

SIXTH FRAMEWORK PROGRAMME
PRIORITY 8.1
Policy-oriented research

Integrating and Strengthening the European Research Area
Call identifier FP6-2002-SSP-1



Contract for:

SPECIFIC TARGETED RESEARCH PROJECT

Annex 1 - "Description of Work"

Project acronym: **EU-MED AGPOL**

Project full title:

**IMPACTS OF AGRICULTURAL TRADE LIBERALIZATION BETWEEN
THE EU AND MEDITERRANEAN COUNTRIES**

Proposal/Contract no.: 502457

Related to other Contract no.: *(to be completed by Commission)*

Date of preparation of Annex 1: 2003

Operative commencement date of contract: *(to be completed by
Commission)*

Table of Contents

1. Project summary	3
2. Project objectives	4
3. Contractor list	5
4. Relevance to the Objectives of the SSP Priority	6
5. Potential Impact	6
6. Project Management	6
6.1. Steering Committee and Advisory Group:	7
6.2. Executive Committee	7
6.3. Collaboration with Medfrol	8
6.4 Planned project Meetings	9
7. Workplan	10
7.1 Introduction	10
7.2. Planning and timetable	11
7.3. Graphical presentation	15
7.4. Major tasks, work plans	15
7.5 Workpackage list	30
7.6 Deliverables list	31
7.7 WP descriptions	33
8. Project resources and budget overview	50
8.1 STREP Project Effort Form	50

1. Project summary

TASK AND STRATEGIC OBJECTIVES ADDRESSED

Scientific Support to Policies

1.1 Modernization and sustainability of agriculture and forestry, including their multifunctional role in order to ensure the sustainable development and promotion of rural areas.

Task 3: Trade and market policies for agriculture in Mediterranean countries

PROPOSAL ABSTRACT

The overall objective of this project is to estimate and describe the impacts on European countries of agricultural trade liberalization in the Mediterranean region. The major changes to be expected are increased EU imports of fruits, vegetables and olive oil and increased EU exports to non-EU Mediterranean countries of cereals, meats, and milk products. Estimation of changes in exports of cereals, meats, and milk products will be done using a well-established sector model. For fruits, vegetables and olive oil, available quantitative models are not sufficient to properly capture the complexity of the phenomena involved (many different products, various seasonal patterns, complex detailed trade regimes). Expert panels for the Mediterranean countries with substantial export potential will be used to complement modeling approaches done at the country level. These expert panels, assembled on the basis of CIHEAM/IAMM's extensive network of contacts in agri-business, production, academia, etc. throughout the region, will be asked to estimate what the likely changes will be under different liberalization scenarios, which will then be used to estimate impacts on the EU's producing regions and budget.

The project has nine work packages that characterize the agricultural and agro-industry sectors in Mediterranean countries and the EU (1 and 2); describe and quantify the EU protection systems for the same products (3); develop specific liberalization scenarios (4); estimate the production and export potential for each Mediterranean country (5); quantify changes in European and Mediterranean production, imports, and exports (6); examine interaction with world markets and international negotiations (7); estimate changes in European production, incomes, budgets, social changes, etc. (8); and disseminate results (9).

The consortium consists of well-known institutions from EU member and candidate countries, from other Mediterranean countries, as well as one American university.

2. Project objectives

The overall objective of this project is to estimate and describe the impacts of EU and Mediterranean partner agricultural trade liberalization on European countries and societies. The major changes in European imports are expected to be in fruits and vegetables and olive oil. Europe has the potential to increase exports to Mediterranean countries of cereals, meats, and milk products.¹ Estimation of changes in exports from the EU to Mediterranean countries can be handled by traditional sector models, and we have chosen CAPRI, a widely used European agricultural sector model for that purpose.

But estimating the impacts of changes in fruit, vegetable, and olive oil imports is an entirely different story. Fruits and vegetables are much more complicated. Many fruits are perennials, and, thus, are difficult to handle in standard annual models. The traditional European export commodities like wheat, barley, milk, meat, etc. are relatively homogeneous. But fruits and vegetables come in hundreds of varieties. Furthermore, there are issues of seasonality that, in essence, make a strawberry in one month different from a strawberry in another month. And on top of all the natural variety, the customs rules and duties applied by the EU for fruits and vegetables are very complicated. In addition, the possible changes in trade in fruits and vegetables are quite large. Thus, it would be very difficult, if not impossible, for any modeling approach to reliably estimate the impacts of prospective policy changes regarding fruits and vegetables. Quantitative models are best when the products are relatively homogeneous, when the policy instruments are straight-forward, and when the envisioned changes are not large. None of those conditions exist for fruits and vegetables, so it would not be wise to use such techniques for this impact estimation.

For olive oil, the case is somewhere between these two extremes. There are models of world oil markets, and some of them include olive oil. CAPRI contains other table oils, but not olive oil at present. We have access to data from FAO and the International Olive Oil Council and from other studies that will permit us to add olive oil to the CAPRI model. Thus, CAPRI will be quite useful in the quantitative analysis with respect to policy changes in olive oil. However, we will still use an expert panel in Tunisia to supplement the quantitative analysis.

The state of the art is that we can and will use quantitative analysis tools for part of our analysis but must use other approaches to complement the modeling approach. For processed goods, we will use the global supply chain approach to capture the supply chain interactions. We have chosen to use expert panels for the Mediterranean countries with substantial export potential. CIHEAM/IAMM has an extensive network of contacts in agri-business, production, academia, etc. throughout the Mediterranean region, and we will draw upon this network to provide the needed expertise. In this way, we will capture the very best understanding available on what the likely changes will be under different liberalization scenarios. We can then use

¹ We use here the term Mediterranean countries to refer to the eastern and southern Mediterranean countries listed in the detailed task description (Malta, Turkey, Morocco, Algeria, Tunisia, Egypt, Cyprus, Lebanon, Libya, Syria, Israel, Gaza and West Bank, and Jordan). We will also use the abbreviation MED to refer to those same countries.

Project acronym : EU-MED AGPOL

that information to do the quantitative estimates of impacts on European producing regions.

The specific objectives of this research are as follows:

- To characterize the agricultural production, processing, distribution, and retail systems in the Mediterranean countries (task 1).
- To characterize the agricultural production sub-sectors in major European regions for production of fruits, vegetables, and olive oil (task 2).
- To describe and quantify the EU protection systems for fruits, vegetables, and olive oil as well as Mediterranean systems for cereals, meats, and milk products (task 3)
- To develop three realistic liberalization scenarios ranging from small changes to totally free trade (task 4).
- To estimate the production and export potential for Mediterranean agricultural systems within three years and ten years using expert panels (task 5).
- Using quantitative tools available, to develop estimates of possible changes in European and Mediterranean production, imports, and exports of agricultural commodities (task 6).
- To determine the kinds and importance of interactions with other world markets and international trade negotiations (task 7).
- To estimate the changes in European production of fruits, vegetables, olive oil, and other crops, agricultural incomes, EU budgets, social impacts, and other changes (task 8).
- To diffuse the results of the research as widely as possible and throughout the duration of the project (task 9).

3. Contractor list

Partic. Role*	Partic. no.	Participant name	Participant short name	Country	Date enter project**	Date exit project**
CO	1	CIHEAM/IAMM	IAMM	France	Month 1	Month 36
CR	2	ENSA Montpellier	ENSAM	France	Month 1	Month 36
CR	3	INRA Nantes	INRA	France	Month 1	Month 36
CR	4	IAP Bonn	IAP	Germany	Month 1	Month 36
CR	5	CSIC Madrid	CSIS	Spain	Month 1	Month 36
CR	6	METU Ankara	METU	Turkey	Month 1	Month 36
CR	7	IAV Hassan II - Rabat	IAV	Morocco	Month 1	Month 36
CR	8	Institut de l'Olivier Sfax	IO	Tunisia	Month 1	Month 36
CR	9	CAES, Cairo University	UC	Egypt	Month 1	Month 36

*CO = Coordinator
CR = Contractor

4. Relevance to the Objectives of the SSP Priority

This project was submitted in SSP area 1.2.1 (i), Policy Oriented Research. The general category is entitled, "Sustainable management of Europe's natural resources." The topic is, "Modernization and sustainability of agriculture and forestry including their multifunctional role in order to ensure the sustainable development and promotion of rural areas." The sub-topic is, "Research in support of international negotiations: improved tools for forecasting and assessment of international agriculture policies and markets, and related agreements." Finally, the task is "Trade and market policies for agriculture in Mediterranean countries."

This research is designed to precisely satisfy and exceed the research objectives identified in the detailed task 3 description. It will enable us to produce a comprehensive understanding of likely impacts of different levels of trade liberalization with Mediterranean partners. This understanding is important because the impacts of significant trade liberalization in fruits, vegetables, and olive oil could be quite large. Also, the current protection system is quite complex meaning that a very detailed innovative analysis such as proposed here is needed.

5. Potential Impact

The impact of this research could be quite significant. It should enable the EU to engage in trade liberalization and to design appropriate compensation schemes for the farmers and agricultural areas affected by that liberalization. Without a quantification of the likely impacts, discussions often get bogged down in debating wild adverse impact possibilities without any basis in fact. Having reliable quantitative measures of the likely impacts plus descriptions of potential social impacts should enable discussions to proceed much more effectively.

Recent history has shown that trade policy reform is much easier if compensation measures can be found to ameliorate the losses caused by the reforms. Having these impact estimates will enable us to design measures that can compensate for estimated losses. In addition, we can even design some compensation measures into the scenarios being evaluated to obtain estimates of what they would cost and to what extent they compensate for lost production and incomes. In addition, by considering both gains from increased agricultural exports and losses from increased imports, we will have a more balanced picture of the impacts of trade liberalization.

Clearly, this information will be indispensable for making significant progress on negotiating free trade agreements with Mediterranean countries. Credible estimates of impacts of changes make achieving the changes much more likely.

