# Barcelona Euromed Forum
# Union for the Mediterranean:
# Projects for the Future

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**DOC**UMENTS**IE**Med.
Published by the European Institute of the Mediterranean
Coordination: Javier Albarracín
Layout: Núria Esparza

January 2010

The collection **DOC**UMENTS**IE**Med. seeks to disseminate studies, reports and work documents closely linked to the current Euro-Mediterranean agenda. It is a descriptive approach to the main issues in the region, an indispensable tool to promote analysis of and reflection on the Euro-Mediterranean field.

Project funded by the European Union

EUROMED

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# Presentation.

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The Barcelona Euromed Forum has the aim of becoming the annual date of reference in the Mediterranean, bringing together top Euro-Mediterranean actors and experts from the public and private sectors. The objective is to generate a powerful dialogue centred on the European and Mediterranean strategic issues on the global agenda in order to influence policy definition and development. Having this objective, this Forum was supported by the European Commision.

The present Barcelona Euromed Forum, organized by the European Institute of the Mediterranean (IEMed), has to be contextualized in the framework of the Union for the Mediterranean (UfM) approved in the Summit of the Heads of State and Government of the European Union and the Mediterranean partners, which took place in Paris on 13th July 2008.

The debate focuses on the main economic projects approved at the Ministerial Conference of the Euro-Mediterranean Ministers of Foreign Affairs at Marseilles on 3rd and 4th November 2008: De-Pollution of the Mediterranean; Maritime and Land Highways; Alternative Energies: Mediterranean Solar Plan; and the Mediterranean Business Development Initiative.

The multinational and multilevel nature of these projects requires a strong effort of coordination, analysis and sharing of priorities among state governments and public institutions of various levels relevant to the issue under discussion. It also requires extensive participation of the private sector, independent and academic experts, as well as international organizations, finance institutions and intermediate authorities or agencies with competences in the different projects involved.

By creating a framework of debate among all these high level multinational experts and actors involved in each sector, the Barcelona Euromed Forum has delivered a document based on the main ideas and proposals expressed by the participants that will be useful for the decision-makers in the Union for the Mediterranean process.

### 1. Water Efficiency and Water Treatment

The Programme "Sustainable Water Management and De-Pollution of the Mediterranean" aims to promote sustainable water management policies in the context of the current increasing water scarcity. In total € 22 million are allocated for 2009-2010. Part of the funds will be dedicated to support the Mediterranean Water Strategy and the implementation of the "Horizon 2020" Programme.
A list of 113 projects were proposed in the domain of "Horizon 2020" initiative by UfM members following priority concerns of (i) de-pollution of the Mediterranean; (ii) technologies and efficient use of water; (iii) balance between supply and demand; (iv) conservation and rehabilitation of natural environments and (v) adaptation to climate change. In this project, complementary measures have to be implemented in order to maximise the use and management of water, such as like technical training, institutional building or legislative reforms, to guarantee the involvement of the private sector.

### 2. Maritime and Land Infrastructures

This project approved by the UfM is one of the projects whose concrete implementation requires more funding. The kind of infrastructure concerned includes, among others, international railways connexion; construction of new harbour facilities or upgrading of already existing ones; rehabilitation and upgrading of road networks; multi-modal logistic platforms or international highway connexions among Mediterranean countries.
This project makes explicit reference to the development of international "motorways of the sea" that would have direct frequent connexions between key ports of the Mediterranean to increase the volume of goods and people transported by sea, minimizing the environmental impact that its road transport would mean.
These types of projects are supposed to be the ones that would require more cooperation between the southern countries in the framework of the UfM.

### 3. Alternative Energies: Mediterranean Solar Plan

This project includes the definition and implementation of the Mediterranean Solar Plan (MSP), one of the most ambitious, multidimensional and structuring projects envisaged by the UfM.
The technical complexity and the national legislative heterogeneity make coordination among states a priority. This is one of the most advanced projects in the context of the UfM in terms of analysis of priorities, viability of certain proposals, as well as the study of the funding requirements.
Different preliminary projects and proposals have appeared in the field of solar energy in the Mediterranean. Some of them based on bilateral agreements, some others with the leadership of the industrial sector.
The Mediterranean Solar Plan has the objective and challenge of trying to integrate all these projects in a network of renewable energy generation plants as well as to define and implement infrastructures that could evacuate the energy produced through North African and Middle East countries and from there to European markets.
In these projects other renewable energies have been introduced, especially wind generated energy, due to the fact that its technological level makes it an already competitive energy compared with other sources.

## 4. Initiative for the development of entrepreneurship

This Initiative has the objective of defining, developing and implementing policies to promote micro, small and medium size enterprises in the Mediterranean economies, bearing in mind that micro and small enterprises represent the vast majority of the businesses in the Mediterranean economies as well as the main engine for job creation. This Initiative is specially focused on the definition and implementation of financing instruments that can really support these types of companies that lack real access to the capital markets to find funding for their projects. This instrument should be complementary to the existing ones as well as market oriented and value added, not interfering in already existing instruments. It should be complemented with technical assistance to the entrepreneurs.
In the analysis of policies to promote small and medium size enterprises, some other factors have been developed as relevant for the success of such a project. Issues like management and technical training, certain legislative reforms to promote a more business friendly environment and the study of the applicability of successful business and innovation institutional models are under debate.

# Chapter 1.

# Working Group on Renewable Energies

# 1:
# Working Group on Renewable Energies

**1)** The evolution of renewable energies in the Mediterranean Neighbourhood is in keeping with the emergence of a European Union Common Energy Policy and its central characteristics. The fight against climate change and the promotion of sustainable development, both in the EU and its neighbourhood, involve the extension of renewable energies in the south of the Mediterranean in order to supply both its own energy demand and export its green electricity to the EU. In any case, the future of renewable energies is conditioned by different limitations, including technical, economic and regulatory.

**2)** Several Mediterranean Partner Countries have expressed their interest in developing renewable energies as a vector of sustainability, creation of employment, technological transfer and industrial development. This approach is also in keeping with the comparative advantages of the Mediterranean Partner Countries, as it helps to mobilise abundant resources until now unexploited (space and insolation) and it involves a potential to supplement their conventional exports with green electricity exports, which also means increasing their geostrategic importance in relation to the EU. Moreover, especially in the countries without hydrocarbon resources, it makes it possible to increase domestic energy consumption while reducing foreign energy dependence. The initiative also targets other specific needs of the Mediterranean Partner Countries, such as rural electrification and the eradication of energy poverty, the modernisation and extension of their networks, desalinisation and the imperative of finding sources of income additional to traditional exports, which are experiencing a certain loss of dynamism.

**3)** The Mediterranean Solar Plan provides an opportunity for the development of renewable energies, especially solar and wind, which will not take place unless there is a clear transnational commitment by governments to its promotion. The role of an active and technically well equipped UfM Secretariat is essential to support and monitor the implementation of the Plan, based on the ideas outlined by the French-Egyptian Co-Presidency.
The Spanish Presidency of the EU is a clear opportunity to advance in this process, both in the concrete aspects related to the Solar Plan and the cross-cutting elements related to the operation and operability of the UfM Secretariat.

**4)** The identification of the priority projects includes the following:

- The installation of (solar and wind) electricity generation capacities in the Mediterranean Partner Countries.
- Construction of high capacity HVDC lines, emphasising the need for inter-connections between the most important markets.
- Improvement of the electricity networks of the Mediterranean Partner Countries and the intra-regional interconnections in the south of the Mediterranean but also in the EU itself.
- Natural gas capacities in the Mediterranean Partner Countries to supplement renewable energies.
- Desalinisation plants fed by renewable energies.
- Projects of training, technical cooperation and technological cooperation for development in the field of management, regulation and development of renewable energies.

**5)** Renewable energies pose important challenges. It is necessary to set up as soon as possible new concrete projects to begin assessing the suitability of the regulatory and institutional framework, as well as technological advances themselves.

**6)** The construction of HVDC lines requires long and complex procedures which should be followed from the beginning in order to approach the simplification of administrative approval procedures. The development on a large scale of renewable energies involves important technological challenges, mainly in terms of energy infrastructures. If the UfM decisively commits to renewable energies, it will be necessary to undertake the appropriate studies to face such challenges, which may involve long periods before resolving their most complex aspects. Thus it is advisable to start implementing the projects as soon as possible in order to reduce the timeframe.

**7)** The precise definition of the institutional framework seems essential to convince investors that their investments are commercially feasible and protected by appropriate institutions and legal frameworks. The legal framework must be predictable and stable in order to guarantee legal security. Moreover, the convergence towards common technical and regulatory standards is advisable. Another fundamental issue is the clarification of the regulatory frameworks in terms of tariffs and other support mechanisms, both in the north and in the south of the Mediterranean. This embraces at least three main issues:

- determining the level of implicit support of the different mechanisms (Feed-in Tariffs and/or others);
- identifying who finally pays for this support (the Mediterranean Partner Countries, the EU or the Member States);
- establishing the schedule to limit the subsidies for conventional energies in the Mediterranean Partner Countries. The high level of subsidies that these energies enjoy poses the added problem of their gradual removal and their social and political impacts.

**8)** Finally, it is essential to clarify the aspects related to the funding and ownership structure, especially in the current context of economic crisis. In any case, it will be necessary to define the potential funding sources and instruments and have as many

of them as possible. In order to mobilise these funding sources, it will be necessary to clarify the terms, costs and real potential benefits, as well as their future evolution. Reducing the uncertainty and risks related to renewable energies will result in greater public and private funding resources.

**9)** In short, renewable energies should be a central element of the Community energy policy in the next few years, including relations with the Mediterranean Partners, as they are closely linked to issues such as the energy security of Europe and its Mediterranean Partners as well as Community environmental objectives. This complementariness between the two shores also involves consideration of renewable energies as a fundamental factor of Euro-Mediterranean integration and as an additional motor of sustainable development for the whole of the region.

# Renewable Energies as a Euro-Mediterranean Vector of Integration

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## Executive Summary

**1)** Energy scenarios foresee a rapid expansion of renewable energies worldwide. By 2015 (2030) the IEA foresees 660 TWh (1,490 TWh) of wind generation, 42 TWh (245 TWh) of photovoltaic origin, and 11 TWh (107 TWh) of solar thermal origin. A large part of this potential is concentrated in the EU Mediterranean neighbourhood, which is one the most active actors in renewable energies at a world level. The development of renewable energies has become one of the pillars of the Community and Member State energy policies.

**2)** The EU Mediterranean neighbours (MPCs-Mediterranean Partner Countries) have shown their interest in exploiting their important solar and, in some cases, wind resources. The countries of the Gulf Cooperation Council are also showing increasing interest in renewable technologies. Renewable energies can boost the economies in the southern Mediterranean through foreign direct investment (FDI), the generation of new local energy sources, the exportation of green energy, the creation of employment and the fostering of R&D and technology transfer. Moreover, in those countries without hydrocarbons, renewable energies can be a solution for their economic and energy vulnerability, especially considering the important increases foreseen for their domestic demand.

**3)** The development of renewable energies in the MPCs requires adapting their institutional and regulatory framework and are, therefore, a factor of modernisation of the energy systems. In their turn, these reforms involve a certain regulatory convergence that makes regional integration, at least of electricity, possible at both a Euro-Mediterranean and South-South level. This integration is consistent with the logic of comparative advantage, as it allows the MPCs to exploit abundant factors in disuse, such as the desert areas and hours of insolation. The promotion of renewable energies is, therefore, a key vector of economic, physical and regulatory integration of the Euro-Mediterranean space.

**4)** The Union for the Mediterranean (UfM) was formally established on 13th July 2008 in the Paris Summit under the French Presidency of the EU. One of the six projects listed in the annex of the Paris Declaration is the so-called "Alternative Energies: Mediterranean Solar Plan". Despite the precision about the Solar Plan, the sense of the Declaration calls for the mobilisation of all alternative energies to export the electricity produced in the MPCs to the EU. This envisages the transmission of the energy generated through specific energy corridors, basically electricity.

**5)** The potential projects identified to date are the following:

- Installation of renewable electricity generation capacities in the MPCs, mainly in wind, solar thermal and photovoltaic energy. The Solar Plan poses the initial dilemma over which technological option should be prioritised. Solar thermal technology has only developed in the southern Mediterranean on a small scale; therefore, a short-term option would be to support new projects that demonstrate this technology, to promote it in the medium and long term when its technological maturity permits precise regulatory decisions. Wind generation seems closer to the break-even point and the projections give it greater capacity for growth, so that in the short term a wind plan could be undertaken for which there is major potential in Morocco, Algeria, Egypt and Turkey. For its part, photovoltaic energy has major potential in the rural environment and in large and medium sized decentralised installations, and it would be advisable to include it in the projects for selection. In the longest term there must be careful consideration of the installation of CSP in areas with greatest hours of insolation and offshore wind energy. For all of them the alternatives of generation and transmission to the EU should be considered, as the impact for the EU and its Member States will depend to a great extent on the definition of the locations and the layout of transmission lines.

- MPC-EU construction of high-capacity HVDC lines to transmit the green electricity generated in the MPCs to the EU. Without development of interconnection infrastructures between the MPCs and Mediterranean Europe, and between the latter and the rest of the European continent, it cannot be possible to transmit the electricity from the MPCs to the EU. Perhaps the greatest problem for the undertaking of these lines is the approval procedures for this kind of infrastructures. A proposal would be that of establishing a Community approval procedure of European infrastructures making it possible to shorten the period of construction of electricity corridors. Another key element is to establish the role of local utilities as a support for the infrastructure development.

- Improvement of electricity network of the MPCs and intra-regional interconnections. The electricity systems in the southern Mediterranean are much weaker than the European ones. The fact of connecting with the EU and between the MPCs themselves enhances their systems but requires an effort of modernisation. A significant increase in the contribution of renewable energies could mean a challenge of additional improvement for their system, given that renewable energies require important network capacities and greater flexibility of the system to be able to manage it appropriately. The improvement of infrastructures may require specific projects to improve the national power lines and the sub-regional interconnections.

- Establishing the necessary natural gas infrastructures in the MPCs to supplement renewable energies. The gradual introduction of generation by renewable installations can require greater capacities of support based on natural gas, especially in combined cycle power stations which can supply the demand peaks.

- Desalination plan through renewable energies. The projections on the hydro resources in the southern Mediterranean and, above all, in the Persian Gulf, point to growing water deficits from the middle of the next decade. Desalination technology has been developed, but still requires major quantities of energy. The desalination plan explores the possibility of using renewable energy to feed the water treatment plants but should also consider the hydro needs of the solar thermal technology.

- Technical cooperation and training programmes in the use and development of technologies related to renewable energies and the management and regulation of the electricity and renewable energy sector. The training programmes could incorporate, together with the authorities, new actors, such as education and research institutions, companies and eventually other civil society agents, in addition to regulators and network operators.

**6)** Renewable energies still require notable stimuli to achieve the break-even point. They also need a stable institutional context to minimise the regulatory risk and to allow the heavy investment resulting from their high capital intensity, therefore generating the appropriate conditions for the establishment of a sustainable framework in the long term for their development. The analysis of the incentivising and legal measures adopted by the MPCs in terms of renewable energies reveals some advances, although at very disparate rates. All these elements should benefit from technical cooperation and training programmes to improve the legal framework and endow the regulatory bodies and authorities with greater capacities for analysis and monitoring.

