



Thinking Ahead
for the Mediterranean



MEDPRO - Prospective Analysis for the Mediterranean Region

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SESSION 1: PRESENTATION OF EU FORWARD LOOKING ACTIVITIES

European Commission's Scientific Officer Dr. Domenico Rossetti Di Valdalbero opened the scientific workshop with a brief presentation of EU's forward looking activities, their history and MEDPRO's positioning within these initiatives. In 1989, E.C. President J. Delors created the "Cellule de Prospective" an interdisciplinary "think tank" composed of Member States' (MS) representatives tasked with conducting prospective studies on diverse aspects of EU integration in collaboration with research centers and organizations specialized in long term planning. E.C. Presidents R. Prodi and J.M Barroso successively renamed the body- today known as the Bureau of European Policy Analysts (BEPA)- and expanded its mandate to include wider economic, political and societal foresight analyses. These activities translate into long term policy orientations such as the EU Budget, the EU 2020 Strategy and Commission Communications such as the Transport 2050 Communication. 7th Framework Programme Social Sciences and Humanities Program (FP7 SSH) including foresight analyses are also key components of EU's forward looking activities*.

As far as the Mediterranean is concerned, besides MEDPRO, the region has been the focus of the EUROMED 2030 Expert Group. Published weeks before the onset of the Arab Spring, the report** called for a unified policy towards the region and highlighting that socioeconomic development was an imperative for the Southern Mediterranean countries to reduce risks for the neighboring countries. As entrenched authoritarianism and poor socioeconomic conditions are at the roots of the Arab Spring, EU's policies towards the region are now deeply being questioned and the design of future policy options for mutual benefit requires going beyond conventional thinking more than before, a challenge MEDPRO strives to meet.

*For more information on FP7 SSH research projects, see: <http://cordis.europa.eu/fp7/ssh/>

** For a copy of the report, which was published in December 2010, see ftp://ftp.cordis.europa.eu/pub/fp7/ssh/docs/euromed2030-long-term-challenges_en.pdf.



**SESSION 2: MEDPRO
REFERENCE SCENARIO,
QUALITATIVE ALTERNATIVE
SCENARIOS AND SCENARIOS
FOR COOPERATION WITH THE
EU**

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Dr. Zoi Vrontisi (ICCS/NTUA) followed the discussion by presenting the preliminary results of the GEM-E3 model under the reference scenario. The GEM-E3 initial version has been adapted to the MED11 countries to comply with MEDPRO's objective to provide quantitative scenarios under the qualitative framework developed originally by Dr. Carlo Sessa (ISIS).

Based on 2004 data incorporated in MEDPRO's economic and structural database and under the assumption of continuing 2004 trends in 2030 under a number of assumptions, the initial results for the reference scenario show that the MED11* will account for 3% of world's GDP, up from its share of 2% in 2010. Substantial disparities will exist between countries. For example, Israel and Turkey will represent 90% of the region's total wealth. Job creation will still represent a daunting challenge, with unemployment levels remaining high in most of the region. Regarding international trade, under the reference scenario hydrocarbon producers Algeria and Libya will remain as net exporters, while the other countries will reach a balanced external trade position. This reference scenario is a baseline scenario: it provides hypothetical results which need to be taken with care. The analysis will emphasize deviations as compared to these baseline scenario rather than absolute values and some elements in the reference model will be fine tuned to make simulations under the qualitative scenarios.

After the presentation of the first quantitative outputs of the project, Dr. Carlo Sessa presented an updated version of the qualitative framework developed for MEDPRO's foresight analysis. Discussions with the project's researchers shaped the four quadrant conceptual framework since MEDPRO's inception and the uprisings in the Southern Mediterranean highlighted both its relevance and the need to fine tune some of its features**. For example, preliminary versions of the qualitative framework assumed in a first quadrant the continuation of 2010 trends as a business as usual scenario. However, the Arab Spring uprisings showed the unsustainability of such scenario. The first quadrant was hence redefined as to reflect the starting point of Euro-Mediterranean relations in 2010. Second, the upper side of the framework's vertical axis was initially labeled as "Union" to reflect strong cooperation between the EU and the MED11. Since no EU-membership prospects are given to the MED11, the axis will refer to integration rather than membership.