6. Project Management

The project is a consortium of nine institutions from four EU or EU candidate countries and three other Mediterranean countries:

Project acronym : EU-MED AGPOL

France – CIHEAM/IAMM, ENSA/INRA-Montpellier, INRA-Nantes
Germany - University of Bonn
Spain – Council for Scientific Research (CSIC), Madrid
Turkey – Middle East Technical University
Morocco – Agricultural and Veterinary Institute Hassan II, Rabat, Morocco
Tunisia –Institut de l'Olivier, Sfax, Tunisia
Egypt – CAES, Cairo University

CIHEAM/IAMM will manage the flow of tasks and responsibilities among partners and collaborators. CIHEAM/IAMM has budget resources allocated to management and coordination of the different partners. Responsibilities of the different partners and collaborators are delineated in the workplan, which follows.

6.1. Steering Committee and Advisory Group:

Technical guidance will be assured by a project steering committee, which will meet once each year, and more frequently if necessary. Steering committee members will receive by electronic means drafts of all reports and other project outputs. Members of the committee will include the following:

Dr. Julian Briz, Universidad Politecnica de Madrid
Dr. Michel Petit, CIHEAM/IAMM and National Agronomic Institute, Paris
Dr. Wallace Tyner, Purdue University, W. Lafayette, IN, USA
Dr. Haluk Kasnakoglu, FAO, Rome

The EC is welcome to send a representative to the Steering Committee meetings as well. In addition to technical guidance, the Steering Committee also will have the responsibility to ensure that the project is performing according to plan, is accomplishing its objectives in a timely manner, and is disseminating results to appropriate agencies and institutions in Europe and the Mediterranean countries.

An *Advisory group* will be set up combining EU-MedAgpol with Medfrol and eventually other projects in the same field, which will meet at least twice during the project life-time. The *Advisory group* will be set-up of members of the Steering Committee, it will also include Commission Officials from DG Agriculture and other DGs as appropriate, the Scientific Officer in DG Research and from the Commission's Joint Research Center (IPTs) to assure the linkage to Commission policies. It will reflect on project progress, provide input to the planning of the next project phase and assist in the dissemination and use of project results.

6.2. Executive Committee

The project director is Dr. Florence Jacquet. The Executive Committee consists of Dr. Jacquet and two members of the Steering Committee: Dr. Michel Petit and Dr. Wallace Tyner. This three person management team will be responsible for major

project management decisions and for assuring that project resources are used effectively.

6.3. Collaboration with Medfrol

In addition, CIHEAM/IAMM will manage communication and collaboration with the MEDFROL project also funded by the EC. Specifically, we will coordinate with the MEDFROL project at each of the following junctures:

- Upon completion of drafts of the deliverables for Work Plans 1 and 2 for the two projects - These work plans are somewhat similar, and the final products from each project would benefit from sharing drafts and data at this stage. Also, the remainder of both projects would be enriched by starting from common descriptive points concerning EU and Mediterranean production and marketing systems.
- Construction of liberalization scenarios (Work Plan 3 of our project) – The comparability of project results would be enhanced if we are working from the same liberalization scenarios.
- Exchange of preliminary results of quantitative impacts (Work plans 5 and 6 on our project) – Both projects would benefit from an exchange of preliminary results, which could lead to revisions and improvements in the analysis in both projects.
- Joint conference at the conclusion of both projects – a joint EU and Mediterranean wide conference near the conclusion of both projects would enrich the debate on the important issues covered in these projects. Participants would be able to see the similarities and differences and discuss and debate the outcomes. The final reports for both projects would be enhanced.

6.4 Planned project Meetings

Meeting n°	Type	Participants	Month
1	Lauching meeting	All partners	M2 (march 2004, 18-19)
2	Steering Committee	Steering committee members	M2
4	Advisory group	Advisory Group members	M8
3	Medfrol collaboration	Leaders WP1-WP2	M12
5	General meeting	All partners	M14
6	Steering Committee	Steering committee members	M14
7	Medfrol collaboration	Leaders WP3-WP4	M17
8	Advisory group	Advisory Group members	M20
9	General meeting	All partners	M26
10	Steering Committee	Steering committee members	M26
11	Medfrol collaboration	Leaders WP5-WP6	M28
12	Final conference	All partners	M34

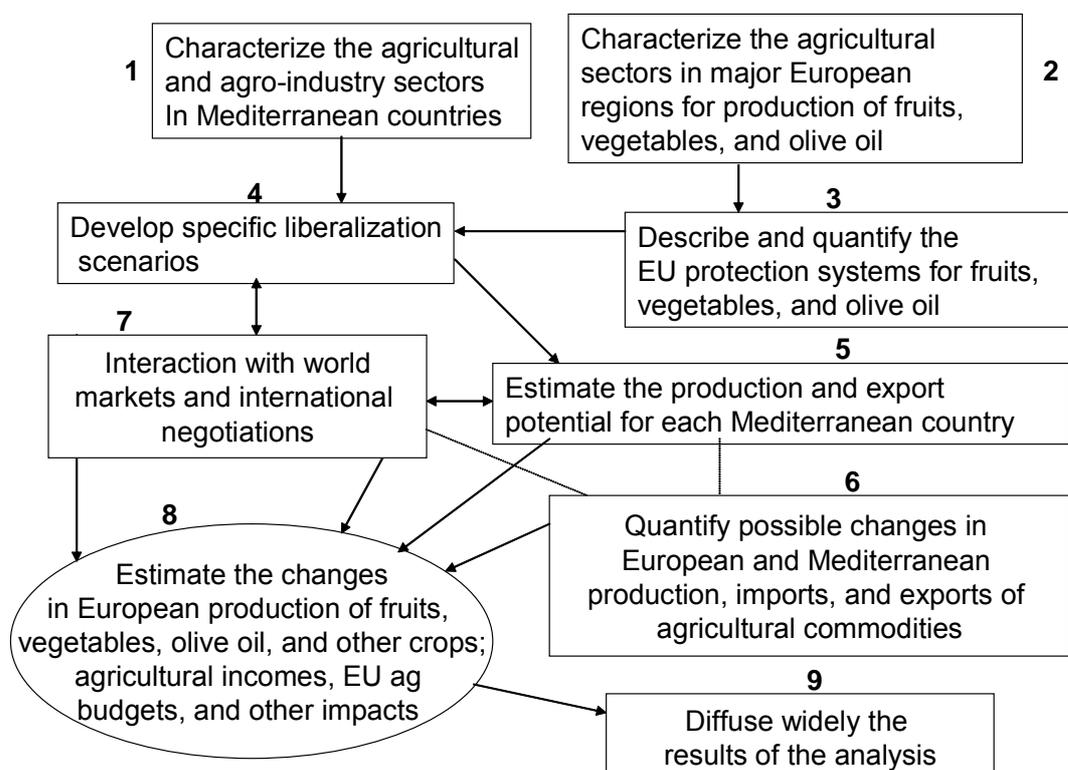
In addition, the executive committee will meet at least once a month, through conference calls. Where possible, the project will make use of electronic and teleconference meeting options to reduce cost of meetings.

7. Workplan

7.1 Introduction

This project has been partitioned into nine tasks or work packages. First, we review the overall structure of the workplan and then describe briefly each of the major tasks. Figure 1 provides the overview of the project with the flows and interactions among the nine tasks. Table 1 provides the time line for performance of each task, and Table 2 provides the participants and lead partner for each of the tasks.

Figure 1 : Project Overview



7.2. Planning and timetable

Table 1 : Time Line for Work Plans

Work plan component	Time Line Quarter	4	1	2	3	4	1	2	3	4	1	2	3
	Year	03	04	04	04	04	05	05	05	05	06	06	06
1) Characterize the agricultural and agro-industry sectors in Mediterranean countries		*	*	*	*								
2) Characterize the agricultural sectors in major European regions for production of fruits, vegetables, and olive oil			*	*	*	*							
3) Describe and quantify the EU protection systems for fruits, vegetables, and olive oil		*	*	*	*								
4) Develop specific liberalization scenarios						*	*						
5) Estimate the production and export potential for each Mediterranean country								*	*	*			
6) Quantify possible changes in European and Mediterranean production, imports, and exports of important commodities							*	*	*	*	*		
7) Interaction with world markets and international negotiations							*	*	*	*	*		
8) Estimate the changes in European production, incomes, ag budgets, social changes, and other impacts									*	*	*	*	
9) Diffuse results			*	*	*	*	*			*	*	*	*

Table 2 : Work Plan Components and Major Participants

Work plan component	CIHEAM IAMM	ENSAM Mont.	INRA Nantes	IAP Bonn	CSIC Madrid	METU Turkey	IAV	IO	UC
1) Characterize the agricultural and agro-industry sectors in Mediterranean countries	Δ	∂				∂	∂	∂	∂
2) Characterize the agricultural sectors in major European regions for production of fruits, vegetables, and olive oil	∂	Δ			∂				
3) Describe and quantify the EU protection systems for fruits, vegetables, and olive oil	∂		Δ						
4) Develop specific liberalization scenarios	Δ	∂	∂		∂	∂			
5) Estimate the production and export potential for each Mediterranean country	Δ	∂				∂	∂	∂	∂
6) Quantify possible changes in European and Mediterranean production, imports, and exports of important commodities	∂		∂	Δ		∂	∂	∂	∂
7) Interaction with world markets and international negotiations	Δ	∂		∂	∂				
8) Estimate the changes in European production, incomes, ag budgets, social changes, and other impacts	Δ	∂	∂	∂	∂	∂			
9) Diffuse results	Δ	∂	∂	∂	∂	∂	∂	∂	∂

Note: Δ = task leader
∂ = task participant

Project acronym : EU-MED AGPOL

The first and second tasks are to characterize the agricultural production, processing, distribution, and retail systems in each Mediterranean country and each major European area producing fruits, vegetables, and olive oil (the most important products for Mediterranean exports to the EU). This work will be done with secondary data.

Simultaneous with the conduct of tasks 1 and 2, we will also produce a comprehensive analysis of the existing EU protection systems applied for the Mediterranean trading partners (task 3). This assessment will include quotas, market windows, ad valorem tariffs, specific duties, and non-tariff barriers. The results of this analysis will become input into defining the liberalization scenarios (task 4). Those scenarios will be defined in consultation with users of the results of the analysis, including, of course, the EC staff.