**7)** One of the central aspects of the regulatory framework is the payment and the incentives brought by renewable energies. The most widely extended regulation modality in the EU, and perhaps the one which prompts most agreement, are the so-called feed-in tariffs (FITs). After the Third Legislative Package, the EU gives freedom to its Member States to adopt the payment scheme of their choice: FITs, trading green certificates (quotas), tax incentives or auctions. The bonus system is in force in Algeria, Egypt, Israel and Turkey, and is under study in Morocco, Tunisia and Syria. Nonetheless, the problem is not so much about where it is in force but who finally pays the bonus: the MPCs themselves or the EU Member States. Perhaps the major obstacle is the high degree of subsidy from which fossil fuels benefit in most of the MPCs, harming the competitiveness of renewable energies. It must be taken into account that the bonuses can be very onerous for the MPCs and that their application to increasing quantities of electricity generated by renewable energies can be limited.

**8)** A different aspect is the regulation of the electricity to be exported to the EU. The convergence of the different regulatory models at a Community level seems difficult, but a "European" tax and regulatory model superimposed over the national models applicable to a Mediterranean plan of renewable energies can emerge. The Community renewable energies Directive 2009/28 stipulates in Article 9 the treatment of joint projects between Member States and third countries within the objectives on renewable energies established by each Member State. The directive allows the Member States to link their domestic support systems to those of other Community countries and the "physical" import of green electricity from third countries. However, the "virtual" imports (investment in renewable energies in those third countries) cannot

be calculated according to the objectives fixed by the directive. The statistical transfer (the exchange of renewable credits between countries with production surpluses and deficits) is limited to the Member States. All these aspects should be the object of revision.

**9)** From the point of view of funding, the purpose of the UfM is to identify priority structuring projects and facilitate their achievement by mobilising the necessary funding. The doubt that has accompanied the whole constitutive process of the UfM is where these funds would come from. The Euro-Mediterranean Community funds have a clear budget allocation and are widely criticised for their limited level, in any case incapable of providing the funding necessary for the set of projects envisaged by the UfM, although the FEMIP (Facility for Euro-Mediterranean Investment and Partnership of the EIB) and the ENPI (European Neighbourhood and Partnership Instrument) could have a role. The approach retained for the funding of projects is based on the concurrence of public and private funds, Community funds, loans from the EIB and other international financial bodies, especially the World Bank, the African Development Bank or the regional Arab financial institutions. The role of sovereign wealth funds from the Persian Gulf countries is also considered.

**10)** The current international economic and financial situation will not ease the mobilisation of the necessary public or private funds. It is worth distinguishing between funds (funding or capital) for the installations of renewable electricity generation and transmission lines, on the one hand, and the training and technical cooperation programmes, on the other. The latter represent a category apart, whose funding could come from Euro-Mediterranean and bilateral cooperation. The funding of a Supergrid could be the responsibility of a company with the participation of Transmission System Operators (TSOs) and multilateral banks, especially the EIB. In terms of renewable generation installations, foreign direct investment has the advantages of having no effect on public budgets, creating jobs, transferring technology, training human capital and developing new industrial branches. 70% of renewable electricity generation projects in the MCS will be IPPs funded by private funds, a model related to free access to the market and regulation by bonuses. The Private Public Partnership (PPP) seems to adapt well to projects involving major investment (solar power stations, wind parks) and has already been used by European companies in the region.

**11)** Another possibility is to mobilise the use of the Clean Development Mechanism (CDM) of the Kyoto Protocol. The CDM is a financial tool which may encourage foreign direct investment in renewable energies in the MPCs, but which is being poorly used in the region due to the lack of local powers to prepare projects, the lack of coordination between authorities and the almost non-existent involvement of banks and local companies. Moreover, investors must face the uncertainty over the price of emissions incorporated in their volatility and the demands for additionality which may inhibit the application of the most innovative technologies.

**12)** Development cooperation can also contribute to technology development and the fight against energy poverty as well as through technical cooperation and training programmes, and there are already experiences in this field in the MPCs. The EU should ensure that renewable energies mean a factor of sustainable development for these countries, as well as a tool against global climate change. The UfM could turn

the Solar Plan into a major Euro-Mediterranean sustainable development project including elements of technology development, the fight against climate change and eradication of energy poverty, among others.

## Introduction

All energy scenarios foresee a rapid expansion of renewable energies worldwide. According to the IEA reference scenario projections (2008), their contribution to primary global energy demand (not including the traditional biomass) would increase from 7% in 2006 to 10% in 2030. Total electricity generation based on renewable energies would increase from 18% in 2006 to 23% in 2030, and would displace natural gas as the second source of electricity generation, after coal, before 2015. The IEA reference scenario envisages a marked increase in wind energy, especially in the EU, until representing 60% of the total increase in electricity generation. By 2015 (2030) the IEA foresees 660 TWh (1,490 TWh) of wind generation, 42 TWh (245 TWh) of photovoltaic origin and 11 TWh (107 TWh) of solar thermal origin.

Many of these potential capacities are concentrated in the EU Mediterranean neighbourhood, which is one of the most active actors in renewable energies at a world level (Marín, 2008). Since Directive 2001/77, the Community has pursued a greater contribution of renewable energies to electricity generation. Their contribution increased from 13% to 16% between 2001 and 2006 in the EU, but the new Directive 2009/28 seeks to double this percentage beyond 30% to achieve the general objective of a 20% contribution of renewable energies in 2020. The Commission itself has recognised that for some countries that it can be difficult to achieve the objectives established but, under certain circumstances, the new directive allows a Member State to sell its surplus of renewable energies to another Member State which has not achieved its objectives. This possibility can generate additional incentives for green electricity in the best positioned Member States. Thus, the development of renewable energies has become one of the pillars of Community and Member State energy policies.

Barack Obama's new presidency can also help consolidate a trend allowing the increase of the contribution of renewable energies to the global energy mix (Isbell, 2009). The EU Mediterranean neighbours (MPCs-Mediterranean Partner Countries) themselves have shown their interest in contributing to this kind of initiative, which would enable them to exploit their important solar and, in some cases, wind resources. Moreover, the countries of the Gulf Cooperation Council (GCC)[1] show a growing interest in renewable technologies, which in their case and due to their water needs have the added attraction of being able to feed desalination plants.

Of course, in the Euro-Mediterranean scenario other energy vectors of great immediate relevance are being developed, such as those related to oil and gas (and eventually nuclear) and the interest in their progress, integration and harmonisation persists. Although this article is exclusively focused on renewable energies, their role cannot be separated from the global energy mix, dominated by fossil fuels, and their geo-economic implications. Moreover, many of the arguments for renewable energies, such as the improvement and harmonisation of energy regulations or the need to carry out the installation of new generation and transport capacities, can be extended to the energy system as a whole. In fact, it seems that any action on the level of renewable energies must be coordinated with energy integration within the EU itself, and especially with the role given to natural gas in an energy mix with a greater contribution of renewable energies.

From the perspective of the southern Mediterranean countries, the development of renewable energies in their territory has an interesting socioeconomic potential.

1. Saudi Arabia, Kuwait, United Arab Emirates, Qatar, Bahrain and Oman.

Renewable energies can stimulate the economies of the MPCs through promotion of foreign direct investment, generation of new local energy sources, export of green energy to the EU, creation of employment and fostering of R&D and transfer of technology, which can entail the delocalisation of determined industrial processes in the MPCs, such as the manufacture and assembly of components in the wind or solar industry. In those MPCs without hydrocarbon resources, renewable energies can be a solution in the medium and long term to their economic and energy vulnerability, especially considering the major increases in domestic demand expected. The impact of these energies on economic growth has been accredited for the EU (Employ-RES) and could mean a motor of development for its Mediterranean neighbourhood.

Renewable energies mean, in addition to a contribution to the solution of environmental problems, a source of wealth for the countries that develop them. Insofar as the integration of renewable energies entails an adaptation of the institutional and regulatory framework of the MPCs, their development also constitutes a factor of modernisation of energy systems. Moreover, these reforms involve a certain regulatory convergence that makes regional integration, at least of electricity, possible at both Euro-Mediterranean and South-South level. This integration, moreover, is consistent with the logic of comparative advantage, as it allows the MPCs to exploit abundant factors until now in disuse, such as the large desert spaces and hours of insolation. The promotion of renewable energies is, therefore, a key vector of economic, physical and regulatory integration of the Euro-Mediterranean space.

In this context, the Union for the Mediterranean (UfM) renewable energies initiative is envisaged. This document proposes specific points for discussion on the type of renewable projects that the UfM could encourage and their implications. First, the origin, context and content of the Mediterranean Solar Plan initiative are briefly set out. Next, some of the projects to be selected are identified. The following section explores the regulatory dimension of the initiatives. The final epigraph is devoted to the funding of the projects and the possibilities of cooperation in technology development.

## The Union for the Mediterranean and Renewable Energies

The Union for the Mediterranean (UfM) was formally established on 13th July 2008 in the Paris Summit under the French Presidency of the EU. The Summit adopted a declaration establishing an institutional structure and proposing a series of specific priority projects: de-pollution of the Mediterranean, maritime highways, civil protection, solar plan, higher education and the development of small and medium sized enterprises. In the Meeting of Foreign Affairs Ministers held in Marseilles in November 2008, the institutional details were finalised, among them the headquarters of the UfM Secretariat, which will be established in Barcelona.

One of the six projects listed in the annex of the Paris Declaration is the so-called “Alternative Energies: Mediterranean Solar Plan” (p. 19), which “confirms the need to focus on alternative energies.” The Declaration estimates that “market development as well as research and development of all alternative sources of energy are therefore a major priority in efforts towards assuring sustainable development.” And concludes: “the Secretariat is tasked to explore the feasibility, development and creation of a Mediterranean Solar Plan.” Despite the precision about the Solar Plan, the sense of the Declaration calls for the mobilisation of all alternative energies to export the electricity produced in the MPCs to the EU. This envisages the transmission of the energy generated through specific energy corridors, basically electricity.

The Solar Plan is in line with the Spanish policy of promoting renewable energies and with the emphasis of the European Commission on interconnections. Under the French-Egyptian co-Presidency the adoption of an "Immediate Action Plan 2009-2010" to develop concrete projects was proposed. Its objectives were to advance in the learning curve, organise efficient governance in the MPCs, and involve public and private stakeholders. It also proposed the setting up of several projects to enable the countries involved to define and test (1) their respective policy framework (tariffs, agreements, licensing…); (2) new funding tools; and (3) new schemes to export "green" electricity to Europe.

The criteria established for the selection of projects was the capacity to start them in 2009-2010, the existence of an industrial sponsor and the commitment of the host country to assure the commercial feasibility of the project. The co-Presidency proposed the creation of a technical group with representatives from several Euro-Mediterranean countries with the aim of carrying out the selection of these projects and discussing the preparation of other action plans. It was also proposed to work with the multilateral funding institutions to design a funding scheme to facilitate this kind of project.

In parallel to the application of the "Immediate Action Plan 2009-2010", this task force would prepare a Master Plan 2011-2020. Its main generic objectives would be the following (Lorec, 2009a, 2009b):

- Developing concrete and profitable projects for both south and north countries
- Promoting private/public and private/private projects in order to boost industrial developments
- Boosting energy market integration and regional harmonisation
- Mainstreaming financial and administrative schemes to facilitate project implementation
- Changing energy habits and carrying out studies on solar and wind resources, regulation and its harmonisation, public incentives, evaluation methodologies, etc…

Tasked with the development of the projects, the Secretariat plays a central role in the institutional network. The delay in its operative constitution has not allowed it thus far to invigorate the process, but some ideas have been advanced to allow progress in the field of renewable energies and interconnection of the two shores of the Mediterranean. The Road Map designed (Immediate and Master Plans) has been standardised with the cooperation of core countries (Germany, Spain, Italy and France from Europe; Morocco and Egypt from the MPCs).

In the Meeting of Energy Ministers in June 2009, two documents were produced: a strategic document which, along with the Solar Plan, includes all renewable technologies, as well as energy efficiency and technological cooperation; the second document refers to the governance of the process, designing a small structure based on a Steering Committee and an Interim Task Force. The strategic document therefore moderates the solar bias and gives a greater role to wind energy, but it would seem appropriate to emphasise the importance of the short-term contribution of wind energy, starting by adopting an alternative name which is inclusive of all technologies (for example, Mediterranean Renewable Energy Plan). The document on governance is based on the principle of variable geometry and on that of bringing together authorities, renewable energy companies and the financial sector.

The reactivation of the UfM in June 2009 offers the opportunity to also revitalize its Solar Plan in the next few years, thereby consolidating the idea that the projects include all renewable energies. Moreover, although the denomination of Solar Plan can be confusing,

it seems clear that the projects include all renewable energies, and this is how it is interpreted here. The following section seeks to identify which concrete projects should be considered in the short, medium and long term with the end of contributing to the development of renewable energies in the Euro-Mediterranean space.

## Tentative Identification of Projects

In recent years there has been a plethora of analyses of the potential of renewable energies (basically solar and wind) in the southern Mediterranean. Box 1 summarises the main initiatives recommended in these studies. Without seeking to evaluate the methodologies or the assumptions adopted for their preparation, many of the studies coincide on the type of projects to undertake, have been tested with the public and private stakeholders, and form the existing starting point for renewable projects of the UfM, when they do not directly inspire them. The rest of this section briefly introduces the discussion of each of the initiatives listed in the box.

**Box 1: Tentative Identification of Projects in the Mediterranean**

1. Installation of renewable electricity generation capacities in the MPCs

2. MPC-EU construction of high-capacity HVDC lines

3. Improvement of electricity network of the MPCs and intra-regional interconnections

4. Natural gas capacities in MPCs to supplement renewable energies

5. Desalination plan through renewable energies

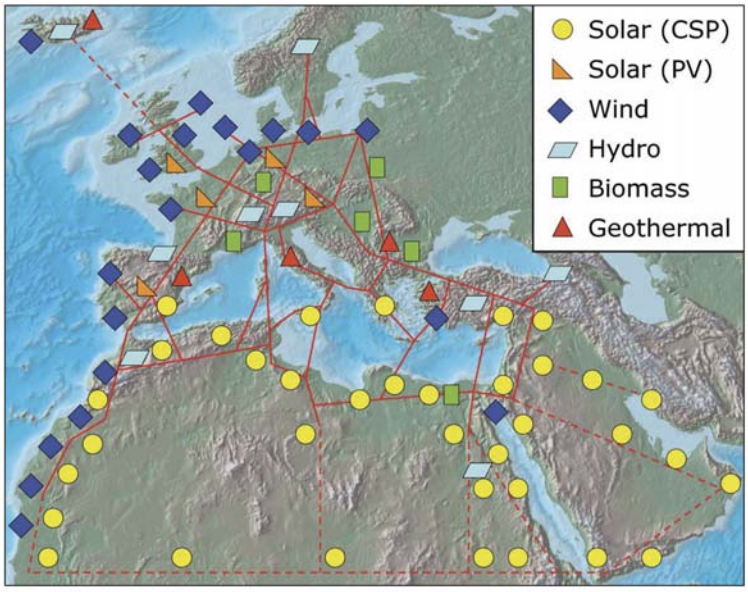
6. Training projects, technical cooperation and technology cooperation for development

Sources: DLR (2005), European Commission (2007), OME (2007, 2008), Plan Bleu (2007, 2008a, 2008b), REACCESS-DLR (2009), REACCESS-UNED (2009), TREC (2007).

