	Cherries (including sour cherries)	500	100
0813.10	Dried apricots	500	100
1507.90.91	Soya-bean oil, semi-refined in bulk	10,000	100
1512.11	Crude sunflower or safflower oil	20,000	100
1512.19.91	Sunflower seed oil, semi-refined in bulk		
1515.21	Crude maize (corn) oil and its fractions	10,000	100
1517	Margarine; edible mixtures or preparations of animal or vegetable fats or oils or of fractions of different fats or oils of this chapter, other than edible fats or oils or their fractions of heading 1516	1,000	100
1704	Sugar confectionery (including white chocolate), not containing cocoa	2,000	15
1806	Chocolate and other food preparations containing cocoa	1,000	15
1902	Pasta, whether or not cooked or stuffed (with meat or other substances) or otherwise prepared, such as spaghetti, macaroni, noodles, lasagne, gnocchi, ravioli, cannelloni; couscous, whether or not prepared	1,000	15
1905	Bread, pastry, cakes, biscuits and other bakers' wares, whether or not containing cocoa; communion wafers, empty cachets of a kind suitable for pharmaceutical use, sealing wafers, rice paper and similar products	1,000	15
2001.10	Cucumber and gherkins, prepared or preserved by vinegar or acetic acid	1,000	15
2008	Fruit, nuts and other edible parts of plants, otherwise prepared or preserved, whether or not containing added sugar or other sweetening matter or spirit, not elsewhere specified or included	500	15
CN Code	**Product Description**	**Quantity (tonnes)**	**Tariff Reduction from MFN Duties (%)**
2009	Fruit juices (including grape must) and vegetable juices, unfermented and not containing added spirit, whether or not containing added sugar or other sweetening matter	500	15
2102.10	Active yeasts	3,000	15

B5-b

Table B to Protocol II

Imports into the Republic of Turkey of the following products originating in the Arab Republic of Egypt shall be subject to the concessions set out below.

CN Code	Product Description	Quantity (tonnes)	Tariff Reduction from MFN Duties (%)
Chapter 3	Fish and crustaceans, molluscs and other aquatic invertebrates (excl. 0301)	Unlimited	50
0602	Other live plants (including their roots), cuttings and slips; mushroom spawn (excl. 0602.90.91, 99)	Unlimited	100
0603	Cut flowers and flower buds of a kind suitable for bouquets or for ornamental purposes, fresh, dried, dyed, bleached, impregnated or otherwise prepared	15	100
0701.90	Other potatoes, fresh or chilled	400	100
0703.20	Garlic, fresh or chilled	100	100
0705	Lettuce (Lactuca sativa) and chicory (Cichorium spp.), fresh or chilled	600	100
0706	Carrots, turnips, salad beetroot, salsify, celeriac, radishes and similar edible roots, fresh or chilled		
0709	Other vegetables, fresh or chilled (excl. 0709.90.31, 39)		
0710	Vegetables (uncooked or cooked by steaming or boiling in water), frozen (excl. 0710.80.10)		
0711	Vegetables provisionally preserved (for example, by sulphur dioxide gas, in brine, in sulphur water or in other preservative solutions), but unsuitable in that state for immediate consumption (excl. 0711.20, 40)		
0712	Dried vegetables, whole, cut, sliced, broken or in powder, but not further prepared		
0804.10	Dates, fresh or dried	5000	100
0804.50	Guavas, mangoes and mangosteens, fresh or dried	1000	100
0810.10	Strawberries, fresh	200	100
0909	Seeds of anise, badian, fennel, coriander, cumin or caraway; juniper berries	100	100
0910	Ginger, saffron, turmeric (curcuma), thyme, bay leaves, curry and other spices	100	100
1006.20	Husked (brown) rice	30000	100
1006.30	Semi-milled or wholly milled rice, whether or not polished or glazed	10000	50
CN Code	**Brief Product Description**	**Quantity (tonnes)**	**Tariff Reduction from MFN Duties (%)**

1202	Groundnuts, not roasted or otherwise cooked	500	100
1704	Sugar confectionery (including white chocolate), not containing cocoa	2000	15 (*)
1806	Chocolate and other food preparations containing cocoa	1000	15 (*)
1902	Pasta, whether or not cooked or stuffed (with meat or other substances) or otherwise prepared, such as spaghetti, macaroni, noodles, lasagne, gnocchi, ravioli, cannelloni; couscous, whether or not prepared	1000	15 (*)
1905	Bread, pastry, cakes, biscuits and other bakers' wares, whether or not containing cocoa; communion wafers, empty cachets of a kind suitable for pharmaceutical use, sealing wafers, rice paper and similar products	1000	15 (*)
2001.10	Cucumber and gherkins, prepared or preserved by vinegar or acetic acid	1000	15
2008	Fruit, nuts and other edible parts of plants, otherwise prepared or preserved, whether or not containing added sugar or other sweetening matter or spirit, not elsewhere specified or included	500	15
2009	Fruit juices (including grape must) and vegetable juices, unfermented and not containing added spirit	500	15
2102.10	Active yeasts	3000	15 (*)

(*) For products falling under the HS Codes 1704, 1806, 1902, 1905 and 2102.10 the ad valorem duties will be abolished and reductions will be made from the duties on agricultural component.

[i] See the market access database for a detailed description of these measures: http://mkaccdb.eu.int/mkaccdb2/indexPubli.htm