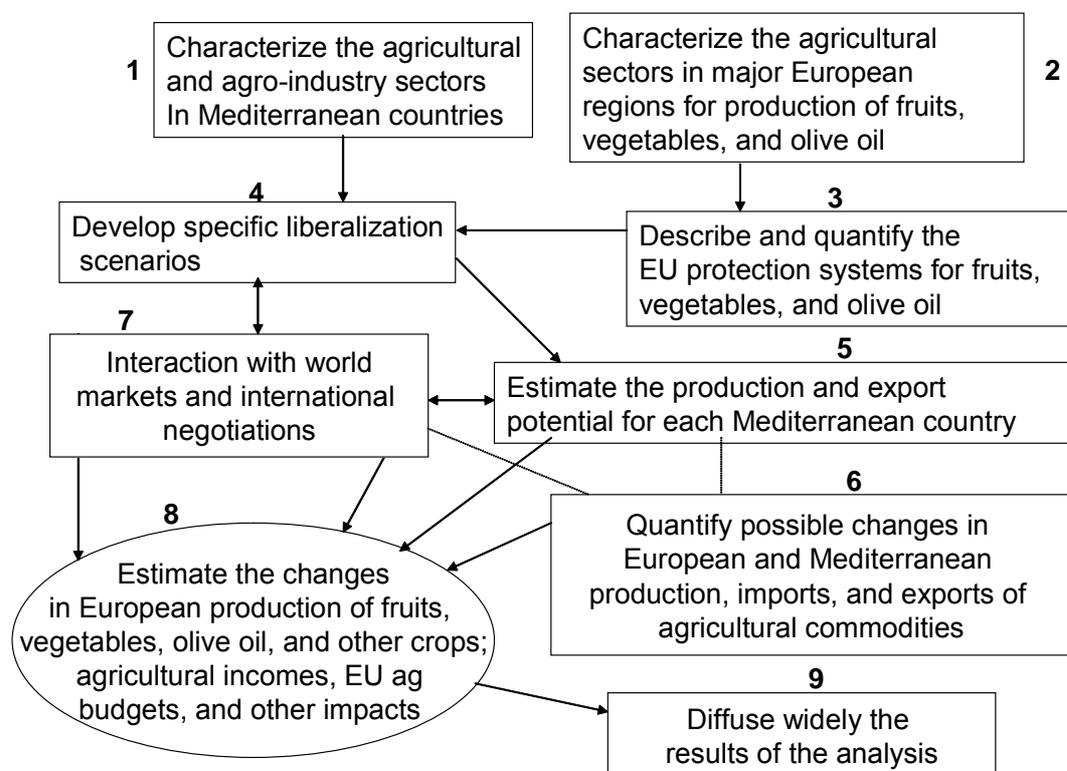
The liberalization scenarios will then become input into the expert panel assessments (task 5) and the model analysis of liberalization scenarios (task 6). Because the changes could be so large, no modeling framework can adequately capture the potential impacts of liberalization in fruits, vegetables, and olive oil. Therefore, we will complement the model analysis with input from expert panels. Using the results from task one, we will then convene expert panels for each of the five major Mediterranean countries to get their assessment on what the potential growth would be in the products important for that country. The panel work will be done in two stages: first, what is the production growth potential for a 3 and 10 year horizon, and second, what fraction of that potential might be exported to the EU under each of the liberalization scenarios developed in task 4. In conducting the second task, the expert panels will be provided with data on and asked to consider market interactions in other parts of the world (task 7).

For the modeling activity, we will make use of CAPRI, a widely used European agricultural policy model containing details of European policy instruments. Three of the regions it uses in the market model are the EU, Eastern Europe candidate countries, and Mediterranean countries, so it is already structured for this type of analysis. It will be especially useful for analysis of the impacts of increased European exports to Mediterranean countries. We will also employ an agricultural sector model for Turkey and a general equilibrium model with a rich specification of the agricultural sector for Morocco. Together these tools will be quite useful for quantifying impacts of some of the important changes in trade.

Thus the estimation of increases in exports to the EU from Mediterranean countries will include consideration of expert panels, market interactions with world markets (some from task 6 and some from expert opinion), and model analysis. These tools will also be used in estimating the changes in European production, agricultural budgets, farm incomes, social changes, etc. (task 8). Once the initial impact analyses have been accomplished, workshops comprising a blend of users and sector experts will be convened to consider the realism of the projected impacts for each scenario. With that input, the analysis team will then produce a final set of impact estimates.

Results of this work will be widely diffused both as stages are completed and near the end of the project. For example, the results of tasks 1-4 will be published within 18 months of launching the project. Towards the end of the project, a European/Mediterranean conference will be held to present the results to professional and user audiences. Professional publications will be prepared as appropriate as work is completed. Finally, near the end of the project, the impact analyses will be packaged in form suitable for interested lay audiences. Press releases will be distributed, and all reports and data will be available on a project web site.

7.3. Graphical presentation



7.4. Major tasks, work plans

1. Characterize the agricultural and agro-industry sectors in Mediterranean countries

The first and second tasks are to characterize the agricultural and agro-industrial sectors in the Mediterranean countries (task 1) and the EU (task 2), particularly as relevant to fruits, vegetables, and olive oil. That description will encompass the following elements as requested in the FP6 Detailed Task Description:

- Natural endowment
- Farm structure
- Employment
- Farm capital and investment
- Rural infrastructure
- Transport and marketing systems
- Key characteristics of the food processing, distribution, and retailing systems
- Production and consumption levels and trends
- Yields and intermediate output use
- Price levels

However, we will go beyond these basic elements and create useful indicators illustrating the relative importance of fruits, vegetables, and olive oil in the national economy and

Project acronym : EU-MED AGPOL

exports for Mediterranean countries. Some of the indicators that will be developed by product and country are as follows:²

- Share of exports to the EU (percentage of total EU imports of the commodity)
- Share of exports to the EU candidate countries
- Share of world market exports
- Production per capita
- Use of production – domestic market, export, and transformation
- Fraction of production that is exported
- Fraction of production that is exported to the EU
- Fraction of production that is exported to EU candidate countries

Time series of these indicators will be developed so that trends can be discerned. We will conduct analysis to explain trends that appear to be important. We will also cover the entire agro-industrial sector. For example, for Morocco seafood and seafood products constitute an important part of the value of total food exports.

Another relevant issue is the relationship between overall agricultural trade evolution and trade concentration in selected products; i.e. whether increased trade in agricultural products between EU and Mediterranean countries is associated with trade concentration in specific products or varieties. This is a question that has implications for the distribution of gains from international trade, and hence for the convergence/divergence of incomes across countries. Initial differences in factor endowment determine that trade is concentrated in few producer countries (specialization derived from factor cost advantages); however, trade liberalization and increased access to foreign investment might reduce trade concentration in some agricultural products (mainly capital or technology intensive products) across Mediterranean countries, and reshape its configuration.

This data tasks will be accomplished primarily with secondary data; however, all results will be verified by contacts and counterparts in the Mediterranean countries. Our Mediterranean country partners will play significant roles in preparing these reports. Once the reports, data sets, and indicators are completed for each Mediterranean country, reports will be published and all materials will be available on the project WWW site.

2. Characterize important European areas of production of fruits, vegetables and olive oil

At the same time task 1 is in progress on Mediterranean countries, task 2 will be performing essentially the same analysis for major European regions for fruits, vegetables, and olive oil. Here again, we will rely on data sources from public and international organizations, producer associations, and private sources. The olive oil portion of the analysis will be led by the Spanish Council for Scientific Research in Madrid, and the fruits and vegetables component will be led in INRA-Montpellier. However, we will draw upon resources and expertise from all the major producing regions in Europe (especially Spain, Portugal, France, Italy, and Greece). This analysis also will be published and placed on the WWW once it is completed. By making the early assessments widely available, we hope to obtain as much public input as possible and to stimulate others to use the information and data collected.

² Some of the indicators will be in terms of volume, some in value, and some both.

Project acronym : EU-MED AGPOL

Olive oil is a particularly interesting market because until recently the Mediterranean basin represented 95% of the production and 85% of the consumption worldwide. In other regions, there were widely available cheaper substitute oils. However, recently with the popularity of the “Mediterranean diet” and the associated health benefits of olive oil, the market for oils is becoming much more segmented.

Olive oil is also important in EU agricultural policy. The Producer Subsidy Equivalent (PSE) for EU olive oil was about 50% estimated from 1998 data. Most of this subsidy is classified as *Amber Box*, so it will be an important issue in future trade negotiations.

In tasks 1 and 2, we will also use the global supply chain approach for selected chains in order to take into account not only the global aggregates, but also the role and dynamics of institutions and economic agents involved in the whole food chain (producers, manufacturers, distributors, exporters/importers, consumers). We will collect data on major food industries such as value added in the sector, number of enterprises, number of employees, profitability, foreign capital, etc., to develop a good understanding of the sub-sector. Changing networks of food supply is a prominent issue in the current context of increasing globalization of the food system. In this sense, it will be helpful to investigate new horticultural and olive oil marketing networks linking MED producers with EU consumers. In other words, the supply chains will no doubt involve interactions on both sides of the Mediterranean.

3. Describe and quantify the protection systems in place in the EU for fruits and vegetables and olive oil

Trade liberalization agreements between the EU and Mediterranean countries could result in major changes in European protection of fruits, vegetables, and olive oil. Protection of fruits and vegetables in Europe is often high and unusually complex. In order to analyze the impacts of changes in EU policies for these commodities, we must have a comprehensive picture of the protection now in force between the EU and Mediterranean partners. Table 3 compiles the agreements in effect between the EU and Mediterranean countries.

Table 3 : EU Trade Agreements with Mediterranean Countries

	Preferential Agreement		
Mediterranean partners	SPG	SPGL	Bilateral
Turkey			Yes
Tunisia		SPGL	Yes
Syrian Arab Republic	SPG		Yes
Morocco		SPGL	Yes
Malta			Yes
Libya		SPGL	Yes
Lebanon		SPGL	Yes
Jordan	SPG		Yes
Israel			Yes
Egypt	SPG		Yes
Cyprus		SPGL	Yes
Algeria		SPGL	Yes

Sources : TARIC (DG-UE)-TARAGRO (INRA)

Note : SPG is the French abbreviation for general system of preferences.
SPGL is a subset of that category, which is more specific to certain products and countries.

The EU has a number of preferential agreements with Mediterranean countries, but the agreements may vary by commodity and country. For example, Morocco might use terms from its preferential agreement for one commodity and MFN (Most Favoured Nation) terms for another. It is even possible that the agreement used could change with the time of the year.