### 1. Installation of Renewable Electricity Generation Capacities in the MPCs

The potential of the different renewable energies in the region is quite well established, and can be summarised in a simplified way in Map 1, which also presents an estimation of the electricity corridors necessary for transmission of the electricity generated to the EU and between the MPCs themselves. The wind energy potential is very important on the Atlantic coast of Morocco, but also in numerous locations in the south of the Mediterranean (although infra-represented on the map), as well as Egypt and Turkey. Hydraulic energy has potential in Egypt and Turkey (in both cases for large dams) and in Morocco (for small dams). Moreover, photovoltaic energy should not be ruled out in some of the locations established for the CSP, as the option of implanting one technology or another can depend on factors such as the evolution of total costs or technological maturity. In fact, photovoltaic solar energy has an important effect on rural electrification in southern Algeria, in some areas of Egypt and, above all, in the Moroccan rural electrification programme.

**Map 1: Renewable Energies and Electricity Corridors (HVDC) in the Euro-Mediterranean Space**




Source: TREC (2007), Figure 9, p. 33.

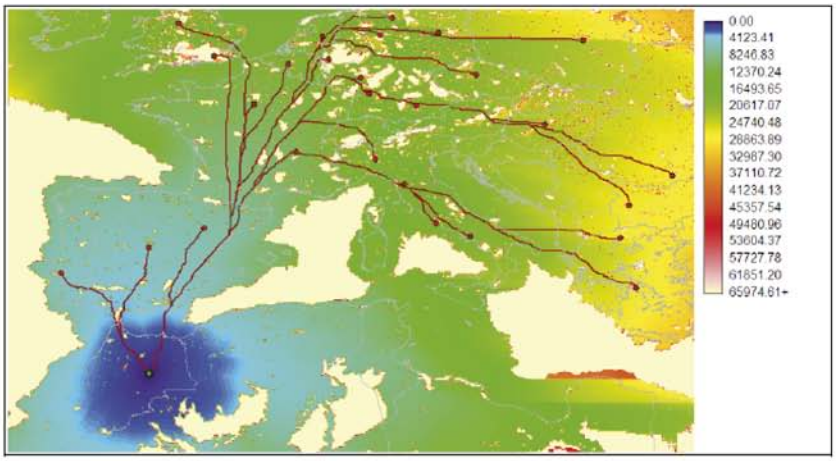
The potential of the remaining sources is limited, although it can be relevant from the local and social perspective. For instance, there is certain potential for biomass in the big cities. The production of bio-fuels does not have the appropriate climatic or edaphologic conditions, except in Turkey where the potential is important; in fact, with this exception, most of the region has structural food trade deficits.

The emphasis of the Solar Plan seems to be on solar thermal energy, following the path of the DESERTEC Plan (TREC, 2007), an initiative of the Club of Rome developed basically by the German DLR.[2] However, the studies point out that solar thermal energy would be competitive from 2020. This does not mean that it cannot form part of the energy mix, but that an important presence of the CSP in the mix ensuring achievement of the break-even point would raise electricity prices until 2020, although it would then contribute to their reduction (TREC, 2007: 37). However, the TREC study concludes that in 2020 CSP electricity imported from North Africa will be 25-30% cheaper than that produced in southern Europe.

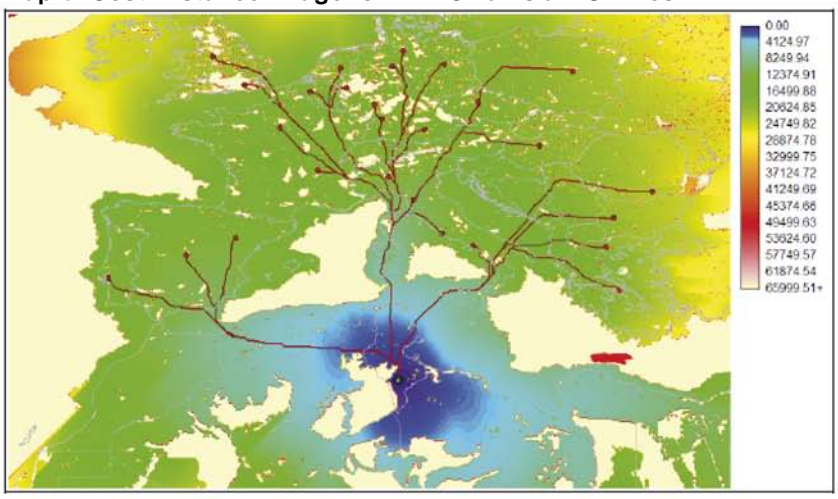
The Solar Plan therefore poses the initial dilemma over which technological option should be prioritised. Solar thermal technology has only developed in the southern Mediterranean on a small scale. A short-term option would be to support new projects that demonstrate this technology, to promote it in the medium and long term when its technological maturity permits precise regulatory decisions. Wind generation seems closer to the break-even point and the projections give it greater capacity for growth, so that in the short term a wind plan could be undertaken, for which there is major potential in Morocco, Algeria, Egypt and Turkey. For its part, photovoltaic energy has major potential in the rural environment, as well as in large and medium sized decentralised installations, and it would be advisable to include it in the projects for selection. In the longest term there must be careful consideration of the installation of CSP in areas with greatest hours of insolation, as well as the alternatives presented, shown in Maps 2, 3 and 4. Consequently, the impact for the EU and for Spain will depend on the definition of the locations and the layout of transmission lines.

2. See the information available on the website of the DESERTEC Foundation: www.desertec.org.

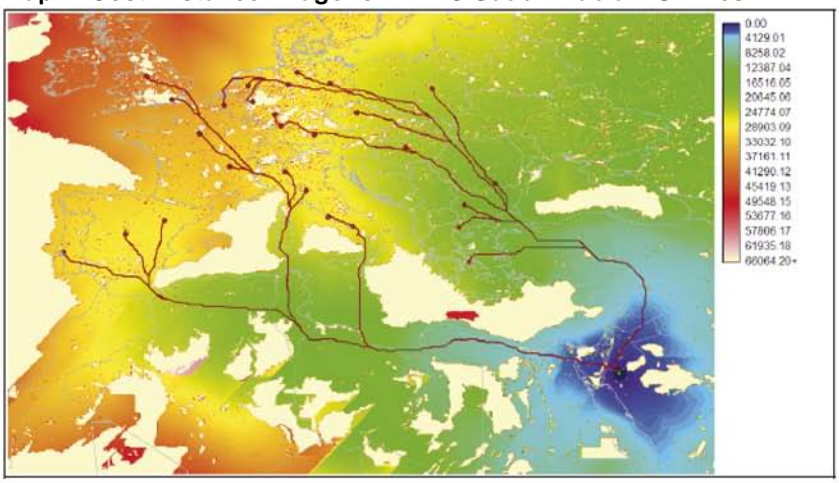
**Map 2: Cost-Distance Image for HVDC Morocco-EU Lines**




**Map 3: Cost-Distance Image for HVDC Tunisia-EU Lines**




**Map 4: Cost-Distance Image for HVDC Saudi Arabia-EU Lines**




Sources: REACCESS-DLR (2009), pp. 119-120, Figures 4-25, 4-26 and 4-27.

In any case, the mere identification of the existence of a major potential of solar and wind renewable energies in the region is only the first step of the reflection on the exploitation and integration of these resources by the EU and, of course, the MPCs themselves. The transmission lines, regulation, funding and generation of capacities are aspects inseparable from access to renewable resources.

## 2. MPC-EU Construction of High-Capacity HVDC Lines

The installation of electricity generation capacity based on both energies also requires transmission routes to the European markets. The interconnection between the southern Mediterranean is another of the European objectives to complete the Mediterranean electricity ring. Map 1 illustrates the trans-Mediterranean electricity corridors considered optimal (TREC, 2007):

- Extension of the existing Morocco-Spain connection.
- Algeria-Spain direct connection (projected in parallel to Medgaz but not carried out).
- Algeria-North Italy connection.
- Tunisia-Italy (North and South) connections.
- Libya-Italy and Libya-Greece connection.
- Egypt-Turkey-EU connection.

The studies advocate the creation of a High Voltage Direct Current (HVDC) network destined to carry the energy generated in the MPCs to the EU. This project, or series of projects, could in fact mean the interconnection of the European electricity markets and would coincide with the objective of a single electricity market. This aspect is especially important for the Mediterranean Member States, which suffer from significant relative isolation in the European energy market. In fact, without the development of interconnection infrastructures between Mediterranean Europe and the rest of the European continent it will be difficult to transmit the electricity from the MPCs to the EU. Table 1 provides four energy import profiles. Profile 4, which could be called the Mediterranean profile, shows a reduced integration in the European energy market and a clear projection towards the southern Mediterranean.

The North Africa-southern Europe interconnection would blur the differences between profiles 1, 2 and 4 and bring Mediterranean Europe closer to a more European profile, given that profiles 1 and 2 would eventually see their energy imports (in this case electricity) from the Mediterranean region increased. In other words, it would mean the Europeanization of the Mediterranean Member States, but also the “Mediterraneanization” of the non-Mediterranean Member States. Moreover, the development of the electricity interconnections would allow the application of the principle of solidarity, currently limited by the impossibility of transmitting electricity or gas from determined Mediterranean markets to the rest of the EU. In many aspects, the development of the trans-European gas and electricity networks cannot be dissociated from the development of renewable energies in the MPCs and the export of green electricity to the EU.

**Table 1: Characterisation of the EU Member States According to Origin of Energy Imports, 2006**

| | | |
|---|---|---|
| **PROFILE 1: Predominance of intra-European imports (76% on average) and moderate weight of Russia and Central Asia (11% on average) and North Africa (5% on average)** | | |
| Austria | Ireland | Slovenia |
| Belgium | Luxemburg | Sweden |
| Denmark | Malta | UK |
| **PROFILE 2: Predominance of intra-European imports (44% on average) but high imports from Russia and Central Asia (41% on average) and moderate contribution of the Middle East (6%) and North Africa (5%)** | | |
| Czech Republic | France | Latvia |
| Estonia | Germany | Holland |
| **PROFILE 3: Clear Russian predominance (81% on average together with Central Asia) and moderate intra-European weight (17%) without significant participation from other origins** | | |
| Bulgaria | Hungary | Poland |
| Finland | Lithuania | Rumania |
| Slovakia | | |
| **PROFILE 4: Reduced participation of intra-European imports (22% on average) with elevated weight of the Middle East (27%), North Africa (17%) and sub-Saharan Africa (8%)** | | |
| Cyprus | Italy | Spain |
| Greece | Portugal | |

Source: REACCESS-UNED (2009), Table 9, p. 21.

A relevant aspect is the type of energy to transport through this network. The Solar Plan stipulates that, in principle, the electricity corridors constructed under its protection must be limited to transporting electricity from renewable sources. A first economic reflection is that the extension to electricity exported from the MPCs from non-renewable sources (gas, nuclear, coal) could facilitate the funding of the transport infrastructures making them more profitable in the short term. The second reflection is how far, once the Supergrid is constructed, the concurrence of fossil fuels can be avoided. In fact, the mere existence of a Supergrid could mean an incentive for the installation of conventional generation capacities destined for export.

Finally, perhaps the greatest problem for the construction of these lines is the demanding and fragmented approval procedures for this kind of infrastructure. Because of their very nature,

these infrastructures are held back by national and, on occasions, regional and local procedures. An interesting proposal would be that of establishing a Community approval procedure of European infrastructures making it possible to shorten the period of construction of electricity corridors, although this proposal clashes with the reluctance of the Member States to cede sovereignty in this matter. Despite the difficulties undoubtedly entailed in this proposal, its achievement is considered to be of the greatest practical interest. Another key element lies in establishing the role of the local utilities, well versed in the local and regional procedures and domestic regulations, as a support for the development of the infrastructures both in the south and north of the Mediterranean, thus facilitating the encouragement and invigoration of these infrastructures and their integration into the socioeconomic environment.

### 3. Improvement of the MPC Electricity Network

The electricity systems in the southern Mediterranean are much weaker than the European ones. The fact of connecting with the EU and between the MPCs themselves enhances their systems but requires an effort of modernisation. A significant increase in the contribution of renewable energies could mean a challenge of additional improvement for their system, given that renewable energies require important network capacities and their integration into it presents additional problems related to offer and supply management. For instance, the construction of wind parks on the Moroccan coast requires the extension of the coastal power line in the country until Agadir. However, this effort is not limited to the MPCs. The connection of an HDVC line between the southern Mediterranean countries and the EU Member States to export large quantities of electricity would also mean the need to enhance the electricity network in southern Europe.

The improvement of infrastructures may require specific projects to improve the national power lines and the sub-regional interconnections. The fostering of a Mediterranean electricity ring is an equally important challenge. Moreover, some studies (TREC, 2007) consider it necessary to increase storage capacity in the MPCs in order to stabilise the electricity network faced with an increase in renewable energy generation. Another relevant aspect is that the integration of renewable energies demands greater flexibility from the system in order to be managed appropriately, to which end there are related mechanisms, such as the relaxation of the natural gas supply contracts, which should include the relaxation of the take or pay clauses.

### 4. Installation of Natural Gas Generation Capacities to Supplement the Contribution of Renewable Energies

Most of the studies note that the gradual introduction of generation by renewable installations can require greater capacities of support based on natural gas, especially in combined cycle power stations which can supply the demand peaks. Numerous scenarios indicate that renewable energies will surpass natural gas as a source of electricity generation towards 2015, but that the combined cycle power stations will play a crucial role as flexible system support. In a scenario of growing importance of renewable energies in the energy mix of the MPCs, greater generation capacities based on this kind of installation could be necessary.

Moreover, the promoters of solar thermal energy note that this technology allows the accumulation of energy to liberate it during the night and use conventional fuels to

activate the turbines, which would reduce the need for support capacities. In any case, the development of the gas market is one of the demands of countries like Morocco and Tunisia in their European Neighbourhood Policy action plans.

### 5. Desalination Plan Through Renewable Energies

This is another of the constants in the studies cited. The projections on the hydro resources in the southern Mediterranean and, above all, in the Persian Gulf, point to growing water deficits from the middle of the next decade. Desalination technology has been developed, but still requires major quantities of energy. The desalination plan explores the possibility of using renewable energy to feed the water treatment plants. In principle, desalination is linked to the solar thermal plants installed close to the coast (TREC, 2007; Plan Bleu, 2008a), although the technical conditions of solar thermal energy make it more efficient in dry climates and areas above sea level, where there is no humidity and more hours of insolation, but it lacks hydro resources.

### 6. Technical Cooperation and Training Programmes

The need for technical cooperation is one of the aspects highlighted by the main studies, which especially note two fields of action in the MPCs: (1) in the use and development of the technologies associated with renewable energies; and (2) in the management and regulation of the electricity and renewable energies sector. It is also, together with the training programmes, one of the preferences expressed by the MPCs to their European partners.

The training programmes in the framework of a mutual interest and also as an exercise in Euro-Mediterranean solidarity could include different levels and must be considered as a key piece of cooperation between the EU and the MPCs in the exercising of the "strong-soft power" of Europe. Moreover, the training programmes could incorporate, together with the authorities, new actors such as education and research institutions, companies and eventually other civil society agents, in addition to regulators and network operators.

- Training of professionals and technicians, both in the field of engineering and economics, to have local human resources that allow the dissemination of the new energies and the satisfaction of consumers.