Starting from the reference scenario which prevailed until 2010 the qualitative framework foresees three different futures for the region driven by the success in anchoring in sustainable patterns of development and depth of Euro-Mediterranean cooperation. Three transitions from the "business as usual" or the reference scenario (Quadrant 1, Q1) are thus envisaged, each leading to a different future:

*Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco, Palestine, Syria, Tunisia and Turkey

** For previous discussions on the Sessa framework, see the MEDPRO Rome meeting event report: <http://www.medpro-foresight.eu/system/files/MEDPRO%20Rome%20meeting%20report.pdf>



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1. The Green Transition (Q2) scenario foresees the EU and the MED11 creating a common market and framework of action on a wide range of issues such as R&D, migration, trade, environment etc. Under this scenario, the MED11 will eventually become members of the European Economic Area (EEA) of which Switzerland and Norway are part.

2. On the other hand, the Blue Transition (Q3), will result in a set of multilateral and differentiated agreements between Mediterranean countries and the EU. MED11 countries will have fostered integration between themselves and with the EU leading to a future based on co-development in a number of areas such as trade, migration, etc. The region will have anchored in sustainable patterns of development and Southern Mediterranean countries will have developed relations with both the EU and other geopolitical actors such as Gulf Cooperation Council countries^{***}, Russia, China etc.

3. Under the Red Transition (Q4), no sustainable pattern of development will be reached, and Euro-Mediterranean relations will be disregarded. Cooperation and political dialogue will first stagnate to then vanish and the lack of interest of the EU in its southern shore will gradually transform the Mediterranean into a border between two clashing civilizations. Under this “threats” scenario, tensions will be rife and could potentially lead to conflicts. . Initially, the framework foresaw a “lost opportunity” scenario, but to reflect nuances in cooperation in the other quadrants, such denomination will be removed.

All three scenarios result from the combination of sustainability patterns and cooperation with the EU and are analyzed in the paper by Ayadi and Sessa^{****}.

SESSION 3: WP2 - GEOPOLITICS AND GOVERNANCE: TRENDS AND FINAL SCENARIOS

Silvia Colombo (Istituto Affari Internazionali, IAI) started the session by presenting the conclusions on the WP2 research in the wake of the Arab Spring. The uprisings in the Southern Mediterranean have pointed at the long lasting confusion in the region between sustainability and stability, where the prevailing status quo until 2011 was characterized by deeply rooted authoritarianism and rampant inequalities and poverty.

Following the recent events, it is possible to anticipate an increasingly polarized region with countries engaging in different paths after their ruler’s overthrow. In particular, it remains to be seen whether the uprisings will succeed in genuinely changing regimes. For example, in Tunisia, a growing discontent among the people could endanger a political transition that seems otherwise promising. Similarly, Egypt, which has not yet succeeded to change its constitution, presents a less bright picture with signals pointing at a slow transition process, possibly going back to authoritarian rule. In Morocco, where the King Mohammed VI has initiated a constitutional reform through a largely top-down process, a “bon usage du néo autoritarisme” may be maintained.

^{***} Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates

^{****}<http://www.medpro-foresight.eu/publication/what-scenarios-euro-mediterranean-2030-wake-post-arab-spring>



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Lebanon is trapped in chronic instability, and Syria's dramatic situation shows no signals of enhancement with growing politically orchestrated violence and an unstructured and fractured opposition. The situation in Israel and Palestine is not better, with Tel Aviv facing growing regional isolation and the Palestinian Authority pressured for requesting statehood at the United Nations. The status quo thus prevailing seems unsustainable.