To undertake this analysis, we will make use of the TARIC (Directorate General for Taxation-EU) data base. This is a relational data base containing the tariff and non-tariff barriers and the measures and rules for their application. This data base serves as the reference point for European Union member states and is updated constantly as needed.

The trade rules and regulations for fruits and vegetables can be quite complex. The nomenclature used for tariffication is much more complex than that used for analyzing trade flows. The data is represented at a level of 10 to 14 figures in the classification system – that is, the 8 standard figures in the classification system plus 2 figures for TARIC plus, in some cases 4 additional figures for additional codes. The additional specificity sometimes is related to quality, but may be linked to other characteristics as well such as seasonality or entry price. These elements are of great importance in understanding EU protection, especially for fruits and vegetables. Fruit and vegetable duties are often expressed as specific tariffs (€/unit of measure) and must be converted to ad valorem duties for certain analyses.

In order to simplify the tariff measures applied for Mediterranean countries, we can identify four types:

- Preferential quota
- Preferential tariff
- Tariff-rate quote
- Standard tariff (– erga-omnes)

The usage of these different measures and more generally the use of any given preference regime will depend on the incentives faced by the importer : the margin of preference or the gap between the MFN tariff and the preferential tariff or quota. The larger this gap, the greater the incentive to use the preferential system. However, the usage of this preferential regime by the importer must respect rules of origin and administrative procedures (notably for quotas, licenses, first in - first served, etc.) These considerations lead us to examine in addition to the rules actually applied (TARIC), the conditions of effective use of the rules by importers. This analysis will be done by treating information on Single Administrative Declarations (SAD) from the customs office (Domain Comext – Taric (Eurostat)).

In summary, we will analyze protection policy by taking into account:

- All tariff measures and preferential agreements
- Factors of seasonality and product quality
- Application of rules and usage that is practiced by importers

In addition to quantifying the effective tariffs in place, we will also summarize important regulations that translate to non-tariff barriers. While these cannot be quantified, we can describe the likely impacts of important regulations.

Project acronym : EU-MED AGPOL

In addition to handling the important fruits, vegetables, and olive oil from Mediterranean countries, we will also conduct the same analysis for commodities likely to be important Mediterranean imports from the EU. That is, we will quantify the current protection levels for EU exports of cereals, meats, milk, etc. to the Mediterranean countries.

Thus, we will arrive at a data base that represents the starting point from which liberalization scenarios can be defined. These scenarios will then be the basis for estimating impacts of protection changes. This data base and protection description also will be made available on the project WWW site.

In addition to the border measures described above, we will also collect information on Producer Support Equivalent (PSE) and Aggregate Measure of Support (AMS) indicators of domestic support provided by the EU for commodity production. For this study, the PSE and AMS measures will be particularly relevant for olive oil.

For the export commodities, we will focus on export subsidies which could affect MED imports of cereals, in particular. Thus, we will have amassed information on the complex border measures for fruits and vegetables, border measures for other products to be traded between EU and MED countries, domestic support measures particularly for olive oil, and export subsidies, particularly for EU exports to MED countries.

4. Develop specific liberalization scenarios

In this task, we will develop the liberalization scenarios to be used to estimate quantitatively and qualitatively the production, income, budget, and social impacts of EU-MED trade liberalization. These scenarios will suppose concessions to be made both by the EU and the Mediterranean countries. The point of departure for developing the liberalization scenarios will be the work in task 3 that delineates the current situation for all the important agricultural products traded or tradable between the EU and Mediterranean countries. We will hold user workshops to help develop the scenarios to be tested. Participants in the workshops will include EC staff, political representation of different positions regarding EU-MED trade liberalization, Mediterranean country participants, and project staff. While we will welcome input from all parties, it is important that the project team make the final decisions on the scenarios to be used, so that independence of the work from political factions can be maintained.

We will probably create three scenarios, one of which would be a free trade agreement in effect by the end of the ten year transition period. The other two scenarios would maintain certain levels or types of protection both by the EU and Mediterranean countries. The scenarios other than totally free trade are likely to be a complex mixture of changes in tariffs, quotas, minimum import prices, and seasonality rules. For example, if minimum import price falls or is eliminated, there might be greater potential for MED exports but at a lower price. If tariffs are reduced, the effective price received for MED exports would increase. For each product and country, the liberalization scenario as compared to the base situation can be viewed as an effective change in price (and other rules), which then is used in task 5 to estimate export changes. The liberalization scenarios also will need to include compensation measures in order to be able to calculate budgetary costs of the changes.

5. Estimate the production and export potential for each major Mediterranean country of important fruits and vegetables and olive oil

Project acronym : EU-MED AGPOL

It would be very difficult, if not impossible, for any modeling approach to reliably estimate the impacts of prospective policy changes regarding fruits and vegetables. Quantitative models are best when the products are relatively homogeneous, when the policy instruments are straight-forward, and when the envisioned changes are not large. None of those conditions exist for fruits and vegetables, so it would not be wise to use such techniques for this impact estimation.³

The starting point for the work in this task is the results from task 1. We will select the most important fruit and vegetable products for each major exporting country using the data from task 1. For example, for Morocco, citrus, melons, and strawberries constitute 90 percent of Morocco's fruit exports. Similarly, tomatoes, green beans, and potatoes constitute 80 percent of the vegetable exports. Thus, we will focus the analysis on those crops. But we will not rely solely on simple trends to estimate the production potential in each country. Rather, we will assemble expert panels in the major countries and ask them to provide their assessment of the production potential of major fruits, vegetables, and olive oil. CIHEAM/IAMM has a large and effective network of contacts throughout the Mediterranean region. We will draw upon that network plus the expertise that exists in the partner institutions to conduct these analyses.

The panel work will proceed in two phases. First, the panels will be asked to estimate the production growth potential for each of the major crops important for the country. In that phase, the panels will be provided all the historical information from task 1. They will be told not to consider market constraints. Thus, phase one will produce estimates of production potential. In the second phase, the panels will be provided the liberalization scenarios developed in task 4. Then they will be asked to estimate what fraction of the previously estimated production growth might be exported to the EU under each of the liberalization scenarios. These export changes and the scenario definitions together define the expected export response to the protection changes. These implicit elasticities can also be used in the quantitative analysis in task 6.

The production potential will be estimated for a medium term (3 year) horizon and a long term horizon of ten years. Thus, we will have medium and long-run export responses to the policy changes. It is our view that projections beyond ten years for this sort of analysis are not very useful. This analysis will be focused on the five countries that account for about 95 percent of the EU imports from Mediterranean countries of fruits, vegetables, processed fruits and vegetables, and oils. Table 4 contains the percentage of the Mediterranean exports to the EU for each sub category of fruits, vegetables, and oils. It is clear that Turkey, Morocco, Tunisia, Israel, and Egypt are the most important countries. For olive oil, the only countries with significant exports to the EU are Tunisia and Turkey. Our olive oil analysis will focus on Tunisia. The only product important for Egypt is vegetables, and our analysis there will focus on fresh vegetables. For Morocco, Turkey, and Israel, the expert panels will cover both fruits and vegetables.

We will use the Delphi method for constructing different production and export scenarios using the expert panels. The justification of using this method stems *inter alia* from the fact that the continuous changes in the socio-economic environment, their complexity and the speed with which they take place make it very difficult to accept the *ceteris paribus* assumptions that are implicit in most quantitative methods. This procedure makes it

³ One study that used modeling tools exclusively (Lorca Corrons, 2000) employed export price elasticities generally in the range of -0.7-0.9. In our study, the implicit elasticities will be derived from the results of the expert panels.

Project acronym : EU-MED AGPOL

possible, *a priori*, to consider all the relevant factors and the way they combine, thus generating a judgement from an essentially systemic perspective.

The Delphi method aims to systematically structure the information provided by a pre-selected group of individuals on a complex problem, with a view to establishing consensus. This technique has been seen to be very useful in heuristic decision-making, and for clarifying complex, multi-dimensional problems.

In addition to the production potential assessment, we will conduct case studies of the agro-industrial sectors in three countries: Morocco, Turkey, and Tunisia. These case studies will evaluate the potential to expand value-added agro-industrial processing in each country using regional expertise and previous work done at IAMM/INRA on agro-industrial firms. These three countries constitute 98 percent of Mediterranean processed product exports to the EU. These case studies will help to complete the characterization for other Mediterranean countries. Finally, the analyses done for other Mediterranean countries will be reviewed by contacts and counterparts from those countries.

Table 4 : Share of Mediterranean Exports to the EU for each Product Category (1997-2000)

Country	Vegetables	Fruits	Oils	Processed Fruits and Vegetables
Turkey	21.50%	60.27%	9.53%	67.22%
Morocco	34.36%	15.49%	1.49%	17.18%
Israel	19.41%	16.00%	2.85%	13.70%
Tunisia	0.72%	4.00%	85.56%	0.23%
Egypt	15.93%	0.84%	0.22%	0.17%
Total	91.91%	96.59%	99.65%	98.49%

Sources COMEXT et Base MEDINA-Taragro INRA

6. Analysis using quantitative models

In this task we will make use of quantitative techniques (CAPRI and Mediterranean country models) to estimate possible changes in European imports and exports of agricultural commodities to Mediterranean countries. Because the possible changes in protection in some of the scenarios will be quite large and because fruits and vegetables are quite complicated, none of these models nor any models can be expected to accurately capture all the impacts of the trade liberalization. Nonetheless, the modeling tools will be useful in several respects:

- They will be quite helpful in capturing the impacts of increased EU exports to Mediterranean countries because the likely exports are crops already contained in the models with rich representation of current policies.
- CAPRI will be helpful in estimating budget impacts because it has an agricultural budget (EGGAF) module that can track changes in anticipated budget expenditures given that parameters are provided through the scenario definitions in task 5.

Project acronym : EU-MED AGPOL

- With additional inputs and specification CAPRI can provide some generalized impact information for fruits, vegetables, and olive oil. The medium and long-run export responses from the five major exporters considered in task 5 can be used to calibrate elasticities in the Mediterranean region of the CAPRI model.
- The country case study models for Turkey and Morocco will be useful in enriching the country specific analyses for those countries.