- Training in R&D&I in renewable energies in research bodies considered of reference in the respective MPCs to foster the transfer of technology.

- Training in the regulatory bodies, in the network operators and the authorities of the MPCs, extending twinning to the field of management and regulation of renewable energies and the electricity sector.

In this aspect, the EU also has important assets in the institutional and business fields, associations related to renewable energies, and education and research centres. The growing interest in renewable energies is also seen in the field of technical cooperation and training. There is great demand and the actions on occasions are fragmented and bilateral. It would be important to seek a non-bilateral system to construct a strategic relationship through a broad training programme that integrates regulators, businesses, associations, universities, professional training centres and research institutions. There are European funds that could fund this kind of programme. Moreover, the already existing programmes in the EU

(Erasmus, Marie Curie, Leonardo, etc.) could emphasise the dimension of renewable energies in their extension to the MPCs (ESTELA, 2009).

## Institutional Aspects Related to Regulation

Despite the advances in recent years and the expected expansion of renewable energies in the medium term, these sources still require notable stimuli which should be transitory to achieve the break-even point. They also need a stable institutional context to minimise the regulatory risk and to allow the heavy investment resulting from their high capital intensity, therefore generating the appropriate conditions for the establishment of a sustainable framework in the long term for their development. The legal security of investment in the region with a high-risk country, as well as the stability of the incentives, are a necessary prerequisite before considering the payment schemes and funding possibilities of the different initiatives. Another relevant aspect is that of technical standards, as the interoperability of the electricity systems requires standardisation. Although the harmonisation of the technical requisites is being undertaken gradually, the need to increase technical cooperation to advance in this process should be pointed out.

The analysis of the incentivising and legal measures adopted by the MPCs in terms of renewable energies reveals some advances, although at very disparate rates. It is possible to distinguish between three groups of countries (Plan Bleu, 2008a, 2008b). Morocco and Tunisia (to which Israel and Turkey could be added) would be the most advanced, while the producing countries (Algeria, Egypt and Libya) would be those with more reforms pending in terms of renewable energies. The remaining MPCs would occupy an intermediate position. Nevertheless, all studies coincide in pointing out the existence of institutional and legal barriers, including the following:

- Absence or fragmentation of responsibilities in the field.
- Lack of coordination of the bodies involved.
- Non-existence or partial and/or long-winded application of the legislation.
- Instability of incentives.

All these elements should benefit from technical cooperation and training programmes to improve the legal framework and endow the regulatory bodies and authorities with greater capacities for analysis and monitoring. The electricity markets of the MPCs have historically been state monopolies but in the mid-1990s Morocco, Turkey, Tunisia and Egypt started to allow private participation in electricity generation. At present, around 16% of the capacity installed in these countries is in the hands of independent power producers (IPPs). Given that the monopolies persisted, power purchasing agreements (PPAs) were established with the IPPs, which, however, were unable to attract the necessary investment. Consequently, some MPCs have initiated the liberalisation of their electricity market to offer more guarantees to investors, but the process is still insufficient with a long and difficult road ahead and should be fostered by the EU.

The restructuring of the electricity market of the MPCs is fragmentary and unequal but evident advances can be seen in certain countries. Turkey is a special case, both as a candidate to EU membership and for its central role in the transit of eastern energy corridors to the EU. As a candidate country, it has advanced greatly in the liberalisation of the electricity market and the alignment with the Community acquis (EDAM-CEPS, 2007). As a place of transit of energy corridors linking the EU with the producing regions in the Middle East, the Caspian Sea and Russia, Turkey aspires to become an energy hub and, to this end, it needs

to have appropriate infrastructures and regulatory frameworks. In 2002, Algeria passed a new electricity law allowing independent production and envisaging a gradual opening of the electricity sector to private investors. Egypt also permits the activity of the IPPs, although the liberalisation of the electricity market is advancing slowly (REACCESS-DLR, 2009). In Morocco a new electricity law is being prepared pointing to a greater liberalisation and the establishment of a regulatory body. Tunisia also admits the IPPs and, for the moment, does not see adopting new liberalising measures as necessary (OME, 2008).

One of the central aspects of the regulatory framework is the payment and the incentives brought by renewable energies. The most widely extended regulation modality for alternative energies in the EU, and perhaps the one which prompts most agreement, are the so-called feed-in tariffs (FITs).[3] However, there are other alternatives, such as tax incentives. For instance, the United States applies a tax deduction scheme to production known as Production Tax Credits (PTCs), which is criticised for the unpredictability of its renewal and the inability to indicate significant incentives in periods of reduction of benefits. Other schemes envisage the use of quotas, auctions or subsidies for investment. After the Third Legislative Package, the EU gives freedom to its Member States to adopt the payment scheme of their choice, mainly FIT, trading green certificates (quotas), tax incentives or auctions. However, the FIT or bonus system seems to have greater consensus and is preferred by the Commission and, in fact, is applied in most of the Member States, therefore seeming to be the most convincing scheme.

Nonetheless, the problem is not so much about where it is in force but who finally pays the bonus: the MPCs themselves or the EU Member States. In the southern Mediterranean, the bonus system is in force in Algeria, Egypt, Israel and Turkey, and is under study in Morocco, Tunisia and Syria. Tunisia, Egypt and Syria offer investment subsidies while Morocco and Turkey are studying them. Morocco and Tunisia offer tax reductions (on VAT or tariffs). Tunisia and Algeria have national funds for the development of renewable energies. However, perhaps the major obstacle is the high degree of subsidy from which fossil fuels benefit in most of the MPCs. In some countries, such as Morocco or Tunisia, these subsidies have tended to decrease slowly but continue to be considerable and harm the competitiveness of renewable energies.

The issue is about which scheme and incentive mechanisms can be applied. In this case, there is nothing approaching the Community acquis, given that, despite the prevalence of the bonus system, the MS have different mechanisms. Perhaps the most advanced countries in these designs, such as Morocco and Tunisia, can move to an operative bonus system with relative speed. Those countries with bonuses, such as Algeria, Egypt and Turkey, must guarantee and facilitate access to the market. For the remaining countries, a first stage could consist of introducing the subsidies for investment and tax reductions. It must be taken into account that the bonuses can be very onerous (in Algeria, for instance, they represent up to three times the tariffs for conventional energies) and that their application to increasing quantities of electricity generated by renewable energies can be limited.

In short, it does not seem that those MPCs which have managed to reduce at a significant political cost the subsidies for fossil energies and electricity (or even maintain them) can take on overly ambitious commitments in terms of giving a bonus to renewable energies. Moreover, an increase of tariffs not only has a major social cost but can also involve undesired results. For instance, the marked rise in electricity tariffs in Syria at the start of this decade immediately resulted in increasing losses due to illegal connections in the poorest areas of the country. Furthermore, the continuity of subsidised prices in order to favour industrial activities, foster agriculture and, in general, moderate the price indicators of the MPCs is highly probable.

3. In Spain, it is possible to opt for a FIT or a bonus.

A different aspect is the regulation of the electricity to be exported to the EU. One proposal is to establish a bonus somewhat lower than the one prevailing in the EU, or in the destination countries for this electricity. The lower bonuses are applied to wind energy and hydroelectric energy, followed by solar thermal, while the bonuses for photovoltaic energy tend to be higher. At a Community level, the convergence of the different models for the promotion of renewable energies seems difficult and, therefore, it could be preferable to develop a "European" tax and regulatory model superimposed over the different national models applicable to a Mediterranean plan of renewable energies. In fact, the new Community renewable energies Directive 2009/28 stipulates in Article 9 the treatment of joint projects between Member States and third countries for their consideration within the objectives established by such a directive for each Member State, always under determined conditions.[4] The new directive allows the Member States to link their domestic support systems to those of other Community countries. More importantly in terms of this article, it also allows the "physical" import of renewable energy (including green electricity) from third countries, such as from wind or solar parks in the southern Mediterranean. However, the "virtual" imports (investment in renewable energies in those third countries) cannot be calculated according to the objectives fixed by the directive. The statistical transfer (the exchange of renewable credits between countries with production surpluses and deficits) is limited to the Member States, and only in the case that the selling country has achieved its own objectives and that both countries cooperate in joint projects of renewable energies.

## Funding, Investment Ownership Structure and Technology Cooperation for Development

The financial crisis has also had a serious effect on the real economy. The fall in growth has caused a collapse in energy demand, which has immediately and expectedly resulted in a fall in energy prices. This reduction in the demand and the prices of traditional energies is acting as a disincentive to investment in new energies, in research, extension and production of them. The public aid programmes are mainly being destined as a priority to financial institutions and industrial activities, at the expense of limiting the funds aimed at research and the development of renewable energies which, at current price levels, seem less competitive. However, when there is a change in current world economic conditions, it will be difficult to make the investment in renewable energies and transmission networks that has not been made in these years.

The initial purpose of the UfM was to identify priority structuring projects and facilitate their achievement by mobilising the necessary funding. The doubt that has accompanied the whole constitutive process of the UfM is where these funds would come from. The Euro-Mediterranean Community funds have a clear budget allocation and are widely criticised for their limited level, in any case incapable of providing the funding necessary for the set of projects envisaged by the UfM, although the FEMIP (Facility for Euro-Mediterranean Investment and Partnership of the EIB) and the ENPI (European Neighbourhood and Partnership Instrument) could have a role. The approach retained for the funding of projects is based on the concurrence of public and private funds, Community funds, loans from the EIB and other international financial bodies, especially the World Bank.

This section focuses on investment in generation and transport installations and is approached from the perspective of a broad participation of private initiative and, specifically, foreign direct investment (FDI), largely affected by the international crisis in 2008 and 2009. Initially, the role of the sovereign wealth funds of the GCC

4. Directive 2009/28 on the promotion of the use of energy from renewable sources, 23rd April 2009.

countries was considered, which could be interested in participating in a project such as the Solar Plan, in which they could participate first as financial backers and/or partners to later develop the technology in the Gulf itself. In fact, the participation of the Arab League in the UfM sought to bring together the Gulf countries to raise investment in the projects identified. However, the evolution of the Gulf sovereign wealth funds has been highly affected by the financial crisis just when they started a diversification and adopted less conservative positions, and we must add that the decrease of oil prices has substantially reduced such funds and increased the demands for domestic funding based on them.

Moreover, the current international economic and financial situation will not ease the task of mobilising the necessary public or private funds. Nevertheless, it is worth distinguishing between the fund contribution (funding or capital) for the installations of renewable electricity generation and transmission lines, on the one hand, and the training and technical cooperation programmes, on the other. The latter represent a category apart, whose funding could be the object of Euro-Mediterranean and bilateral cooperation. The funding of a Supergrid could be the responsibility of a company with the participation of Transmission System Operators (TSOs) which, in most of the MPCs and the Member States, are public companies or regulated natural monopolies and multilateral banks, especially the EIB. Another possibility is a wider consortium with the participation of distribution companies.

In terms of renewable generation installations, FDI has the advantages of having no effect on public budgets, creating jobs, transferring technology, training human capital and developing new industrial branches. Although in the past the MPCs were not attractive for FDI, in recent years clear improvements have been made, especially in some countries. In fact, in the field of hydrocarbons, numerous large-scale projects are funded, but with few exceptions the case of FDI in renewable energies in the MPCs is not comparable.

Maintaining the same level, the estimations indicate that 70% of renewable electricity generation projects in the MCS will be IPPs funded by private funds (OME, 2008), a model related to free access to the market and regulation by bonuses. Both aspects have been emphasised in the previous section as crucial for private initiative to invest in renewable energies. This model is based on the private funding of the installations in the southern Mediterranean, provided that the regulatory conditions are profitable. Foreign investment, specifically European, and within it Spanish, has shown interest in the potential of renewable energies in the southern Mediterranean. However, the public financial means of the MPCs are not capable of supporting major incentives for renewable energies and, therefore, are not enough to generate an expansion in the market.

These limitations of the markets in the southern Mediterranean require foreign investment, both of the installations and derived from a payment tariff framework for “green” electricity exported to the EU. Other measures could consist of acting on the tax pressure through tax abatements (VAT), agreeing subsidised loans and creating guarantee funds (or widening those existing) that reduce the risk of the projects. The Private Public Partnership (PPP) seems to adapt well to projects involving major investment (solar power stations, wind parks) and has already been used by European companies in the region. Another possibility to reduce the risk of the projects is to enhance the role of energy services companies, providing them with participation in capital and guaranteeing the maintenance of the installations.

Within international funding, the UfM emphasises the role of the European Investment Bank (EIB). In the UfM ministerial meeting on sustainable development held in Paris, the EIB, the German Development Bank (KfW) and the French Development Agency (AFD) announced a joint investment programme of 5,000 million euros for renewable energies. In April 2009 in Alexandria, InfraMed was launched, a long-term investment fund which will complement the FEMIP by investing, among others, in energy infrastructures. There is also the possibility of resorting to the funding of international and regional banks, such as the World Bank, the African Development Bank or the regional Arab financial institutions. The instruments can include donations and subsidised loans. The role of sovereign wealth funds of producing or Asian countries is to be determined, as mentioned above, although it forms part of the initial UfM proposal which also includes the Arab League. Some initiatives echo one of the star proposals of President Obama's campaign and recommend the creation of a regional fund for renewable energies or the strengthening of those funds which already exist in the MPCs.

Another possibility is to mobilise the use of the Clean Development Mechanism (CDM) of the Kyoto Protocol. The CDM is a financial tool which may encourage FDI in renewable energies in the MPCs, but which is being poorly used in the region. Among the projects submitted are wind parks in Egypt, Morocco and Israel, and the rural photovoltaic electrification programme in Morocco. The most common explanation is the lack of local powers to prepare projects, the lack of coordination between authorities and the almost non-existent involvement of banks and local companies. Moreover, investors must face the uncertainty over the price of emissions incorporated in their volatility and the demands for additionality which may inhibit the application of the most innovative technologies.

Development cooperation can also contribute through the funding of installations that help fight against energy poverty as well as through technical cooperation and training programmes. Technology cooperation for sustainable development is one of the lines of development cooperation which could be better developed by the EU. Some countries have experience in the funding of renewable energy projects with development aid funds, for instance the Zafarana wind park in Egypt, which has benefited from loans and donations from the KfW and Danish and Spanish development agencies.

The EU should ensure that all projects related to renewable energies in the southern Mediterranean mean a factor of sustainable development for these countries. This requires technology cooperation and the formation of local capacities so that the MPCs can benefit from the development of renewable energies and these mean a boost for their socioeconomic development. Southern Mediterranean countries have shown their interest in renewable energies but have also clearly pointed out the kind of European support they require.

There is a lot to do in technology cooperation, and in the EU there is the potential to act in this field, from the exploitation of the current cooperation programmes to the launching of specific instruments against climate change which can be applied to the Mediterranean region. At the level of multilateral cooperation there can also be funding opportunities in the context of the fight against climate change. The UfM could agglutinate all these elements and turn the Solar Plan into a major Euro-Mediterranean sustainable development project including elements of technology development, generation of local capacities in terms of renewable energies, the fight against climate change, eradication of energy poverty, and regional integration.