SESSION 4: WP3 & WP7 – DEMOGRAPHY, HUMAN CAPITAL, INEQUALITY, & MIGRATION: FACTORS, TRENDS, PROJECTIONS, AND SCENARIOS

Dr. George Groenewold (NIDI) started the session by presenting the outcome of WP3 on the demographic and health status scenario projections for the MED-11 countries. A key assumption for building the distinct scenarios, following the Sessa framework, is that an increase in wealth is assumed to co-exist with regional cooperation. In this manner, more optimistic wealth conditions are achievable when either (i) integration with the EU countries takes root (Q2, i.e. "Upside scenario"); or (ii) the development of an independent Pan-Arab MED-Alliance political and economic system (Q3, i.e. "Divergent scenario"). These developments have different impact on the fertility, mortality and migration conditions in each country. Fertility will continue to decline in all scenarios except the stress scenario (Q4, i.e. "Threats scenario"); however, it will drop more rapidly in the case of integration with the EU (Q2), due to a form of a shift in cultural preferences and fertility attitudes. In turn, the protection of family ties and the limited introduction of unhealthy Western-style dietary habits contribute to a lower mortality under the Med-Alliance scenario (Q3). Meanwhile, a total disruption of the health care infrastructure and support systems lowers health status and leads to a massive emigration under the stress conditions (Q4). The assumptions on fertility, life expectancy, and migration reflect these "stories", resulting in quantitative scenario projections for each MED-11 country for the years 2010-2050. An overview of the main quantitative results shows that aging-related problems will become more felt in most countries in the years 2030 and beyond under the more optimistic scenarios (Q2 and Q3), mostly due to improving health status and dropping fertility.

Dr. Boris Najman (CASE) followed up, giving an overview of the preliminary results on the migration scenarios. The main explanatory factors for migration are declared as income, political conditions, presence of conflicts, and the quality of institutions. Income in particular is a non-linear determinant since the very poor cannot afford to migrate while those living in richer/well-developed countries have fewer reasons to leave the country. Institutional quality also matters, depending highly on the differences between the educational quality, health-care system, and judiciary system of the recipient and sending countries.



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Likewise, countries with higher democratic accountability tend to attract migrants more, explaining the recent flux of migration within the region. Preliminary conclusions also show that migration restrictions have generated more illegal migration. The four scenarios that will be produced will consider the determinants to reach specific scenarios.

Dr. Ola el Khawaga (FEPS) gave the third presentation in the session, providing the overall trends and an initial outlook of the scenarios on education in the MED-11 countries. To a large extent, secondary enrollment rates have increased in most countries in the region, with the exception of Libya. In most countries in the region, the bulk of public expenditures on education are directed towards primary and secondary education. In some countries, such as Egypt, Jordan, Lebanon, and Turkey, despite high enrollment rates, many (especially women) do not participate in the employment pool. Moreover, youth unemployment rates remain high among the more educated university graduates, which worsen to the labor market problems in most countries. The FEPS team will expand upon the stock-taking exercise to provide alternative scenarios in education and social protection in the MED-11 region.

Fourth presentation in the session was Dr. Stella Tsani's (ICCS/NTUA) results on the potential of female labor force participation in the economic development in the MED-11 countries. Although female labor force participation may potentially be determined by a number of factors, the current paper relies only on income levels. The results confirm the presence of a U-shaped relationship, implying that participation rates are lowest for middle-income countries, where women can afford to stay at home and do not have the adequate opportunities or incentives to work, i.e. lacking education, labor market opportunities, etc. The results show that further economic growth in the MED-11 under the "alternative scenario" will diminish female participation rates further, with only marginal (feedback) impacts on economic development. The empirical assessment will be revised to consider additional factors that may play a role, such as fertility rates, women's education levels, market conditions, and the availability and accessibility of child care.

The fifth and final presentation for the day was given by Dr. Emrah Arbak (CEPS) on measuring human capital in the MED-11 region. In a nutshell, the human capital measure is a population weighted average of the salaries of individuals with different education and experience level, measured as a multiple of the "base salary" in each country, i.e. the earnings of a person with no education and no experience.



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The estimation of private returns to education and experience relies on a global micro dataset (i.e. World Values Survey and European Values Survey), which covers a substantial proportion of the Mediterranean region for the years 1999-2002. In addition, population education attainment levels are used to construct the aggregate stock of human capital in each country in the region. The results show that human capital levels are generally very low in the region as a whole, with the exception of Israel and Turkey. Most strikingly, in some countries, such as Algeria, the returns to education are practically zero, implying that those with very low or no education are able to obtain wages that comparable with those with a university degree. Assuming that relative wages remain constant, the results imply that changing attainment levels will only have a minor influence in countries with lower returns. The final draft of the paper will also consider the impact of youth unemployment, which will most likely diminish the human capital stocks in most of the MED-11 countries, as well scenarios on human capital and educational attainment, which will be used as inputs to the GEM-E3 model.