The following sections briefly describe the CAPRI and country case models to be used.

Brief description of CAPRI modeling system

The CAPRI modeling system is designed as a projection and simulation tool for the agricultural sector based on:

1. A **physical consistency framework**, covering balances for agricultural area, young animals and feed requirements for animals as well as nutrient requirement for crops, realized as constraints in the regional supply models. The market model ensures that fat and protein comprised in the milk delivered to dairies is equal to the fat and protein comprised in the processed dairy products.
2. **Economic accounting principles** according to the definition of the Economic Accounts for Agriculture (EAA). The model covers all outputs and inputs included in the national EAAs for the Member States, and the revenues and costs are broken down consistently to regions and production activities (see annex).
3. A **detailed policy description**. On the supply side capturing all relevant payment schemes with their respective ceilings. On the market side, it covers tariffs, intervention purchases and subsidized exports. The policy of non-EU regions is based on OECD PSE/CSE data bank.
4. **Behavioral functions** and allocation steering strictly in line with micro-economic theory. Functional forms are chosen to be globally “well-behaved,” allowing for a consistent welfare analysis.

The system was developed (1997-1999) by a network of European research institutions, mostly universities, funded as a cost share project under EU research framework programs. The system is applied to policy impact analysis in different fields, such as European dairy and sugar market reform options or the Mid-Term Review Proposal. These activities are partly funded by network institutions themselves, and partly funded directly by the European Commission. Another path of applications relates to agri-environmental analysis, with different projects currently either under way or in the pipeline.

The model incorporates supply and market modules, which are iteratively coupled. The supply module consists of 200 aggregate programming models covering EU 15, working with exogenous prices for each iteration. After being solved, the regional results – crop areas, herd sizes, input/output coefficients etc. – are aggregated to Member State level. Member State models with an identical structure as the regionalized models are then defined, and calibrated to the aggregated results. Next, young animal prices are determined by linking these Member State models. Afterwards, supply and feed demand functions of the market module are calibrated to prices of the current iteration and aggregated Member State results on feed use and supply, and the market model is solved. The producer prices at Member State, as calculated by the market module, drive the next iteration with the supply models.

Project acronym : EU-MED AGPOL

The market module of the CAPRI modeling system breaks down the world into 12 country aggregates (Table 5), each featuring systems of supply, human consumption, and feed and processing functions. Three blocks that are of particular interest for this project are the EU, East European candidate countries, and Mediterranean countries. This aggregation will greatly facilitate the quantitative analysis for this component of the project. The other regions will be needed in task 7, interaction with world markets.

The physical data of the model are based on time series from FAOSTAT (or EUROSTAT for EU Member States), where calibration techniques ensure closed balances in the base year, currently a three year average around 1998. *Policy instruments* in the market module include bilateral tariffs and Producer/Consumer Subsidy Equivalent price wedges (PSE/CSE) as well as Tariff Rate Quotas (TRQs). For the EU, intervention sales and subsidized exports under WTO commitment restrictions are implemented as well. Data on policy instruments for OECD countries stem from OECD PSE/CSE calculations. Policy parameters for non-OECD countries are currently compiled from different sources, notably WTO schedules and the GTAP data base.

Table 5 : Regional Disaggregation of the Market Module⁴

Country aggregate	Code
European Union, broken down into Member States	EU000
East European Candidate Countries	CEE
Mediterranean countries	MED
United States of America	USA
Canada	CAN
Australia & New Zealand	ANZ
Free trade developing (CAIRNS group)	CAD
High tariff traders (Japan, Norway, Switzerland)	HIT
China	CHN
India	IND
Asian, Caribbean, Pacific developing countries	ACP
Rest of the world	ROW

In the course of this project, we will modify CAPRI to strengthen its functionality for the analysis to be conducted:

- Modify and enrich the CAPRI representation of the Mediterranean region
- Enrich the CAPRI model with information obtained from other tasks to the extent useful. In other words, we might obtain information from task 2 that could improve the Mediterranean supply elasticities. If so, that information will be included in the analysis.
- Use CAPRI to estimate changes in EU agricultural imports and exports from Mediterranean countries due to trade liberalization (these estimates will be used in conjunction with the results from the expert panels)
- Estimate production and income changes for European farmers and regions due to increased imports of Mediterranean products and increased EU exports of other agricultural products

⁴ A detailed description can be found in: C. Tritten, B. Henry de Frahan, W. Britz (2001): Regionalization of the Rest of the World Aggregate, CAPRI working paper 01-01, available on the project web site.

Turkey Ag Sector Model

The Turkish Agricultural Sector Model (TASM) model provides a consistent and integrated framework to evaluate potential developments in the Turkish agricultural sector. The model is a non-linear optimization model, which maximizes consumers' and producers' surplus.

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. The diversity in production points out an unusually interdependent production structure on the supply side. In addition, on the demand side, the regions compete with each other for access to the same national and foreign markets.

The model maximizes Marshallian surpluses and incorporates a technique known as Positive Mathematical Programming (PMP), to overcome the overspecialization problem in production by using the information provided by the actual actions taken by the farmers. It provides an internally consistent quantitative framework of analysis to study the impact of changes in resource prices, resource availabilities, policies, techniques of production, and economic growth on the location, production, consumption and price of agricultural commodities.

TASM is a sector-wide model in the sense that it describes total national supply (production and imports) and use (domestic demand for food, feed, and exports). The base period is 1997-99. The production side of the model is decomposable into submodels for each of four geographical areas. On the demand side, consumer behavior is regarded as price dependent, and thus market clearing commodity prices are endogenous to the model.

The most important features of the model are the following:

- i. The production side of the model is disaggregated to four regions (Coastal, Central, Eastern, and Southeastern Anatolia Project (GAP) Region) for the exploration of interregional comparative advantage for the policy impact analysis.
- ii. The crop and livestock subsectors are integrated endogenously, i.e. the livestock subsector gets inputs from crop production.
- iii. Trade policies are explicitly incorporated in the model and trade is allowed in raw and in raw equivalent form for processed products.

The objective function is quadratic in revenue and cost because it maximizes the area between linear demand and supply curves. The maximand consists of the sum of consumers' and producers' surplus plus net export revenue. The optimal solution entails equating supply to domestic plus foreign demand and prices to marginal costs for all commodities.

TASM contains more than 200 activities to describe the production of 50 commodities. Each production activity defines a yield per hectare for crop production, yield per head for livestock and poultry production. The crop activities use fixed proportion of labor, tractor power, fertilizers, seeds and seedlings. The livestock and poultry activities are defined in terms of energy. The relation between inputs and outputs are those which were observed on farms in each region, and not necessarily biological or economic optima.

The core of the model consists of the production activities and resource constraints. The commodities produced are distributed between different activities at the national level. First, there are domestic demand activities which are generated by linear demand curves. Domestic demand includes the domestic consumption of processed commodities in raw equivalent form. Second, there is feed demand for livestock and poultry activities from crop production activities. Third, the model allows export of commodities at exogenous prices both in raw and raw equivalent form for processed commodities. It is possible to augment the supply of commodities through import activities at exogenously determined prices.

The Turkish model will be used to quantify for Turkey the impacts of EU-Turkey liberalization scenarios developed in task 4. The results of this analysis will be fed into task 8.

Morocco CGE Model

The Morocco general equilibrium model is calibrated on 1997-98 data for Morocco. Using this model, it is possible to estimate both the direct and indirect effects of changes in policies and external prices. The model differs from previous CGE models of Morocco because of its richness in detail regarding agricultural commodities and the food processing sectors. Agricultural production is divided into six agro-ecological zones: favorable, intermediate, unfavorable west, unfavorable south, mountain, and desert. Within each zone, rainfed and irrigated agriculture are distinguished. Within the irrigated areas, there is gravity, aspersion, and large public irrigation schemes. In total, there are 20 agricultural commodities divided into 258 production activities.

To provide greater detail on sectors closely linked to agriculture, there are 13 agro-industrial activities. In the disaggregation, an effort was made to distinguish those activities having an interface through the world market, either through imports or exports. The rest of the economy is represented by six activities, which are services, chemical industry, petroleum, water, electricity, administration, and other non-agricultural activities. The model distinguishes between tradable and non-tradable goods, so that changes in policies or world prices can easily be handled by the analysis. For the rest of the model, the standard CGE structure is used.⁵

This model will be used in the same way as the Turkish model described above. Its richness in the food processing sectors will be particularly useful for the analysis of agro-industrial changes.

7. Delineate the major interactions with world markets and international negotiations

EU-Mediterranean trade negotiation and liberalization is not the only change occurring in world agricultural trade. WTO negotiations are progressing towards a targeted completion date in 2005. EU candidate countries will soon become part of EU 25. The United States is negotiating free trade agreements with countries around the world including some Mediterranean countries.⁶ Thus, we must understand the interactions between all these other changes in world markets and agreements and the EU-MED trade liberalization. For

⁵ Details are contained in a paper by Rachid Doukkali (2003).

⁶ The U.S. and Jordan have already completed a FTA, and negotiations are in progress in 2003 for a Morocco-U.S. FTA.

Project acronym : EU-MED AGPOL

example, Morocco exports significant quantities of fruit to Eastern EU candidate countries. Once they become members of the EU, Morocco will no longer have the same access to these markets. On the other hand, if Morocco negotiates a FTA with the U.S., some of its potential exports to the EU might end up in the U.S. Similarly, if Morocco has a FTA with the U.S., it might end up importing American wheat and meat instead of EU products.

On the other hand, the EU obtains fruits, vegetables, and oils from all over the world. Table 6 provides the top 20 exporters to the EU of fruits, vegetables, oils, and processed foods for the year 2000. In each category, countries not in the top 20 constitute less than 1 percent of EU imports. Five Mediterranean countries are in the top twenty exporters to the EU for vegetables: Morocco, Turkey, Israel, Egypt, and Cyprus. For fruits, Turkey, Israel, and Morocco make the list. For oils, it is only Tunisia and Turkey. Half the EU oil imports come from Indonesia and Malaysia, and that is mostly coconut and palm oil. For processed foods, the Mediterranean countries in the top 20 include Turkey, Morocco, and Israel. Hence, we must also consider other EU sources of these products, likely changes in their market environment, export potential, etc. All of these interactions must be taken into account to estimate the impacts on Europe of trade liberalization with Mediterranean countries.