## Acronyms

CDM-Clean Development Mechanism

CENER-Centro Nacional de Energías Renovables

CIEMAT-Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas

CNE-Comisión Nacional de la Energía

CSP-Concentrated Solar Power

CTAER-Centro Tecnológico Avanzado en Energías Renovables de Andalucía

DLR-German Aerospace Center

EIB-European Investment Bank

ENPI-European Neighbourhood and Partnership Instrument

ESTELA-European Solar Thermal Electricity Association

FDI-Foreign Direct Investment

FEMIP-Facility for Euro-Mediterranean Investment and Partnership

FIT-Feed-in Tariff

GCC-Gulf Cooperation Council

HVDC-High Voltage Direct Current

IDAE-Instituto para la Diversificación y Ahorro de la Energía

IEA- International Energy Agency

IIER-Instituto de Investigación en Energías Renovables

IPP-Independent Power Producers

LNG-Liquefied Natural Gas

MPC-Mediterranean Partner Countries

OME-Observatoire Méditerranéen de l'Énergie

PPA-Power Purchasing Agreements

PPP-Public Private Partnership

PTC-Production Tax Credits

PV-Photovoltaic energy

TREC-Trans-Mediterranean Renewable Energy Cooperation

TSO-Transmission System Operator

UfM-Union for the Mediterranean

UNED-Universidad Nacional de Educación a Distancia

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# Alternative Energies: Mediterranean Solar Plan

"The Euromed Expert Group, reporting to the Euromed Energy Forum, met on 7 October 2008, reviewed progress achieved and agreed on future actions, which should further develop the decision of the Paris Summit for the Mediterranean, to launch a Mediterranean Solar Plan focused on market deployment as well as research and development of all alternative sources of energy. An expert workshop organised by Germany in cooperation with France, on the potential and cost of different renewable energy technologies and aspects of a future Master Plan, took place on 28-29 October in Berlin. A conference, organised by France and Egypt in cooperation with Germany and Spain, will convene on 22 November in Paris to discuss financing and project implementation of the Mediterranean Solar Plan. An Immediate Action Plan (IAP) could be agreed to list concrete and pilot projects to be launched in 2009-2010. The aim is to launch three power stations of 20MW in 2009."

*Final Statement Marseilles, 3-4 November 2008*

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Avec une contribution de 7 % au total mondial des émissions de gaz à effet de serre (GES), la Méditerranée est parmi les plus vulnérables aux effets du changement climatique. La technologie, le financement, la responsabilité de réduction des GES sont au Nord ; les sources d'énergies renouvelables, la jeunesse, les opportunités d'investissement vert au Sud. Les pays du Maghreb devraient réussir leur mise à niveau énergétique : la coopération avec le Nord est indispensable, ainsi que l'harmonisation de leurs dispositifs juridiques.
**http://www.politicaexterior.com/pdf/3/3-22-21-fr.pdf**

"Énergie en Méditerranée : croissance durable et intégration régionale", Juan Bachiller. *afkar/ideas,* No. 22, summer 2009.
Il existe un haut niveau d'interdépendance énergétique : le Sud en tant que fournisseur et le Nord en tant qu'importateur peuvent contribuer à un développement conjoint. Le conflit entre la Russie et l'Ukraine en 2009 a mis en évidence l'importance de l'Afrique du Nord en tant que fournisseuse d'énergie pour l'Europe. La région a besoin d'investissements en infrastructures énergétiques : pour garantir l'approvisionnement et avancer dans le sens de l'efficience et de la croissance durable.
**http://www.politicaexterior.com/pdf/3/3-22-20-fr.pdf**

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La demande énergétique des pays du Sud enregistre un taux de croissance annuel de 5 %, alors que ce taux n'est que de 2,1 % dans les pays du Nord. Le PSM permet d'apporter une réponse au double défi de l'énergie et du développement posé par le changement climatique et la raréfaction des ressources fossiles. Son objectif est de créer une capacité de production de 20 GW d'électricité verte en 2020, ainsi que les conditions pour la viabilité d'un réseau régional d'énergies renouvelables.
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# Chapter 2.

# Working Group on Land and Maritime Infrastructure

# 2:
# Working Group on Land and Maritime Infrastructure

*For a Sustainable, Safe and Secure Transport Policy in the Mediterranean*

The participants in the Euromed Forum in Barcelona on 5th November 2009 reached the following conclusions:

- Currently, Euromed transport cooperation is implemented through Euromed work and structures under the Co-Presidency of the Union for the Mediterranean and developed between the European Union and its Mediterranean partners for the entire Mediterranean region.
  The Euromed Transport Forum is the main technical decision-making body under the authority of the Euromed Transport Ministerial Conferences, besides GTMO 5+5 for the Western Mediterranean.

- More involvement by the private sector is desirable at every level of Euro-Mediterranean cooperation in the area of transport.

- The Forum's current activities and the future activities of the Union for the Mediterranean should be coordinated in a spirit of convergence. There will be a need to capitalize on any synergies between the two bodies and those from other regional cooperation organizations, such as GTMO 5+5, as well as a potential and desirable cooperation in the Eastern Mediterranean.

  Within the framework of this cooperation, the Euromed Transport Forum contributes a shared vision of the strategy to be pursued within the area of transport. The Secretariat of the Union for the Mediterranean, for its part, will contribute the promotion and the financial support necessary for the implementation of high priority infrastructure projects.

- In the framework of this cooperation, the responsibilities of third-party countries with respect to their own competencies and modernisation should not be forgotten.

- The work of the Euromed Transport Forum is structured based on the Regional Transport Action Plan (RTAP).

- The Euromed Forum's current activities include the definition of a Trans-Mediterranean transport network (primary planning instrument which forms a

framework for all priorities and gives legitimacy to joint plans), the short list of infrastructure projects, cooperation in the fields of aviation, GNSS and maritime transport and especially in maritime security and the motorways of the sea. Next year, there will be increased cooperation in the road and rail sectors and in urban development.

These activities are felt to be universally necessary and are welcomed by the participants.

- The development of the network and its priority projects is still, within the framework of existing multilateral cooperation, limited by the lack of sufficient funding.

- The definition of new funding instruments will represent one of the main challenges to be overcome. In this respect, GTMO 5+5's proposal to develop a programme (including funding) for the development of a Trans-Mediterranean transport network, based on the Trans-European Transport Network, needs to be considered and pursued further. This concern was also raised in Naples by the Mediterranean countries in October 2009 at the conference on "The Future of Trans-European Transport Networks: Bringing Europe Closer to its Neighbours".

- Within the framework of maritime cooperation, the opening up of the European Maritime Safety Agency to partners on the southern shore of the Mediterranean is becoming a vital step towards giving technical coherence to the Euromed partnership.

- In the spirit of the Paris Declaration of the Union for the Mediterranean, there is a need to put the initiatives suggested into more concrete terms in order to finalize the activities already in place.

One of the most urgent issues is defining the selection criteria for projects of the Union for the Mediterranean and prioritization between sectors and sub-sectors, as well as expanding the idea of project to the broader idea of programme.

- The motorways of the sea should focus on promoting a quality maritime service which is closely linked to improving the competitiveness of the maritime and port sector by means of integrating logistics chains, facilitating through-port traffic and enhancing accessibility to ports by land, specifically via the rail network.

- Another point to be developed, in conjunction with the one above, is that of logistics platforms along the lines of the European Investment Bank study.

- As part of the Union for the Mediterranean, there is also a need to introduce the question of air transport in order to promote new air routes which could improve Intra-Mediterranean connectivity, in conjunction with the implementation of the roadmap for the creation of a Euro-Mediterranean Common Aviation Area (EMCAA).

- Road safety programmes are also required. Although this question is fundamentally an activity to be developed at the national level, there are also shared needs for action at the regional level.

· Besides the priorities in terms of the infrastructure, some cross-cutting activities should not be neglected, including training, bringing the transport sector and companies in the region up to standard, a need for information on the sector, streamlining regulations, transfer of technical know-how and research.

· All these activities need to be undertaken based on an approach to developing transport in the Mediterranean that is sustainable (from an environmental and socio-economic perspective), safe and secure.

# The Union for the Mediterranean and the Transport Sector

*Identification of Actions and Projects*

*Saki Aciman. General Director of the Centre for Transportation Studies for the Western Mediterranean (CETMO)*

The Euro-Mediterranean cooperation fostered by the Barcelona Process through the two Euro-Mediterranean conferences, held in Barcelona in 1995 and 2005, is currently developed by the European Union and its Mediterranean partners through the tasks and structures of Euromed under the co-presidency of the Union for the Mediterranean (UfM). The first of the conferences resulted in the Euro-Mediterranean Partnership and generated the Barcelona Declaration with a firm commitment to a regional approach and, among other measures, to the creation of a free trade area aimed at encouraging the development of the Mediterranean peoples. The transport sector is called on to play an important role as a facilitator of the smooth operation and progress of this free trade area and, by extension, of the new regional approach and union. The Euromed Transport Forum is the highest body responsible for decision-making regarding the Euro-Mediterranean transport sector in preparation for final consideration by the Euromed Transport Ministerial conferences.

## Euro-Mediterranean Cooperation: Political Level

### The Barcelona Process: Background and Objectives

The first Euro-Mediterranean Conference, held in Barcelona on 27th and 28th November 1995, marked the beginning of the Euro-Mediterranean Partnership (Barcelona Process), a broad framework of political, economic and social relations between the EU Member States and the Mediterranean Partner Countries.

In 2005, the Euro-Mediterranean Partnership embraced 35 members: the 25 Member States and 10 Mediterranean Partner Countries, along with Libya with the status of observer since 1999.

In the Barcelona Declaration, approved in 1995, the Euro-Mediterranean partners established the three main objectives of the Partnership.

**1.** The definition of a shared space of peace and stability through the strengthening of political and security dialogue.

**2.** The creation of an area of shared prosperity through economic and financial cooperation and the gradual establishment of a free trade area.

**3.** The rapprochement between peoples through cooperation in the social, cultural and human fields, fostering awareness between cultures and exchanges between civil societies.

## The Role of the Transport Sector in the Barcelona Process

In keeping with the Barcelona Declaration, which defines the Mediterranean as a sea of union between peoples, participants also agree to cooperate in other fields and, to this end,

they emphasise the importance of developing and improving infrastructures, also through the creation of an efficient transport system, the development of information technologies, and the modernisation of telecommunications.
The Annex of the Barcelona Declaration, which constitutes a work programme, points out that: "Efficient interoperable transport links between the EU and its Mediterranean partners, and among the partners themselves, as well as free access to the market for services in international maritime transport, are essential to the development of trade patterns and the smooth operation of the Euro-Mediterranean Partnership."

Transport cooperation will focus on:

- development of an efficient Trans-Mediterranean multimodal combined sea and air transport system, through the improvement and modernisation of ports and airports, the suppression of unwarranted restrictions, the simplification of procedures, the improvement of maritime and air safety, the harmonisation of environmental standards at a high level, including more efficient monitoring of maritime pollution, and the development of harmonised traffic management systems;

- development of east-west land links on the southern and eastern shores of the Mediterranean, and connection of Mediterranean transport networks to the Trans-European Network in order to ensure their interoperability.

In 2005, a second meeting (Barcelona II) took place as a reminder of the tenth anniversary of the first Barcelona Conference. Once again, the importance of transport was emphasised and the work programme adopted reflected the need to "develop a regional transport infrastructure network and adopt a set of recommendations during the Meeting of Euro-Mediterranean Transport Ministers to be held in Marrakech in December 2005 with the aim of boosting Euro-Mediterranean cooperation in the transport sector."

## The European Neighbourhood Policy

Currently, the Mediterranean countries participating in the Barcelona Process form part of the European Neighbourhood Policy (ENP) of the EU. This was implemented in 2004 after the enlargement of the EU to 25, with the objective of avoiding the appearance of new division frontiers in Europe. The ENP complements and enhances the Barcelona Process (multilateral cooperation) with a bilateral approach, through the Action Plans agreed between the EU and third countries, taking into consideration the specific needs and individual characteristics of each of them.

### ENP Funding

Until 1st December 2006, the EC provided assistance to the ENP countries through a series of geographical programmes, such as TACIS (in the case of Russia and the eastern neighbours) and MEDA (for the southern Mediterranean neighbours) or thematic programmes. Throughout the budget period 2000-2006, the funds available for MEDA amounted to approximately 5,300 million euros, to which should be added the European Investment Bank loans for an amount of around 2,000 million euros.[1]

On 1st January 2007, after the reform of the European assistance instruments, the MEDA and TACIS programmes, among others, were substituted by a single instrument: the European Neighbourhood and Partnership Instrument (ENPI). For the budget period 2007-2013, the Community funding for support to reforms in the ENP countries is around 12,000 million euros, which in real terms means an increase of 32%. The funds allocated to the

1. Source: http://ec.europa.eu/world/enp/funding_es.htm.

programmes of each country will depend on their needs, their fund absorption capacity and the effective realisation of the reforms agreed.

Finally, in late 2007 it was decided to create a Neighbourhood Investment Facility, which started to fund loans to the ENP partners in 2008. The European Commission allocated 700 million euros (2007-2013) to this mechanism and, to give greater projection to the credits, it requested that the Member States make a contribution equivalent to that of the Community. The mechanism seeks to subsidise projects of shared interest, mainly in matters of energy, environment and transport.

**A New Initiative, the UfM**

The passage of time and the lack of specific and tangible results of Euro-Mediterranean cooperation have meant that the appearance of this French initiative, launched with the clear objective of reinvigorating and changing the rules of the game of cooperation, has been warmly welcomed by most Mediterranean countries.

The Euro-Mediterranean Partnership, formerly called the "Barcelona Process", was reactivated and renamed Union for the Mediterranean during the Paris Summit for the Mediterranean, organised in July 2008, and later in the Euro-Mediterranean Conference of Foreign Ministers, held in Marseilles in November 2008. The Partnership currently encompasses the 27 EU Member States and 16 partners from the southern Mediterranean and the Middle East.

*New Boost to the Barcelona Process, Better Sharing of Responsibilities and Institutional Governance: Peer-To-Peer Cooperation*

This reactivation seeks to give a new boost to the Partnership and enhance the political character of the strategic relations between the European Union and its southern countries. Following the achievements of the Barcelona Process, the Union for the Mediterranean wants to offer more balanced governance and better visibility for citizens, as well as the commitment to develop specific regional and transnational projects.

Among the most notable innovations of the Union for the Mediterranean would be the system of a rotating Presidency, with a president from the EU and another representing the Mediterranean partners, and the creation of a Secretariat in Barcelona responsible for detecting and promoting multisectorial projects of utility at a regional, sub-regional and transnational level.

*More Concrete and Visible Relations, the Bases for a Project Approach*

Thus, the Paris Declaration, by which the Union for the Mediterranean was launched, also defined 6 priority fields or projects, the central points of its activities:

- de-pollution of the Mediterranean Sea;
- creation of maritime and land highways;
- launching of civil protection initiatives aimed at fighting against natural and human disasters;
- production of a Mediterranean Solar Plan;
- opening of a Euro-Mediterranean University in Slovenia;
- the Mediterranean initiative for the development of companies, aimed at microcompanies and the SMEs.

*The Importance of Transport*

A quotation from the project Annex of the Joint Declaration of the Paris Summit for the Mediterranean of 13th July 2008: "Maritime and land highways: The Mediterranean is a sea that joins, not separates, its people. It is also a highway for commerce. Easy and safe access and flow of goods and people, on land and sea, is essential for maintaining relations and enhancing regional trade. The development of motorways of the sea, including the connection of ports, throughout the entire Mediterranean basin, as well as the creation of coastal motorways and the modernisation of the trans-Maghreb train, will increase the flow and freedom of the movement of people and goods. Particular attention should be devoted to cooperation in the field of maritime security and safety, in a perspective of global integration in the Mediterranean region."