SESSION 5: WP5 & WP6 – ECONOMIC INTEGRATION, TRADE, INVESTMENT, & FINANCIAL SERVICES: DETERMINANTS, TRENDS, AND SCENARIOS

Following Dr. Luc de Wulf's (CASE) introductory notes and overview of the tasks under the WP5, Leonor Coutinho (CCEIA) presented her findings on the determinants of growth and inflation in Southern Mediterranean countries. The analysis of growth relies on macroeconomic data covering the MED-11 (excluding Palestine) and the four EU-MED countries (France, Greece, Italy and Spain). The results show that the presence of a "catching-up" effect in growth and inflation, implying that countries with greater initial per capita incomes tend to grow slower and have lower inflation rates. Moreover, higher inflation has a significant negative impact on growth while trade openness, greater foreign direct investment (FDI) and expenditures on education improve growth. Alternative formulations of the growth equation using education attainment and institutional quality indicators may be considered in the final draft of the paper. The analysis of the determinants of inflation also confirms the positive impact of fiscal and current account deficits and the negative impact of unemployment rates (i.e. Phillips curve) on inflation. Put together, these findings highlight the importance of reducing tariff and non-tariff barriers as well as improving investment and business climate to attract investments and increase trade.

The second presentation in the session was given by Nicolas Peridy (CASE) on the effects of deep and shallow integration. The estimation of the impact of non-tariff measures (NTMs) as ad-valorem price-equivalents (AVEs) reveals that total trade costs, including both tariff and non-tariff measures, are substantially high in most of the MED-11 countries.



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On the other hand, the costs are lower in Turkey, which has entered into a customs union with the EU. Additional empirical estimations are used to distinguish how various trade costs, logistic costs, as well as other institutional factors contribute to the generation of trade. The shallow and deep integration scenarios with the EU (corresponding somewhat loosely to Q2 under the Sessa framework) based on these estimates show that Algeria, Egypt, and Tunisia would benefit most from the removal of tariffs and NTMs, in the form of increased imports. As for exports to the EU, the most serious gains will be obtained from improved logistics (i.e. reduced transportation costs). Turning to South-South trade, the biggest gain from deep integration would be realized for Algeria with logistics once again proving crucial in expanding exports markets within the region. The scenario descriptions may be aligned in the future to allow for more homogeneity across the assumptions made in the scenario building exercise.

The third series of presentations were given by Dr. Luc de Wulf (CASE), who gave a brief overview on the deliverables on technical reports of the members of the team unable to attend the meeting. The overview addressed Khalid Sekkat's (FEMISE) work on the determinants of the manufactured exports and FDI and the impact of Turkey-EU customs union. To summarize the main results of the first paper, exchange rate depreciation, openness, governance quality, and infrastructure contribute positively to manufactured exports. The latter two variables are also important in explaining FDI inflows. Using these estimated determinants, four scenarios are then built. The second overview was given of Subidey Togan (Bilkent University), on the impact of Turkey-EU customs union. According to the main results of the paper, by going beyond a set of tariff reductions, the agreement has substantially reduced the transaction and compliance costs for trade, shortened delays to the clearance of imports, exports, and transit goods, all of which translates into lower input prices and more competitive exporting pricing potential. The remaining three overviews were given more briefly, covering the papers on private sector development (Task D), investment in transport infrastructure (Task E1) and information and telecommunications technology (Task E2). The final presentation in the session was by Dr. Rym Ayadi (CEPS), providing details on the ongoing tasks in WP6. Two technical papers by Dr. Sami Mouley (ITCEQ) were presented by Dr. Ayadi in Dr. Mouley's absence. The first paper on monetary policies and economic convergence highlights that although the MED-11 countries display some degree of convergence and homogeneity, differences also exist in details. Differences can also be noted in fiscal policy and public debt management, especially between oil-importing and -exporting countries. The second paper provides a deeper look into the challenges arising from capital account liberalization. The results show that capital account opening can lead to higher growth, especially when institutional quality and government stability are adequate.