We will approach this analysis using both the expert panels described above in task 5 and using the models described under task 6. Drawing information from both these sources, we will produce “most likely” impacts for each of the scenarios identified in task 4.

Table 6 : Top Twenty Exporters to the EU of Vegetables, Fruits, Oils, and Processed Foods for 2000

Vegetables			Fruits			Oils			Processed foods		
Thailand	1	12.67%	USA	1	11.47%	Indonesia	1	32.74%	Brazil	1	25.85%
Canada	2	10.76%	Turkey	2	10.55%	Malaysia	2	16.38%	Turkey	2	11.81%
China (PRC)	3	8.63%	South Africa	3	8.73%	India	3	7.24%	China (PRC)	3	7.69%
Morocco	4	8.22%	Costa Rica	4	6.43%	Philippines	4	6.41%	USA	4	7.61%
USA	5	7.06%	Ecuador	5	4.69%	Papua N Guinea	5	5.46%	Thailand	5	6.87%
Turkey	6	4.95%	Chile	6	4.64%	USA	6	4.49%	Poland	6	5.30%
Kenya	7	4.95%	Colombia	7	4.43%	Argentina	7	3.87%	Peru	7	3.09%
Israel	8	4.87%	New Zealand	8	3.56%	Tunisia	8	3.78%	Morocco	8	2.89%
Poland	9	4.77%	Argentina	9	3.51%	Senegal	9	3.30%	South Africa	9	2.76%
Hungary	10	3.70%	Poland	10	3.23%	Brazil	10	1.80%	Hungary	10	2.72%
Egypt	11	3.11%	Panama	11	3.01%	Canada	11	1.67%	Israel	11	2.59%
Argentina	12	3.08%	Brazil	12	2.99%	Norway	12	1.64%	Costa Rica	12	2.05%
Mexico	13	2.48%	Ivory Coast	13	2.92%	China (PRC)	13	0.99%	Kenya	13	2.05%
Peru	14	1.60%	Israel	14	2.84%	Ivory Coast	14	0.85%	Cuba	14	1.69%
New Zealand	15	1.41%	India	15	2.76%	Iceland	15	0.68%	Indonesia	15	1.59%
India	16	1.22%	Morocco	16	2.75%	Peru	16	0.66%	Philippines	16	1.42%
Cyprus	17	1.18%	Iran	17	2.15%	Japan	17	0.61%	India	17	1.37%
Russia	18	1.03%	Cameroon	18	1.62%	Ukraine	18	0.60%	Switzerland	18	1.26%
Yugoslavia	19	0.90%	Honduras	19	1.11%	Turkey	19	0.46%	Ecuador	19	1.13%
Zimbabwe	20	0.87%	Yugoslavia	20	0.93%	Hungary	20	0.45%	Australia	20	0.68%

Sources : TARIC (DG-UE)-TARAGRO (INRA).

8. Estimate the impacts of EU-Mediterranean trade liberalization

This task involves bringing together the expert judgment analyses (task 5), the modeling analyses (task 6), and the international linkages analysis (task 7) to produce a coherent and informed assessment of the changes in European agriculture likely to be induced by each liberalization scenario. The analysis will not take as given the results of either the models used or the expert panels but will incorporate elements from both to produce the most reasonable set of conclusions and will then test these conclusions with expert and user workshops. For MED countries other than the five major exporters, we will make projections based upon the analysis done for the five countries and model results. Some of the important outputs of the analysis are as follows:

- Changes in European production due to Mediterranean imports. This analysis will be done for each major production area for each important commodity.
- Changes in EU agricultural budgets under each scenario. These budget changes will be done using the CAPRI budget module and parameters from the scenario definitions.
- Changes in European agricultural incomes in fruit, vegetable, and olive oil production areas and in areas with increased exports to Mediterranean countries
- Description of social changes induced by trade liberalization in each of the major European production areas seriously impacted by liberalization

Once the preliminary results are completed, we will hold user workshops to communicate the preliminary results and receive feedback on those results. Taking that feedback into consideration, we will produce a final set of impact analyses. This set of results will become the major topic for a European-Mediterranean conference on the subject of the impacts of EU-Mediterranean trade liberalization. Of course, like for the other steps, all results will be available on the project WWW site.

9. Diffuse the results of the analyses through professional and public outlets

Policy research does not have impact unless it reaches those who make or influence policy. It also has greater impact if those players have been involved in advisory roles at all stages of the research. Through our research design, we have made sure that users and professionals in the field are incorporated in the research process. In both EU and Mediterranean countries, we will ensure that policy makers and staff have ample opportunity to participate and to comment on project progress.

We are equally committed to diffusing the results so that a wide audience of researchers, public, and press are informed. To that end, project professional staff will be available for seminar and conference presentations throughout the duration of the project. Also, the following actions will be taken:

- Papers will be submitted to major professional journals on the impact analyses conducted
- Public education materials will be prepared in the form of popular publications and press information materials
- A European conference will be held near the end of the project to communicate the results to both professional and popular audiences

- A project web site will be maintained throughout the project to make available data, results, and progress reports. The data on this web site will be in a relational data base searchable by external and internal users. In addition, working papers, completed reports, etc. will be available on the site.
- A summary volume will be produced containing the impact estimates plus a summary of the results from the earlier tasks.

7.5 Workpackage list

WP list (full duration of project)

WP No ⁷	WP title	Lead contractor No ⁸	Person-months ⁹	Start month ¹⁰	End month ¹¹	Deliverable No ¹²
1	Characterize the agricultural and agro-industry sectors in Mediterranean countries	1	21.5	1	12	D2-D7
2	Characterize the agricultural sectors in major European regions for production of fruits, vegetables, and olive oil	2	22.5	4	15	D8-D12
3	Describe and quantify the EU protection systems for fruits, vegetables, and olive oil	3	7.5	1	12	D13-D14
4	Develop specific liberalization scenarios	1	11.5	13	18	D15
5	Estimate the production and export potential for each Mediterranean country	1	16	19	27	D16-D21
6	Quantify possible changes in European and Mediterranean production, imports, and exports of important commodities	4	20	16	30	D22-D24
7	Interaction with world markets and international negotiations	1	20	16	30	D25
8	Estimate the changes in European production, incomes, ag budgets, social changes, and other impacts	1	25	22	33	D26-D27
9	Diffuse results	1	23	4	36	D1 and all reports
	TOTAL		167			

⁷ Workpackage number: WP 1 – WP n.

⁸ Number of the contractor leading the work in this workpackage.

⁹ The total number of person-months allocated to each workpackage.

¹⁰ Relative start date for the work in the specific workpackages, month 0 marking the start of the project, and all other start dates being relative to this start date.

¹¹ Relative end date, month 0 marking the start of the project, and all ends dates being relative to this start date.

¹² Deliverable number: Number for the deliverable(s)/result(s) mentioned in the workpackage: D1 - Dn.

7.6 Deliverables list

Deliverables list

Deliverable No	Deliverable title	Delivery date	Nature	Dissemination level
D01	Project Presentation	4	R	PU
D02	Plan for using and disseminating knowledge	6	R	PP
D03	Progress report to the European Commission	12	R	PP
D04	Progress report to the European Commission	24	R	PP
D05	Progress report to the European Commission and final plan for using and disseminating knowledge	36	R	PP
D1	Project Web site	4 - with frequent updating throughout the project	O	PU
D2	Characterization of the Moroccan Agricultural Sector with Special Emphasis on Fruits, Vegetables, and Processed Foods	4	R	PU
D3	Characterization of the Turkish Agricultural Sector with Special Emphasis on Fruits, Vegetables, Olive Oil, and Processed Foods	4	R	PU
D4	Characterization of the Tunisian Agricultural Sector with Special Emphasis on Olive Oil	6	R	PU
D5	Characterization of the Egyptian Agricultural Sector with Special Emphasis on Fruits and Vegetables	8	R	PU
D6	Characterization of the Israeli Agricultural Sector with Special Emphasis on Fruits, Vegetables, and Processed Foods	10	R	PU
D7	Characterization of Mediterranean Agriculture with Special Emphasis on Fruits, Vegetables, Olive Oil, and Processed Foods	12	R	PU
D8	Characterization of European Fruit Production and Markets	7	R	PU
D9	Characterization of European Vegetable Production and Markets	9	R	PU
D10	Characterization of European Olive Oil Production and Markets	11	R	PU
D11	Characterization of European Production and Consumption of Processed Fruits and Vegetables	13	R	PU
D12	Characterization of European Production and Consumption of Fruits, Vegetables, Olive Oil, and Processed Fruits and Vegetables	15	R	PU
D13	Description and Quantification of the EU Protection for Imported Fruits, Vegetables, Olive Oil, and Processed Foods from Mediterranean Countries	12	R	PU
D14	Description and Quantification of Mediterranean Country Protection of Imported Agricultural Commodities Important to the EU	12	R	PU

Deliverables list

Deliverable No	Deliverable title	Delivery date	Nature	Dissemination level
D15	Alternative Liberalization Scenarios for EU – Mediterranean Country Trade	18	R	PU
D16	Moroccan Production and Export Potential for Fruits, Vegetables, and Processed Foods – An Expert Panel Analysis	19	R	PU
D17	Turkish Production and Export Potential for Fruits, Vegetables, Olive Oil, and Processed Foods – An Expert Panel Analysis	20	R	PU
D18	Tunisian Production and Export Potential for Olive Oil – An Expert Panel Analysis	21	R	PU
D19	Egyptian Production and Export Potential for Fruits and Vegetables – An Expert Panel Analysis	23	R	PU
D20	Israeli Production and Export Potential for Fruits, Vegetables, and Processed Foods – An Expert Panel Analysis	25	R	PU
D21	Mediterranean Production and Export Potential for Fruits, Vegetables, Olive Oil, and Processed Foods	27	R	PU
D22	Impacts of Alternative Trade Liberalization Scenarios on Turkish Agriculture with Special Emphasis on Fruits, Vegetables, Olive Oil, and Processed Food Products	28	R	PU
D23	Impacts of Alternative Trade Liberalization Scenarios on Moroccan Agriculture with Special Emphasis on Fruits, Vegetables, and Processed Food Products	29	R	PU
D24	Quantitative Assessment of EU-Mediterranean Trade Liberalization Using the CAPRI Modeling System	30	R	PU
D25	Interaction and Linkages Between EU – Mediterranean Trade and World Markets and Multi-lateral and Bi-lateral Negotiations	30	R	PU
D26	Conference on the Impacts of EU – Mediterranean Trade Liberalization	34	R	PU
D27	Analysis of EU – Mediterranean Trade Liberalization – How Would the Agricultural Sectors and Economies Be Changed?	36	R	PU