*UfM Funding*

In the Paris Declaration on the launching of the UfM, it is stated that the UfM will be able to mobilise the necessary additional funding for the region. In others words, the UfM is meant to have the capacity to attract more financial resources for regional projects, with a high degree of donor coordination, which will be its main added value. Funding will mainly come from:

- private sector participation;
- contributions from the EU budget and UfM partners;
- contributions from other countries, international financial institutions and regional entities;
- the Euro-Mediterranean Investment and Partnership Facility (FEMIP);
- a Euromed ENPI envelope, the Neighbourhood Investment Facility and the cross-border cooperation instrument within the ENPI, as well as the other instruments applicable to the countries covered by the initiative.

Given the great expectations that the UfM has aroused both on the effective execution of projects with high visibility and impact in the beneficiary population and on the many existing needs, it is possible to glimpse a considerable distance between the requests for project funding received by the UfM Secretariat and the funds available to execute them. In fact, the challenge of the funding of the UfM initiative is the most important pending issue, after the implementation of the UfM Secretariat in Barcelona.

## Situation of Euro-Mediterranean Cooperation in the Transport Sector

Since the 1995 Barcelona Conference, Euro-Mediterranean cooperation in the transport sector has materialised through the high level political dialogue of the Euromed Transport Forum, which includes the public authorities of the Mediterranean countries, EC representatives, as well as representatives from other international organisations and institutions, and the technical work of its working groups and the projects implemented throughout the years.

### Euro-Mediterranean Cooperation in Transport from 1995 to 2005

From 1995 to 2005, some important advances in transport cooperation in the Mediterranean have taken place:

· Seven meetings of the Euromed Transport Forum

It was not until the third meeting of the Euromed Transport Forum in Brussels in 2002 when two significant initiatives were launched to respond to the most important challenges in the region. These were formalised through two projects: the "Euro-Mediterranean Transport Project" for the facilitation of transport, and the "Infrastructure Project" for the definition of the infrastructure network.

The first project sought the definition of an action plan and a set of initiatives necessary to prepare and modernise the transport sector for the free trade area, dealing with issues such as the liberalisation of the transport market, training, new technologies, logistics and regulatory convergence, among others. The second project sought to define the infrastructure priorities and their funding.

In recent years, other projects around this forum and its working groups have been implemented. The working group on aviation launched the "Aviation Project", whose final objective was to design a route map to generate a single Euro-Mediterranean sky. In the field of navigation satellite systems, they are working within the framework of the "GNSS-Metis Project" for the promotion of this technology. The working group on maritime aspects has two independent projects to invigorate its activities, the "Safemed Project" – maritime safety – and the "MedaMoS Project" – maritime highways in the Mediterranean.

· The High Level Group

In 2004, the European Commission created a High Level Group for the extension of the priority trans-European transport axes to the neighbouring countries and regions. This group worked simultaneously with the Euromed projects. The High Level Group was created in practice as a group of consensus to fundamentally work with the aim of identifying the key infrastructures in the international relations of the neighbour countries. The group exceeded the work carried out by the Forum's "Infrastructure Project".

· The Blue Paper

The "Euro-Mediterranean Transport Project" produced the Blue Paper on Transport in the Mediterranean Region, which contains the diagnosis of the transport system and the recommendations for its improvement. This document, together with the High Level Group report, was adopted by the Euromed Transport Forum and by the first Conference of Transport Ministers of the Region, held in Marrakech in December 2005.

· The Marrakech Conference

This ministerial conference expressed the desire of the region to further develop cooperation over the next years. It also recognised that an integrated, safe and efficient transport system in the region represents a fundamental element in the development and stability of the region and in the growth of interregional trade.

On that occasion, the Ministers of Transport of the EU and Mediterranean countries demanded the intensification of cooperation with and within the Mediterranean region for transport. With this aim, they charged the Euromed Transport Forum with the writing of a Regional Transport Action Plan (RTAP) for the period 2007-2013.

**Euro-Mediterranean Cooperation in Transport from 2005 to Date: the Regional Transport Action Plan (RTAP) for the Mediterranean**

The RTAP was officially approved and adopted during the eighth Meeting of the Euromed Transport Forum in May 2007 in Brussels. The RTAP is the document of reference for Euro-Mediterranean cooperation in the transport sector for the period 2007-2013. This plan endeavours to intensify the cooperation in the region and establish an efficient transport system as a necessary and important condition for economic growth and integration in the Mediterranean.

Analytically, the RTAP is based on:

- the transport priorities identified in the bilateral action plans signed between the EU and different Mediterranean countries in the framework of the Euro-Mediterranean Partnership or the European Neighbourhood Policy;

- the results of the Euromed framework transport project (2003-2007) funded by the European Union and dealing with transport policy development, including institutional capacity building and infrastructure needs;

- the findings of additional strategic regional projects on a wide range of issues including maritime safety and security (SAFEMED), aviation (Euromed Aviation), maritime highways (MEDA MoS), logistics platforms as well as on satellite navigation systems (GNSS I). These projects will continue to provide technical assistance to the Mediterranean countries with respect to the implementation of several of the RTAP actions;

- the results of the R&D projects (INCO-MED): MEDA-TEN, DESTIN and REG-MED related to infrastructure development and transport facilitation measures, the two latter directly linked to the Western Mediterranean.

The RTAP comprises a set of 34 actions in the different transport sub-sectors (maritime, land, railway, air and multimodal) and mainly seek the reform of the regulation as well as the definition and planning of a trans-Mediterranean network of transport infrastructures. Moreover, it includes considerations on sustainable development, safety and institutional and organisational capacity.

Moreover, the RTAP takes into account the national particularities and priorities and determines the geographical scope of the actions suggested (regional, sub-regional or national) and foresees an agenda for their implementation.

The RTAP actions related to infrastructure foresee the detailed identification or priority projects (with feasibility studies) on the main transport axes that unite the Mediterranean countries with each other and/or with the European Union, in anticipation of investment decisions at a multilateral level. The RTAP considers that the list included in Annex A is not definitive and foresees its updating in keeping with the infrastructural priorities of the countries. Annex A is the result of the work done in the framework of the High Level Group.

Moreover, as a priority in this Annex, a more reduced list of 17 projects has been produced.

### Sub-Regional Cooperation Initiatives: GTMO 5+5

The GTMO 5+5, Group of Transport Ministers of the Western Mediterranean, was created in 1995 with the objective of making regional cooperation in terms of transport advance in the Western Mediterranean and contributing to the Euro-Mediterranean cooperation process in this sector. The members of the GTMO 5+5 are the ministers responsible for transport in the ten countries of the area (Algeria, Spain, France, Italy, Libya, Malta, Mauritania, Morocco, Portugal and Tunisia), with the presence of the Directorate General for Transport of the European Commission and the Secretariat General of the Arab Maghreb Union (AMU).

The cooperation activities of the GTMO 5+5 fall in the following priority fields:

- definition and development of a multimodal transport network in the Western Mediterranean, with special emphasis on links with the Trans-European Transport Network and the networks of the neighbour countries;
- search for advantageous infrastructure-financing modes;
- exchange and transport facilitation with special emphasis on the transport chain;
- training of the companies involved in transport, faced with the instauration of a free trade area;
- establishment of a database and methodologies allowing for regular identification of the priorities in the region;
- development of research on transport in the Western Mediterranean, and the participation of the countries of the Maghreb in international research and development programmes.

### Coordination between the UfM Initiative and Euromed Transport Forum

On 25th June 2009, a UfM Ministerial Conference on Sustainable Development was held in Paris. This conference was preceded by meetings, in the form of workshops, with representatives of the UfM countries of the four main sub-sectors in the sustainable development strategy followed by the UfM French-Egyptian co-Presidency: energy, water, transport and sustainable development of cities.

The objective was to assess the state of progress of the projects, their governance and funding. It is a question of better coordinating the financial institutions, ensuring the capacity to carry out the projects and promoting the technologies or innovative concepts involved in sustainable development. One of the most important conclusions drawn in this conference in terms of the transport sector is the agreement in favour of the coordination and exploitation of the synergies that may emerge between the Euromed Transport Forum and the new UfM initiative.

The transport workshop considers the existence of both levels useful, as it believes that the Forum must contribute a joint vision of the strategy to be followed in the field of transport, as a body of management and reflection on Euro-Mediterranean cooperation, while the UfM, specifically its Secretariat based in Barcelona, must help invigorate and implement the projects considered a priority in the transport field.

The list of the 17 priority infrastructure projects produced by the Euromed Transport Forum was presented during the workshop.

## The Transport Projects

The UfM initiative, through its Secretariat, will seek to develop many projects until their implementation. This is why a series of initiatives is being conceived with the aim of detecting feasible projects with a high impact on the beneficiary population. The UfM initiative must also be seen as an opportunity, for example, to develop and widen actions in the Mediterranean countries and their civil societies. This is how it is being seen in other sectors and countries, where the positioning and alliances of solid European companies and institutions in the framework of the UfM initiative is very advanced.

Returning to the aforementioned information, the Paris Declaration to launch the UfM initiative embraced six priority fields of action. Of these, two have a direct or indirect effect on the transport sector: maritime and land highways and the de-pollution of the Mediterranean Sea.

At present, at the UfM level there are no concrete transport projects which can be considered specific to this initiative. The recognition of the works of the Euromed Transport Forum means that they are, at present, the only proposals which can be declared as such. However, nothing prevents other projects in the future or that they may emerge from different initiatives or backgrounds.

Next you will find a summary of the projects which, despite having a Mediterranean approach, are compatible with these two fields of action and are possible UfM projects.

### Presentation of the Euromed Transport Forum: Annex A and Restricted List

The updating of the infrastructure projects of interest for the region has been produced based on Annex A in the Regional Transport Action Plan. The Euromed Transport Forum has approved an updated list of almost 90 projects.

These 90 projects have been submitted to a prioritisation process through a multi-criteria analysis. The objective was to restrict this wide list of projects until reaching the list of the highest priority projects for the region, focusing on the study of the project feasibility and later promotion among the financial institutions.

The result of this prioritising process is a list of 17 projects, presented below, grouped in four main categories:

- Trans-Maghreb train.

- Land transport infrastructures in the Middle East.

| Title / *Intitulé* | Country *Pays* | Status *État* | Length *Longueur* (km) | Cost/*Coût* (EUR mio) | Comments / *Commentaires* |
|---|---|---|---|---|---|
| Ligne ferroviaire à grande vitesse Casablanca-Tanger. | Maroc | FS | 200 | 1800 | Date de mise en service prévue pour juin 2013. |
| Ligne ferroviaire à grande vitesse Casablanca-Marrakech. | Maroc | FS | 229 | 1230 | |
| Doublement et électrification ligne Tunis - Ghardimaou (fr. algérienne). | Tunisie | - | 220 | 370 | Axe d'intérêt maghrébin de 216 Km. Étude avant 2011. Réalisation après 2011. |

· Mediterranean network of logistics platforms.

| Title / *Intitulé* | Country *Pays* | Status *État* | Length *Longueur* (km) | Cost/*Coût* (EUR mio) | Comments / *Commentaires* |
|---|---|---|---|---|---|
| New Railway Link between Syrian border and borders with Iraq and Saudi Arabia. | Jordan | FS | 432 | 490 | Project is part of "Study of the Railway Development Strategy", undertaken by international consultants. Length between Syrian border and border with Saudi Arabia: 179 km. Additional length to Iraq border: 253 km. Most of the line is in relatively easy terrain, particularly in the remote, flat areas approaching the borders of Saudi Arabia and Iraq. Iraq has already started to tender for the design of the link on its territory. Saudi Arabia has already desginated prepared bidder for BOT on its territory. |
| Rehabilitation and upgrading of the road from Mafraq - Safawi - Iraq border. | Jordan | CD | 280 | 325 | The Road is located on the Western-Eastern Axis and when completed will serve as a link between Europe/Turkey/Syria/Saudi Arabia Axis and Iraq/ Mediterranean Axis. Current road has 2 lanes and asphalted shoulders, future road shall have 4 lanes. Total estimated cost are JD 289.0 million. Construction is expected to start in July 2009 and to be completed in January 2012. |
| Ha'emek railway line (from Haïfa to Jordanian border), including expansion of the Port of Haïfa. | Israel | (PS) (PFS-08) | 75 | 700 / 800 | Pre feasibility study for the rail link prepared by the Euromed Project; Port master plan. Development of an intermodal transport connection between the Middle East and Europe through the Port of Haifa:<br>- Double track from the Port of Haifa to Jordan and beyond, with spur to the Palestinian Authority (Jenin);<br>- Expansion of the Port of Haifa by purchasing of equipment, new links to the railway, new terminals, etc.<br>Government commitment to implement the project with private sector involvement as international project and as part of the multi-annual railway investment programme. |
| Railway bypass around Tripoli till Chekka (via Bahsas area). | Lebanon | - | 20 | 28 | Urban area around Tripoli is densely populated, however a new railway line, linking the network in northern Lebanon and Syria to the region of Cheeka is necessary. Government owns right of way, but detailed alignment will have to be decided.<br>Once railway link is connected, it will allow traffic from Cheeka and Bahsas area to use the railway to go to Syria and beyond. |
| Railway connection between Al Arish (Egyptian border) and Jordan border. | Palestine | - | 210 | 210 | Project would connect Egypt with Jordan: 80km in Gaza Strip, 40 km in Israel, 90 km Westbank until King Hussein bridge.<br>Preliminary design for Gaza section exists. No studies for remaining sections.<br>Section between Gaza Strip and West Bank is also proposed by Israel. Preliminary studies exist, supported by World Bank and USAID. |
| Railway line from Damaskus to Jordanian border. | Syria | CD | 100 | 167 | Historic Hijaz railway exists (from Istanbul to Jeddah) but it is narrow gauge and has a commercial speed of only 40 km/h. It is partly decommissioned.<br>Aim of new railway line: to connect Europe to Jordan and Gulf by building a new line. |

| Title / *Intitulé* | Country *Pays* | Status *État* | Length *Longueur* (km) | Cost/*Coût* (EUR mio) | Comments / *Commentaires* |
|---|---|---|---|---|---|
| Logistics Platform in Alexandria and 6th October | Egypt | (FS) | - | 11 (per location) | EIB and JICA study completed:<br>EIB study recommended two locations in Egypt (Alexandria and 6th October);<br>JICA is more detailed and recommends three locations (6th October, East Port Said and 10th Ramadan). |
| Logistics platform in Homs. | Syria | (FS) | - | | Located in Homs at intersection between North-South and East West roads and two rail lines (all are HLG axes) and near the port of Tartous. The project would facilitate the international freight flow between Europe and the Middle East, including Iraq and the Gulf. |

- Expansion of the port capacity in the Mediterranean.

| Title / *Intitulé* | Country *Pays* | Status *État* | Length *Longueur* (km) | Cost/*Coût* (EUR mio) | Comments / *Commentaires* |
|---|---|---|---|---|---|
| Multipurpose terminal East Port Said, with access to the port. | Egypt | PS | - | 275 | "Port Said East Master Plan" has been completed by DHV. Study makes clear that access road is necessary for the functioning of the port. JICA intermodal study has recommended this project as short list project. |
| Jounieh Port. | Lebanon | PS | - | 28 | Improved facilities for cruise ships, engineering and tender documents exist, but no feasibility study available.<br>Project comprises new breakwater, passenger terminal, quay and small dredging. Cruise ships up to 250 meter will be able to berth on quay. This will allow all cruise ships circulating the Mediterranean to call the port.<br>Construction will be funded by public sector, but operated by private concessionaire under supervision of semi autonomous authority. |
| Reconstruction of the Port of Gaza. | Palestine | CD | - | 120 | Government of Netherlands, Government of France and EIB pledged to contribute USD 70 mio for the reconstruction of the substructure. Project started in 2007, but was stopped. Palestine wants to restart the project. There is a small fishing port, but it can't be used for commercial traffic. |
| Port en eau profonde à Enfidha. | Tunisie | FS | - | 1400 | |
| Port of Candarli (North Aegean Sea Port). | Turkey | FS | - | 400 | Part of TINA, feasibility study exists, part of investment programme, hub port for the Mediterranean.<br>Possible Funding from Pre Accession Facility. |
| Mersin port - new container terminal (Phase I, II and III). | Turkey | PS | - | 600 | There is already a port, but the Container Terminal will be built next to the existing port. Part of TINA list, possible funding from Pre Accession Facility, possible PPP project. |

*Note: this list is a document partially approved by the Euromed Transport Forum.*

As previously noted, this list of projects was submitted to the Paris Conference on Sustainable Development in June 2009. After its definitive approval, this list of projects will be submitted for its promotion by the UfM, once the Secretariat is established and in operation.