SESSION 6: WP4A –
MANAGEMENT OF
ENVIRONMENT AND NATURAL
SOURCES; DETERMINANTS
AND SCENARIOS

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The sixth session started with Francesco Bosello (FEEM) who discussed methodological issues for generating scenarios for the management of natural resources and adaptation to climate change. To a large extent, as in other work packages, certain basis assumptions on climatic, economic, social, and demographic conditions are needed to generate the final scenarios with some consistency. For example, filling-in the scenario quadrants for adaptation would require inputs on GDP, share of tourism, population, carbon emissions, and so forth. The next meeting of the scenario building committee will discuss some of the basic assumptions that are needed. On a broader level, the estimates by work packages may only be used as guidance for the GEM-E3 and therefore may, by definition, defined as a partial equilibrium output.

The second presentation in the session was by Dr. Nicola Lamaddalena (IAMB), who gave a detailed overview on the link between water availability and crop yield in the Mediterranean countries. In identifying the link, the research will provide scenarios under alternative water management and climatic conditions. Since the impact of climate change is likely to lead to a drop in rainfall and rising temperatures in most of the MED-11 region, certain crops will do better than others. Different water management and adaptation techniques could also increase the options. For example, the Tunisian water-saving programme introduced in 1995 has been successful (until the recent events) in controlling the growth of irrigated production to a minimum. Simple management solutions, such as card-based water pumps that restrict extraction for each user, could provide substantial water saving and could be an important solution for the future. Nevertheless, regulating water extraction requires a certain degree of institutional development and governance, which could be a key determinant of the success of the management efforts in the years to come. Another important issue that needs to be considered alongside the choice of crops is the market for the yields, which could also be an important determining factor.

Dr. Consuelo Varela-Ortega (UPM) gave the last presentation in the session, providing the main results and the preliminary scenarios on water use in the MED-11. Total water demand will rise substantially in most countries in the region, especially in Egypt, Syria, and Turkey. Several countries with inadequate resources will not be able to meet the future demand, including most critically Egypt and Syria. Empirical assessments show that the drivers of water depend on the level of water availability. In water-scarce countries, the amount of arable and irrigated land, population, agricultural value-added and electricity consumption are important determinants of water use. In those with abundant water resources, amount of irrigated area and crop types matter.



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Simulations based on these determinants, and after identifying optimal use given resource constraints, show that a 25% drop in water availability can reduce agricultural income and employment by more than 10% and 30%, respectively, in Syria (case study). In turn, technological improvements such as pressurized irrigation can mitigate the negative impact impacts fully, despite a permanent change in cropping patterns towards more rain-fed crops and drop in employment.

SESSION 7: WP4B-ENERGY AND MITIGATION OF GLOBAL WARMING: TRENDS AND SCENARIOS

Dr. Manfred Hafner (FEEM) began the last session with his presentation on the electricity and renewable energy outlook in the MED-11 countries. The reference scenarios depend on questionnaires from domestic energy companies, energy ministries, and other public agencies on the energy infrastructure development prospects, strategies and projects that will be put in place in the upcoming years. Perhaps the most surprising finding that comes out of the analysis is the increased potential of sustainable energy mixed in the region. Although renewable energy sources represent a very small proportion of the total energy mix, new projects are being implemented or will be implemented over the next years to increase their share to almost 10% of the total power generation by 2030. In some countries, the shifts will be more radical than in others. In the hydrocarbon-rich Algeria, for example, the share of gas-fired power generation will drop from the current 97% to 73% of the power generation by 2030, almost entirely due to a growth in renewable power generation. The same also applies for Libya, although for a lesser extent and with more uncertainty due to the on-going civil war. Several countries are also projected to enter into nuclear energy generation, including Egypt, Morocco, and Turkey. On cooperation with the EU, Desertec and the Mediterranean Solar Plan, which were launched in recent years, are set to satisfy a significant share of the EU's energy needs over the next decades. Interconnectivity and grid infrastructure projects are also foreseen; however, in some cases, it is too early to tell the actual impact since the projects are in early phases and since new project development is delayed by a few years due to the Arab Spring.

Dr. Zoi Vronitisi (ICCS/NTUA) followed the discussion with her presentation on the energy supply and demand scenarios, including reference and the MED-EU cooperation. The scenarios were built through an interaction of the GEM-E3 (to produce electricity demand) and the satellite Electricity Model (to generate mix of power generation and trades), using the power generation outlook generated by Dr. Manfred Hafner (FEEM) under WP4b.