7.7 WP descriptions

WP1

WP number	1	Start date or starting event:						1 January 2004			
Participant id	I A M M	ENS AM	INRA	IAP	CSIC	MET U	I A V	IO	UC	TOTA L	
Person-months per participant	1 0 5	1			1	3	2	2	2	21.5	

Objectives

To characterize the agricultural production, processing, distribution, and retail systems in the Mediterranean countries

Description of work

The first task is to characterize the agricultural and agro-industrial sectors in the Mediterranean countries, particularly as relevant to fruits, vegetables, and olive oil. That description will encompass the following elements as requested in the FP6 Detailed Task Description: natural endowment; farm structure; employment; farm capital and investment; rural infrastructure; transport and marketing systems; key characteristics of the food processing, distribution, and retailing systems; production and consumption levels and trends; yields and intermediate output use; and price levels. We will go beyond these basic elements and create useful indicators illustrating the relative importance of fruits, vegetables, and olive oil in the national economy and exports for Mediterranean countries. Time series of these indicators will be developed so that trends can be discerned. We will conduct analysis to explain trends that appear to be important. We will also cover the entire agro-industrial sector.

This data tasks will be accomplished primarily with secondary data; however, all results will be verified by contacts and counterparts in the Mediterranean countries. Once the reports, data sets, and indicators are completed for each Mediterranean country, reports will be published and all materials will be available on the project WWW site.

Deliverables

The deliverables will include reports for Morocco, Turkey, Egypt, Tunisia, and Israel, plus a comprehensive report covering these countries and all the other Mediterranean countries included in this study. The data in these reports plus the reports themselves will be mounted on a web site and be available as each report is completed.

Milestones and expected result

We will characterize the agricultural sectors in detail for each of the five countries that together represent more than 90 percent of EU fruit, vegetable, and olive oil imports. In addition, we will

Project acronym : EU-MED AGPOL

produce a summary report covering all Mediterranean countries. That report also will contain chapters on each of the major products such as tomatoes, potatoes, citrus, olive oil, etc.

These data and reports will be used as inputs in the analysis that follows in the course of the study.

WP2

WP number	2	Start date or starting event:						1 January 2004		
Participant id	I A M M	ENS AM	INRA	IAP	CSIC	MET U	I A V	IO	UC	TOTA L
Person-months per participant	3 . 5	8			11					22.5

Objectives

To characterize the agricultural production sub-sectors in major European regions for production of fruits, vegetables, and olive oil

Description of work

At the same time task 1 is in progress on Mediterranean countries, task 2 will be performing essentially the same analysis for major European regions for fruits, vegetables, and olive oil. Here again, we will rely on data sources from public and international organizations, producer associations, and private sources. We will draw upon resources and expertise from all the major producing regions in Europe (especially Spain, Portugal, France, Italy, and Greece).

Olive oil is a particularly interesting market because until recently the Mediterranean basin represented 95% of the production and 85% of the consumption worldwide. In other regions, there were widely available cheaper substitute oils. However, recently with the popularity of the "Mediterranean diet" and the associated health benefits of olive oil, the market for oils is becoming much more segmented. Olive oil is also important in EU agricultural policy. The Producer Subsidy Equivalent (PSE) for EU olive oil was about 50% estimated from 1998 data. Most of this subsidy is classified as *Amber Box*, so it will be an important issue in future trade negotiations.

In tasks 1 and 2, we will also use the Marketing Chain (Analyse de Filière) approach for selected chains in order to take into account not only the global aggregates, but also the role and dynamics of institutions and economic agents involved in the whole food chain (producers, manufacturers, distributors, exporters/importers, consumers). We will collect data on major food industries such as value added in the sector, number of enterprises, number of employees, profitability, foreign capital, etc., to develop a good understanding of the sub-sector. The supply chains will no doubt involve interactions on both sides of the Mediterranean.

Deliverables

The reports for this task will be produced by group of products plus one summary volume. There will be one report on European fruit, vegetables, olive oil, and processed food products that could compete with Mediterranean products. Thus there will be four product group reports plus a summary report covering all the products and all production regions for the EU.

Project acronym : EU-MED AGPOL**Milestones and expected result**

This task will provide the detailed description of European production of fruits, vegetables, olive oil, and processed products. That information will serve as the point of departure for the analysis of impacts on the EU of trade liberalization with the Mediterranean countries.

WP 3

WP number	3	Start date or starting event:						1 January 2004		
Participant id	I A M M	ENS AM	INRA	IAP	CSIC	MET U	I A V	IO	UC	TOTA L
Person-months per participant	0 . 5		7							7,5

Objectives

To describe and quantify the EU protection systems for fruits, vegetables, and olive oil as well as Mediterranean systems for cereals, meats, and milk products

Description of work

Trade liberalization agreements between the EU and Mediterranean countries could result in major changes in European protection of fruits, vegetables, and olive oil. Protection of fruits and vegetables in Europe is unusually complex. In order to analyze the impacts of changes in EU policies for these commodities, we must have a comprehensive picture of the protection now in force between the EU and Mediterranean partners. The EU has a number of preferential agreements with Mediterranean countries, but the agreements may vary by commodity and country. To undertake this analysis, we will make use of the TARIC (Directorate General for Taxation-EU) data base. This is a relational data base containing the tariff and non-tariff barriers and the measures and rules for their application. This data base serves as the reference point for European Union member states and is updated constantly as needed. The nomenclature used for tariffication is much more complex than that used for analyzing trade flows. The additional specificity sometimes is related to quality, but may be linked to other characteristics as well such as seasonality or entry price. These elements are of great importance in understanding EU protection, especially for fruits and vegetables. These considerations lead us to examine in addition to the rules actually applied (TARIC), the conditions of effective use of the rules by importers. This analysis will be done by treating information on Single Administrative Declarations (SAD) from the customs office (Domain Comext – Taric (Eurostat)). In addition to quantifying the effective tariffs in place, we will also summarize important regulations that translate to non-tariff barriers.

In addition to handling the important fruits, vegetables, and olive oil from Mediterranean countries, we will also conduct the same analysis for commodities likely to be important Mediterranean imports from the EU. That is, we will quantify the current protection levels for EU exports of cereals, meats, milk, etc. to the Mediterranean countries. We will also collect information on Producer Support Equivalent (PSE) and Aggregate Measure of Support (AMS) indicators of domestic support provided by the EU for commodity production.

Deliverables

The two deliverables will be a report and data set containing a complete explanation and quantification of the protection measures in place for the major fruit, vegetable, oil, and processed food products from each of the five important Mediterranean exporting countries and another giving the MED protection of commodities important to the EU. This information will be available on the project web site as well as in report form.

Project acronym : EU-MED AGPOL

Milestones and expected result

The expected result is the deliverable described above, which will represent the point of departure for the creation of liberalization scenarios in task 4.

WP 4

WP number	4	Start date or starting event:						1 January 2005			
Participant id	I A M M	ENS AM	INRA	IAP	CSIC	MET U	I A V	IO	UC	TOTA L	
Person-months per participant	3	1	1		5	1	0 . 5			11,5	

Objectives

To develop three realistic liberalization scenarios ranging from small changes to totally free trade

Description of work

In this task, we will develop the liberalization scenarios to be used to estimate quantitatively and qualitatively the production, income, budget, and social impacts of EU-MED trade liberalization. These scenarios will suppose concessions to be made both by the EU and the Mediterranean countries. The point of departure for developing the liberalization scenarios will be the work in task 3 that delineates the current situation for all the important agricultural products traded or tradable between the EU and Mediterranean countries. We will hold user workshops to help develop the scenarios to be tested. Participants in the workshops will include EC staff, political representation of different positions regarding EU-MED trade liberalization, Mediterranean country participants, and project staff. While we will welcome input from all parties, it is important that the project team make the final decisions on the scenarios to be used, so that independence of the work from political factions can be maintained.

We expect to create three scenarios, one of which would be a free trade agreement in effect by the end of the ten year transition period. The other two scenarios would maintain certain levels or types of protection both by the EU and Mediterranean countries. The scenarios other than totally free trade are likely to be a complex mixture of changes in tariffs, quotas, minimum import prices, and seasonality rules. For example, if minimum import price falls or is eliminated, there might be greater potential for MED exports but at a lower price. If tariffs are reduced, the effective price received for MED exports would increase. For each product and country, the liberalization scenario as compared to the base situation can be viewed as an effective change in price (and other rules), which then is used in task 5 to estimate export changes. The liberalization scenarios also will need to include compensation measures in order to be able to calculate budgetary costs of the changes.

Deliverables

The deliverable on this task is a paper explaining in detail the contents of the liberalization scenarios that were developed. This information in this paper will be used in tasks 5 and 6 to conduct the panel and quantitative analyses.

Project acronym : EU-MED AGPOL

Milestones and expected result

The liberalization scenarios will have been developed and published by 1 April 2005. They become an input to the analysis in the rest of the study.

WP 5

WP number	5	Start date or starting event:						1 July 2005		
Participant id	IAM M	EN SA M	INR A	IAP	CSI C	ME TU	IAV	IO	UC	TOTAL
Person-months per participant	6,5	2				3	1,5	1,5	1,5	16

Objectives

To estimate the production and export potential for Mediterranean agricultural systems within three years and ten years using expert panels

Description of work

We will select the most important fruit and vegetable products for each major exporting country using the data from task 1, focusing on the five countries that account for about 95 percent of the EU imports from Mediterranean countries of fruits, vegetables, processed fruits and vegetables, and oils. We will assemble expert panels in these countries and ask them to provide their assessment of the production potential for each crop or product. CIHEAM/IAMM has a large and effective network of contacts throughout the Mediterranean region. We will draw upon that network plus the expertise that exists in the partner institutions to conduct these analyses.