Next you will find some statistics of these projects, notably their cost. This amount can be deceptive, given that three projects (the two sections of the high speed train in Morocco and the port of Enfida in Tunisia) represent over 50% of the total cost of the 17 projects.

Statistics of the restricted list of projects

| | No. | Km | Mil. € |
|---|---|---|---|
| Railway | 8 | 1,486 | 5,045 |
| Land | 1 | 280 | 325 |
| Ports | 6 | - | 2,823 |
| Airports | - | - | - |
| Logistics | 2 | - | 33 |
| **Total** | **17** | **1,766** | **8,226** |

*Source: Own production*

### Projects in the Field of Maritime Highways

In recent years, the working group on maritime policy, ports and short-distance shipping of the Euromed Transport Forum has developed the MedaMoS project. This has fostered, through a call for projects, the appearance of operator consortiums, ports and authorities that work together on a maritime highway project between the two shores of the Mediterranean. Out of the total of initiatives which appeared, in 2008 the four most advanced projects were selected with the aim of developing them into a quality maritime service similar to the European concept of "maritime highways", partially thanks to the specific technical assistance for each project. To date, these four projects only receive EU cooperation in the form of technical assistance but have shown on several occasions that they also need another form of cooperation, this time in the form of port infrastructures and equipment.

The four pilot maritime highway projects which can receive specific technical assistance, because of their high degree of maturity, are:

Haifa – Trieste
Bejaia – Barcelona and Bejaia – Marseilles
Genova – Rades – Marseilles
Agadir – Port-Vendres

### Projects in the Field of Maritime Safety and De-Pollution of the Mediterranean

Some of the activities of the working group on maritime safety of the Euromed Transport Forum revolve around the Safemed project. One of the primordial objectives of this project is the improvement of the environmental situation of the Mediterranean Sea. This is carried out through prevention of and improved response to maritime accidents and also through the regulatory approach and the facilitation of the implementation of international agreements. This working group can produce some interesting projects with

a view to their future submission to the UfM, such as everything related to the improvement or installation of information and monitoring systems for the traffic of vessels in the Mediterranean countries. In this field, the southern Mediterranean countries have great interest in the European Maritime Safety Agency.

### GTMO 5+5 Project Proposals

In the framework of the GTMO 5+5, the following major projects have appeared as the main infrastructure priorities for the sub-region:

- Nouakchott-Bengazhi Trans-Maghreb motorway. This motorway is the first of the priorities, and the countries have significantly advanced in the achievement of the project; to be specific, in the three countries in central Maghreb, important progress has been made in the last decade. The government forecasts show that, in the next two years most of the motorway section will be constructed, with the exception of the border links. A project to be invigorated by the international community would be the support for countries in the construction of the Algeria–Morocco and Algeria–Tunisia border sections of the Trans-Maghrebian motorway, as well as the study and promotion of a similar axis in the Mashreq (in keeping with the possibilities and realities of the region).

- Modernisation of the trans-Maghreb train. In a first stage the aim is to improve the existing railway lines in the Maghreb countries to make the whole line interoperable and achieve a competitive means of transport, both of goods and passengers, thereby allowing expansion of the port-railway intermodality. This project can be widened to the remaining Mediterranean countries in the Mashreq (in keeping with the possibilities and realities of the region), allowing the shipping of goods by train from Turkey to Morocco.

- Maghreb high speed train. The second stage of the project consists of implementing a new railway line suitable for high speed trains.

## Some Reflections on Possible Projects of Interest and Actions for the Mediterranean Region

The statements of the Paris Declaration in the transport sector require further consideration of the concepts and materialisation of the initiatives proposed as specific projects and actions.

The opportunity represented by the launching of the UfM and its work for the promotion of cooperation in the Mediterranean through the development of specific projects is clear. However, this opportunity requires the clarification of some issues, such as the project selection criteria to be used by the UfM or the need to prioritise between sectors and even types of sectors: infrastructure, horizontal, governance, facilitation, safety, training…

Undoubtedly, the projects proposed must be sustainable, mainly from the environmental and socioeconomic point of view. Moreover, the possibility of working on the concept of programmes should be studied. These projects must be integrating and allow the participation of diverse sectors or sub-sectors, thereby having greater impact. The programme concept also responds to the reality perceived by most of the actors, and this is why there is generally no single problem whose solution will aid quick development. On the contrary, there is a network of small interlinked projects in which joint action is necessary to overcome the problems.

### Infrastructure Projects

We must reflect on whether the infrastructure projects mentioned in the presentation document, especially linear projects (motorways, railways) must be a priority, as they are not easily manageable in the short term.

Moreover, financial groups seem to be less interested in transport infrastructures faced with the increasing interest in energy infrastructures. In any case, investments must assume a level of risk but this must be limited, through, for instance, guarantees, references and, of course, always depending on the type of client. In the Mediterranean countries it will be necessary to have a transparent and stable legal framework in the long term. All this leads to the need for financial and legal security which goes beyond the field of reflection of this document.

In any case, the introduction of an exercise of definition of the trans-Mediterranean network, in the image of RTE-T in Europe, as a framework of reference and help for the definition of the infrastructure priorities in the region, is an excellent initiative which helps to technically dialogue with shared criteria.

### The Role of Transport Consultancy and Technical Assistance

Consultancy in the field of transport is experiencing a great expansion in the market of the Mediterranean countries. The engineering companies on both shores of the Mediterranean have the capacity to act in matters of consultancy, studies and projects in terms of infrastructure and transport services (all modes) and there is also a need for technical assistance in Mediterranean countries. Consultancy has space to grow in these countries and this is why its interest in the possible UfM results and projects is very high. It is a sector ready to be involved in the possible resulting initiatives.

### Air Sector

The air sector is not approached by the Paris Declaration. The current cooperation focuses on the definition and implementation of a policy of a single Euro-Mediterranean sky. Of course, this is a need, and it is already being implemented. However, it is not sufficient and there are other possible cooperation fields. The lack and poor quality of intra-Mediterranean connections is a pending issue, as is the creation of a space for discussion bringing together airports and air companies, where it is possible, to study the needs and feasibility of hypothetical new air services, which could provide solutions. New air routes must be analysed and promoted which can give a more appropriate service to the Euro-Mediterranean region and which are a good business opportunity for air companies, airports and airport sectors in the Mediterranean cities and countries. This issue could constitute a project that would seek to foster air connectivity in the Mediterranean. It could also make new infrastructure needs emerge.

### Port and Logistics Sectors

The port and logistics sectors can generate a greater number of ideas or needs to be developed in order to improve the operation of the transport sector in the Mediterranean. The maritime field is where the joint work of the actors from the two shores of the Mediterranean

can be more beneficial and have a greater effect, as pointed out by the Paris Declaration. Indeed, the improvement of transport between the two shores of the Mediterranean, which obligatorily involves the improvement of maritime transport, would have a clear effect on development, both in North African and southern European countries. Beyond competition between ports in the region, it must advance towards a framework of complementariness and joint work, so that all are enhanced. The role of the Mediterranean as a world shipping centre and gate of entry for goods in Europe is best based on joint work between the two shores rather than on a reductionist view of competition.

There is a need to reduce or eliminate the economic, infrastructure, safety and logistics barriers which limit the competitiveness of the Mediterranean as a route of transit and embarking and disembarking of Asian goods with a destination (or origin) in Europe and North Africa, and also in their cross-trading function of shipping between Asia and America, thereby limiting a greater development of alternative routes which avoid the Mediterranean to connect Europe and North Africa with Asia.

The Mediterranean transport network must respond to the logic of the present and future flow of goods, in the most efficient and sustainable way. All this will redound on lower logistics and environmental costs. It is necessary to create the necessary conditions (price of land, railway and road connections, efficient customs procedures, etc.) so that the major international logistics operators create regional and continental distribution centres on the two shores of the Mediterranean to serve Europe and Africa from them.

The Paris Declaration speaks of maritime highways. This concept originated in Europe with the aim of transferring land traffic to the maritime mode, which there has been an attempt to extend to the whole of the Mediterranean, but generates lack of understanding about its meaning, scope and real application. The actors of the sector consider in general that the projects launched on the concept of maritime highway must not result in unfair competition, through the subsidy of private maritime services or port improvements.

The current needs focus on the improvement of governance of the port infrastructures in the South and the optimisation of their potentials. This work in the port field should lead to the updating of the port (operative and administrative) management and to the modernisation of the ports with the resulting increase in capacity, and this could develop through port-port agreements, the development of the port communities and benchmarking or twinning. Moreover, there is an important need to improve the connectivity of the ports towards the hinterland as a basis for any port development.

It could be said that the concept of maritime highway, as a quality maritime service, could be embraced by an action to generate a network of optimised port services appropriate for hosting quality maritime services. The reflection presupposes that if there is a flow of goods and the operative conditions are suitable, private companies will be interested in implementing a maritime service to respond to this flow.

Moreover, the EIB study on the creation of a Mediterranean network of logistics platforms, providing a homogenous level of service and sharing between them a series of horizontal services, is attractive for a large number of countries and operators.

This project is linked with the need to improve the connection of the ports with their hinterland, providing through logistics and their activities an invigoration of the port hinterland and the whole of the transport chain. This is a demand which comes both from the authorities of these countries and the private transport operators.

This EIB study is of unquestionable interest and should be adapted in its application to the needs detected, among others, by the national logistics plans of each country, their interests and capacities.

Within this field we should not forget the training needs in the field of logistics or the opportunities emerging for the implementation of the management (mainly information) tools essential for raising the level of the southern countries.

Overall, and based on these issues, it could be interesting to propose a programme that can encompass the necessary port improvements in the southern Mediterranean countries through work in partnership with the European ports, and which integrates within it the original idea of the EIB project of the Mediterranean network of logistics platforms.

This programme would have as its main objective the improvement of the competitiveness of the Mediterranean maritime and port space thanks to a greater integration and optimisation of the logistics chains, through the improvement of maritime-land transport and its services, including the logistics infrastructures and the land connection and accessibility to the ports.

# Maritime and Land Highways

"As a follow-up to the Paris Summit's decision to develop a 'Motorway of the sea' project, an expert group held two meetings on 17 July 2008 and on 17 October 2008. In these meetings, concrete and pilot projects were presented and support for their full implementation is being sought. The outcome of all these activities will lead to a Ministerial Conference to be hosted by Greece in 2009."

*Final Statement Marseilles, 3-4 November 2008*

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"Infrastructure Paves the Way", Saki Aciman. *Mediterranean Yearbook, Med. 2009.*
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# Chapter 3.

# Working Group on the Water Sector

# 3:
# Working Group on the Water Sector

Owing to the environmental and socioeconomic values and current regional problems related to water management, Mediterranean countries are developing a Strategy for Water in the Mediterranean. It is hoped that this Strategy will be approved by the Euro-Mediterranean Ministerial Conference, to take place in Barcelona from 12th to 14th April 2010, during the Spanish Presidency of the European Union.

Spain, through the Ministry for the Environment and Rural and Marine Affairs, is actively participating in this Strategy and acts as coordinator of the Technical Writing Group responsible for developing and agreeing the contents of the Strategy.

The fundamental aspects of this Strategy are included in the Declaration of Euro-Mediterranean Ministers in Jordan in 2008 and cover the following concerns:

- Need to advance in effective governance for the integrated management of water resources, water supply and its quality.

- Include the influence of climate change in aspects of water, placing special emphasis on drought and flood management, as well as on the mitigation of the effects of water scarcity.

- Optimise water funding.

- Consider water demand management and efficiency, and non-conventional water resources.

- Determine a holistic approach of the projects to be developed, from the study of the implementation of the infrastructure or model, construction or execution to its operation and maintenance in the long term.

It is noted that this is a complex environment that combines expectations of economic growth (i.e. growing population and agricultural and industrial activity) with a prediction of global change making clear a future with no guarantee of water availability. This environment requires effective and rapid economic and technical solutions to the demands of the Mediterranean countries.
The following points should be noted as essential to the definition of the Water Strategy:

## 1. Need for Integrated Management of Water Resources

The countries of the south of the Mediterranean have similar problems in terms of water resources: droughts, water scarcity, water access problems, floods, quality problems, and (urban and industrial) water pollution. There is great experience in several European countries in relation to water that can be transferred to other countries that need it with the objective of achieving integrated resource management. Moreover, some of these countries have extensive experience, both in management models and in practical aspects of water sanitation and treatment techniques and use of non-conventional resources that can be useful to other countries and help to improve their water management.

Particularly important is governance, already included in the Strategy being developed, for the good management of water resources. Governance, based on general criteria established in the Strategy, must be adaptable to the local conditions of each country transferring governance criteria or models.

Integrated management must consider the sustainable use of all resources, including non-conventional resources such as desalination and recycling, and even environmental needs.

## 2. Action Plans

The Strategy should include specific actions for its development and implementation, involvement of the parties and monitoring of its evolution. Therefore, the Strategy should be complemented by action plans to be developed by the countries that include identification and priorities of the most important projects. Criteria should be defined for the identification of needs and the selection and prioritisation of the most important projects to be developed in function of the beneficiary countries. These criteria must also include the funding aspects that guarantee the carrying out of the activities included in the action plans. Moreover, information on and publication and approval (public, local) of the project selection criteria is also desirable.

The selection of projects could be based on aspects such as water efficiency, demand management, possibilities of cost recovery, environmental impacts, maintenance guarantees, and respect for the cultural aspects of each country.

The action plans should also promote the establishing of determined indicators for project monitoring.

## 3. Importance of the Private Sector

It can be argued that it is not possible to resolve problems of water in the Mediterranean without the participation of the private sector.

In the context of the Mediterranean countries there are a relevant number of enterprises that have achieved, over the last few years, an important development in the sector (desalination, water sanitation, recycling…) as well as a clear improvement in their management skills. This experience, along with the possible synergies, must be exploited and can be transferred to the Mediterranean countries that need it.