The panel work will proceed in two phases. First, the panels will be asked to estimate the production growth potential for each of the major crops important for the country. They will be told not to consider market constraints. In the second phase, the panels will be provided the liberalization scenarios developed in task 4. Then they will be asked to estimate what fraction of the previously estimated production growth might be exported to the EU under each of the liberalization scenarios. These export changes and the scenario definitions together define the expected export response to the protection changes. The production potential will be estimated for a medium term (3 year) horizon and a long term horizon of ten years. We will use the Delphi method for constructing different production and export scenarios using the expert panels. This procedure makes it possible, *a priori*, to consider all the relevant factors and the way they combine, thus generating a judgement from an essentially systemic perspective. The Delphi method aims to systematically structure the information provided by a pre-selected group of individuals on a complex problem, with a view to establishing consensus.

In addition to the production potential assessment, we will conduct case studies of the agro-industrial sectors in Morocco, Turkey, and Tunisia. These case studies will evaluate the potential to expand value-added agro-industrial processing in each country using regional expertise and previous work done at IAMM/INRA on agro-industrial firms.

Deliverables

There will be one report for each of the major exporting countries (Morocco, Turkey, Tunisia, Egypt, and Israel), one report covering processed food export potential in Morocco, Turkey, and Tunisia, and one summary report covering export potential for the Mediterranean region.

Project acronym : EU-MED AGPOL

Milestones and expected result

The panel results will be published as each panel is completed. All the panel reports plus the other reports will have been completed by 1 January 2006.

WP 6

WP number	6	Start date or starting event:						1 April 2005		
Participant id	IAM M	EN SA M	INR A	IAP	CSI C	ME TU	IAV	IO	UC	TOTAL
Person-months per participant	2,5		2	9		5	0,5	0,5	0,5	20

Objectives

Using quantitative tools available, to develop estimates of possible changes in European and Mediterranean production, imports, and exports of agricultural commodities

Description of work

In this task we will make use of quantitative techniques (CAPRI and Mediterranean country models) to estimate possible changes in European imports and exports of agricultural commodities to Mediterranean countries. Because the possible changes in protection in some of the scenarios will be quite large and because fruits and vegetables are quite complicated, none of these models nor any models can be expected to accurately capture all the impacts of the trade liberalization. Nonetheless, the modeling tools will be useful in several respects:

- They will be quite helpful in capturing the impacts of increased EU exports to Mediterranean countries because the likely exports are crops already contained in the models with rich representation of current policies.
- CAPRI will be helpful in estimating budget impacts because it has a FEOGA budget module that can track changes in anticipated budget expenditures given that parameters are provided through the scenario definitions in task 5.
- With additional inputs and specification CAPRI can provide some generalized impact information for fruits, vegetables, and olive oil. The medium and long-run export responses from the five major exporters considered in task 5 can be used to calibrate elasticities in the Mediterranean region of the CAPRI model.
- The country case study models for Turkey and Morocco will be useful in enriching the country specific analyses for those countries.

Deliverables

This task will have three deliverables:

- The report containing the analysis using the CAPRI model
- A report containing analysis from the CGE model for Morocco to capture whole economy effects, commodity changes, plus food processing impacts
- A report based upon the analysis using the Turkey agricultural sector model to capture the changes throughout the agricultural system in Turkey

Milestones and expected result

These reports will all be completed by 31 March 2006. Each will contain useful information in their own right, and they will serve as input to the final analysis in task 8.

WP 7

WP number	7	Start date or starting event:						1 April 2005			
Participant id	I A M M	ENS AM	INRA	IAP	CSIC	MET U	I A V	IO	UC	TOTA L	
Person-months per participant	1 1	1		3	5					20	

Objectives

To determine the kinds and importance of interactions with other world markets and international trade negotiations

Description of work

EU-Mediterranean trade negotiation and liberalization is not the only change occurring in world agricultural trade. WTO negotiations are progressing towards a targeted completion date in 2005. EU candidate countries will soon become part of EU 25. The United States is negotiating free trade agreements with countries around the world including some Mediterranean countries. Thus, we must understand the interactions between all these other changes in world markets and agreements and the EU-MED trade liberalization. For example, Morocco exports significant quantities of fruit to Eastern EU candidate countries. Once they become members of the EU, Morocco will no longer have the same access to these markets. On the other hand, if Morocco negotiates a FTA with the U.S., some of its potential exports to the EU might end up in the U.S. Similarly, if Morocco has a FTA with the U.S., it might end up importing American wheat and meat instead of EU products.

On the other hand, the EU obtains fruits, vegetables, and oils from all over the world. We must also consider other EU sources of these products, likely changes in their market environment, export potential, etc. All of these interactions must be taken into account to estimate the impacts on Europe of trade liberalization with Mediterranean countries.

We will approach this analysis using both the expert panels described above in task 5 and using the models described under task 6. Drawing information from both these sources, we will produce "most likely" impacts for each of the scenarios identified in task 4.

Deliverables

This task will produce one report that will contain a description of the interactions anticipated with other world markets plus a description of the linkages among the EU-MED trade liberalization and WTO negotiations and other bi-lateral or multi-lateral negotiations or agreements. That report will stand on its own plus serve as input into task 8.

Project acronym : EU-MED AGPOL

Milestones and expected result

The report for this task will be produced no later than 31 March 2006 and will contain the results described above.

WP 8

WP number	8	Start date or starting event:					1 October 2005			
Participant id	I A M M	ENS AM	INRA	IAP	CSIC	MET U	I A V	IO	UC	TOTA L
Person-months per participant	1 1	2	1	2	8	1				25

Objectives

To estimate the changes in European production of fruits, vegetables, olive oil, and other crops, agricultural incomes, EU budgets, social impacts, and other changes

Description of work

This task involves bringing together the expert judgment analyses (task 5), the modeling analyses (task 6), and the international linkages analysis (task 7) to produce a coherent and informed assessment of the changes in European agriculture likely to be induced by each liberalization scenario. The analysis will not take as given the results of either the models used or the expert panels but will incorporate elements from both to produce the most reasonable set of conclusions and will then test these conclusions with expert and user workshops. For MED countries other than the five major exporters, we will make projections based upon the analysis done for the five countries and model results. Some of the important outputs of the analysis are as follows:

- Changes in European production due to Mediterranean imports. This analysis will be done for each major production area for each important commodity.
- Changes in EU agricultural budgets under each scenario. These budget changes will be done using the CAPRI budget module and parameters from the scenario definitions.
- Changes in European agricultural incomes in fruit, vegetable, and olive oil production areas and in areas with increased exports to Mediterranean countries
- Description of social changes induced by trade liberalization in each of the major European production areas seriously impacted by liberalization

Once the preliminary results are completed, we will hold user workshops to communicate the preliminary results and receive feedback on those results. Taking that feedback into consideration, we will produce a final set of impact analyses. This set of results will become the major topic for a European-Mediterranean conference on the subject of the impacts of EU-Mediterranean trade liberalization. As for the other steps, all results will be available on the project web site.

Deliverables

From this task, we will produce the main project report, which likely will be a book covering the analysis conducted throughout the project including the conclusions reached in this task on the impacts of trade liberalization on the European Union.

Project acronym : EU-MED AGPOL**Milestones and expected result**

The work on this task will be completed by 30 June 2006, and the book is expected to be completed by 30 September 2006.

WP 9

WP number	9	Start date or starting event:						1 April 2004		
Participant id	I A M M	ENS AM	INRA	IAP	CSIC	MET U	I A V	IO	UC	TOTA L
Person-months per participant	1 8			1		1	1	1	1	23

Objectives

To diffuse the results of the research as widely as possible and throughout the duration of the project

Description of work

Policy research does not have impact unless it reaches those who make or influence policy. It also has greater impact if those players have been involved in advisory roles at all stages of the research. Through our research design, we have made sure that users and professionals in the field are incorporated in the research process. We are equally committed to diffusing the results so that a wide audience of researchers, public, and press are informed. At a minimum, the following actions will be taken:

Papers will be submitted to major professional journals on the impact analyses conducted

- Public education materials will be prepared in the form of popular publications and press information materials
- A European conference will be held near the end of the project to communicate the results to both professional and popular audiences
- A project WWW site will be maintained throughout the project to make available data, results, and progress reports.
- A summary volume will be produced near the end of the project.

Deliverables

Since this task is the publication task, it involves all the paper and WWW deliverables to be produced on all the other tasks plus the conference likely to be held in September 2006.

Milestones and expected result

The results of this task will be a significantly improved understanding on the part of public officials and citizens of the impacts on the EU of trade liberalization with Mediterranean countries.

8. Project resources and budget overview

8.1 STREP Project Effort Form

Project acronym : EU-MED AGPOL

STREP Project Effort Form
Full duration of project
(person-months for activities in which partners are involved)

	Partner 1 CIHEAM -IAMM	Partner 2 ENSAM	Partner 3 INRA	Partner 4 IAP	Partner 5 CSIC	Partner 6 METU	Partner 7 IAV	Partner 8 IO	Partner 9 UC	TOTAL PARTNERS
Research/innovation activities										
WP 1 : Characterize the agricultural and agro-industry sectors in Mediterranean countries	10.5	1			1	3	2	2	2	21.5
WP 2 : Characterize the agricultural sectors in major European regions for production of fruits, vegetables, and olive oil	3.5	8			11					22.5
WP 3 : Describe and quantify the EU protection systems for fruits, vegetables, and olive oil	0.5		7							7.5
WP 4 : Develop specific liberalization scenarios	3	1	1		5	1	0.5			11.5
WP 5 : Estimate the production and export potential for each Mediterranean country	6.5	2				3	1.5	1.5	1.5	16
WP 6 : Quantify possible changes in European and Mediterranean production, imports, and exports of important commodities	2.5		2	9		5	0.5	0.5	0.5	20
WP 7 : Interaction with world markets and international negotiations	11	1		3	5					20
WP 8 : Estimate the changes in European production, incomes, ag budgets, social changes, and other impacts	11	2	1	2	8	1				25
WP 9 : Diffuse results	18			1		1	1	1	1	23
Total research/innovation	66.5	15	11	15	30	14	5.5	5	5	167
Management activities										
Total management	18					1				19
TOTAL ACTIVITIES	84.5	15	11	15	30	15	5.5	5	5	186