Promoting public-private collaboration through a mixed focus of projects between the local public sector and the companies carrying out the projects is considered

appropriate. The need to generate and establish an environment of trust and equality in this respect should be mentioned.

It can be very useful to develop a framework in which the public and the private sector can meet and interact, exchanging ideas and experiences. It should help to transmit the right messages between the public and private sectors to avoid overlapping and repeating plans and actions in the region. Meetings such as the Barcelona Euromed Forum can improve the role of companies in the region and increase visibility of the private sector, while guaranteeing their involvement in the process of the Strategy for Water in the Mediterranean.

To improve this connection between the public and private sectors, the Governments involved need to request projects and programmes that can be developed in the Mediterranean region and can, consequently, be included in the Strategy for Water in the Mediterranean.

The priority action lines were set out in the Declaration of the Euro-Mediterranean Ministers in Jordan in 2008, and are the following:

- Adaptation to climate change.
- Balance between water availability and demand.
- Conservation and rehabilitation of natural environments.
- De-pollution of the Mediterranean.
- Technology and efficient use of water.

These can be broken down as: management of water scarcity/drought, social participation, irrigation management, water cycle in small communities, de-pollution/treatment of residual waters – urban, industrial –, climate change, sanitation, regeneration, recycling, rainwater, water policy, urban-rural, governance, aquatic ecosystems, non-conventional resources, desalination, underground waters, new technologies (validation), and occasional pollution.

## 4. Knowledge Transfer

The existing experience in diverse Mediterranean countries, both in technology and in water management, can be transferred to other countries to mutual benefit.

First, there is a need to compile, value and promote existing knowledge in Mediterranean countries and make a selection of the models to be implemented that can be useful for UfM projects; definition of the transfer/dissemination of knowledge and technology models. For example, models of infrastructure management, good sectorial practices, and so on.

This transfer should be concentrated on advances in training and education at a local level, for solid capacity building at all levels to confront current challenges.

The role of universities, research bodies and projects of the EU Framework Programme in this knowledge transfer is considered important, as is the part played by the public and private sectors involved in water issues.

Another aspect to consider is the definition of the training strategy, communication of the benefits for society and the creation of knowledge in the local ambit (capacity building) to guarantee the feasibility and achievement of the objectives in the long term of the projects to be developed.

Given that agriculture is the greatest consumer of water in these countries, it is necessary to adopt irrigation techniques that allow saving and efficient use of water.

The cultural and educational aspects of each country must always be respected as they constitute the fundamental pillars of Mediterranean tradition. These multicultural features associated with water in local ambits must be appropriately managed for sustainability of the projects. It will be important to achieve local social participation throughout the gestation-implementation process of the projects and training programmes. For example, price of water, recycling of regenerated water, and so on.

## 5. Funding and Legal Aspects

The funding possibilities must be clearly defined if we want the application of the Strategy to achieve satisfactory results. To this end, the models that allow long-term sustainable funding of projects to be carried out should be defined. For example, price of water.

The establishing of models and funding formulas appropriate to the needs of the countries, as well as promoting international cooperation, are highly important aspects.

The countries must establish appropriate funding strategies to contribute to relieving funding of projects and their conservation.

The development of a common legislative basin management framework (rules/directives) can be considered, which includes particular features such as basins shared by several countries. The WFD (Water Framework Directive of the European Commission) can serve as a model of structure, but it should develop some aspects which are critical in the Mediterranean ambit, such as water scarcity or floods. The WFD has created good practices in European countries that can be applied in the ambit of the projects.

## 6. Coordination and Cooperation

There is a series of water strategies, similar to that of the Mediterranean, in other geographical regions, such as the Arab Strategy. It seems important for there to be a certain coordination in these strategies so that they follow the same criteria and exploit the synergies that can be produced, including the multiple initiatives at European and world level, such as the EU Water Initiative, the Millennium Development Goals, the Water Supply and Sanitation Technology Platform, and the Global Water Partnership, among others.

Moreover, to achieve the success of the Strategy it is considered necessary to intensify cooperation at all levels, between countries and between public and private sectors, as well as with other sectors affected and continue working in Forums like that of Barcelona to define relevant projects and priorities.

# Problems and Needs of Sustainable Water Management in the Mediterranean Area

*Damià Barceló,*[1,2] *Mira Petrovic,*[2,3] *and Jaume Alemany*[1]



## 1. General Introduction: Problems and Facts

The Mediterranean Sea is the largest semi-enclosed European sea, characterized by a narrow shelf, a narrow littoral zone and a small drainage basin, especially in the northern part. Today, 82 million people live in coastal cities in 21 countries on the Mediterranean rim and by 2025 there will be an estimated 150-170 million. Today, the southern Mediterranean countries account for 32 per cent of the region's population; by 2025 that is expected to have reached 60 per cent. Even though the population growth is slowing down in the area, this will still mean an increase in environmental pressure in the immediate future, especially because the rise in population will be mainly concentrated in the countries located in the southern and eastern Mediterranean. The important level of human activity in coastal areas is also leading to serious pollution problems, caused by the large quantities of industrial and urban waste that are produced and discharged in the sea with a low capacity for self-decontamination and a slow water renewal cycle. Seasonal population pressures are also very high. Over 100 million tourists visit Mediterranean beaches and cities every year and this number is expected to double by 2025. In order to cater for this booming business, natural habitats have been replaced by modern resorts and the extra pollution generated is often dumped untreated into the sea, threatening the equilibrium of the entire ecosystem of the region.

The regions included in the Mediterranean basin are amongst the world areas most affected by water scarcity in addition to the pollution of freshwater resources. It is estimated that 30 million Mediterranean people live without access to clean drinking water due to lack of general investment and/or lack of resources (see Figure 1).

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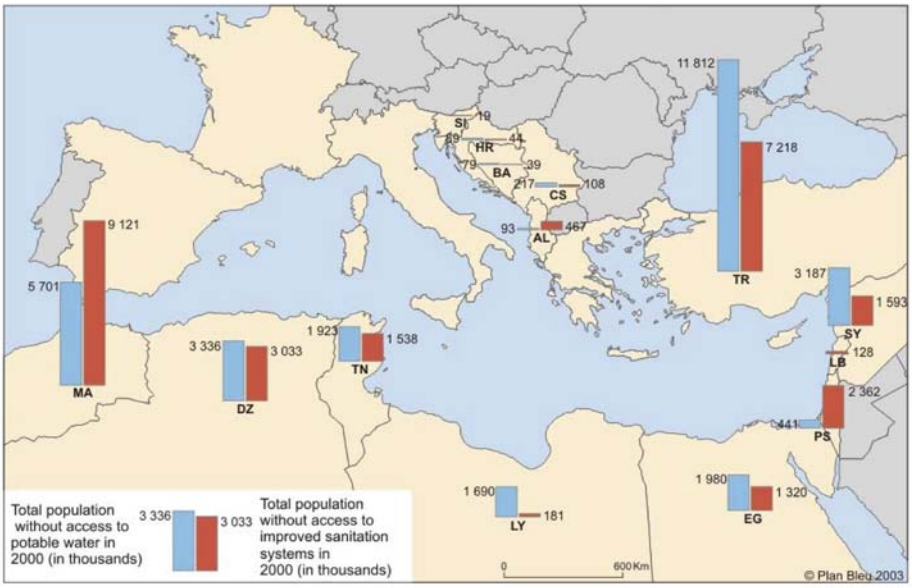
3. Institució Catalana de Recerca i Estudis Avançats (ICREA), Passeig Lluís Companys, 23, 80010 Barcelona, Spain.

**Figure 1: Access To Safe Drinking Water and Sanitation**




Source: UN-SDMI, OMS-Unicef, 2003.

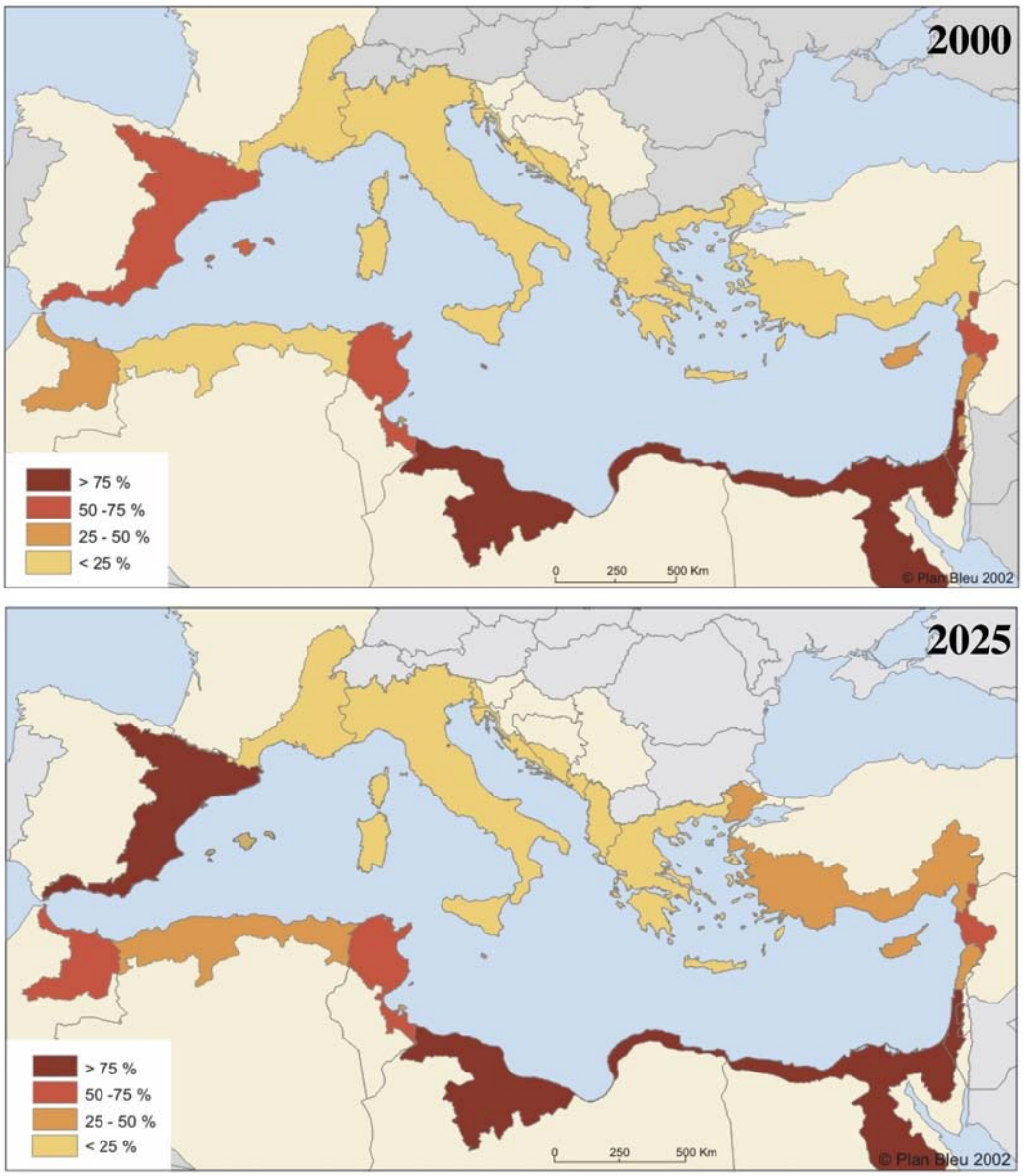
The degree of pressure on water resources, expressed through the exploitation index of renewable natural resources (volume of annual abstraction on renewable natural water resources/annual average volume of available renewable natural water resources, expressed as a percentage), and its projection to 2025 is shown in Figure 2. Tensions on the resources are expected to be particularly high in Egypt, Israel, Libya, Palestinian Territories and in the Spanish Mediterranean catchment areas (index at 75% or higher), as well as in Malta, Syria, Tunisia and in some catchments of Morocco (index between 50 and 75%).

Understanding water scarcity and the way to cope with scarcity is not just a matter for water managers or scientists. Water scarcity has a direct impact on citizens and economic sectors that use and depend on water, such as agriculture, tourism, industry, energy and transport. Water scarcity and droughts also have broader impacts on natural resources at large, through negative side-effects on biodiversity, water quality, increased risks of forest fires and soil impoverishment. Ultimately, the shortage of available water may not only have effects on water quality, but also on the ecosystems' integrity, and may result in economic and social disarrangements.

The increased pressure on water resources will cause additional effects on aquatic ecosystems, with some direct and indirect effects. This is particularly relevant since freshwater ecosystems deliver relevant services to human societies. The effects on watersheds are commonly focused upon streams and rivers. Hence there will be effects on morphology (incision, channel simplification), chemistry (higher nutrient and pollutant concentrations) and biological communities (lower diversity, arrival of invasive species, lower efficiency of biological processes). Regional climate models provide a series of consistent high resolution scenarios for several climate variables across Europe. Analyses in Mediterranean watersheds consistently suggest that the climate will be significantly hotter and drier, especially in summer. It is expected that this will influence both the fate and behavior of pollutants.

Since it is evident that the physical, socio-economic and environmental limits of supply-based policies have been reached, future scenarios include implementation of a number

**Figure 2: Exploitation Indices of Renewable Natural Water Resources**

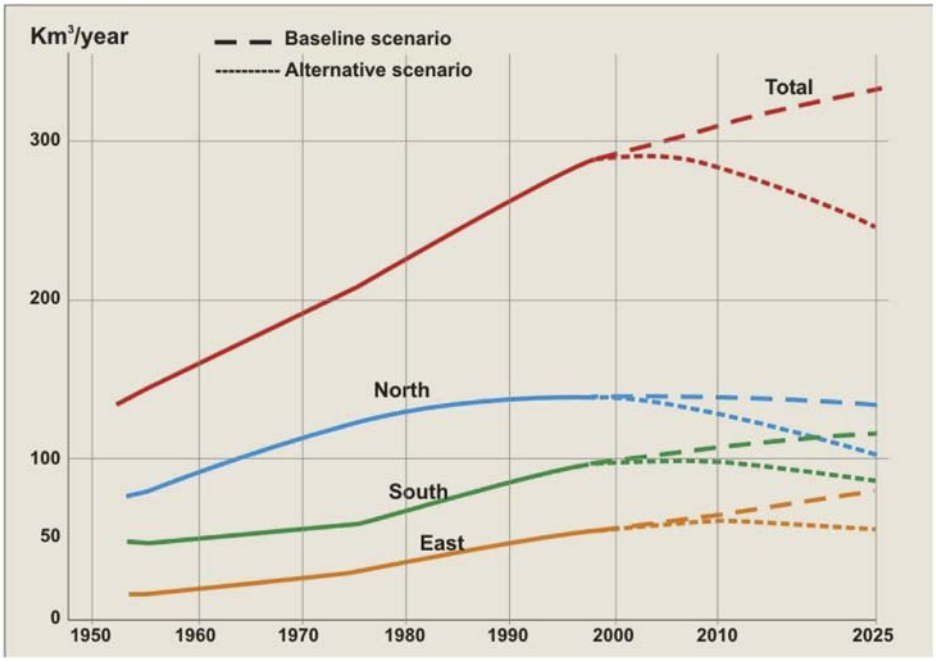



Source: Plan Bleu, UNEP – Regional Activity Centar. Environment and Development in the Mediterranean.

of policies based on improved water demand management and policies aimed to increase exploitable potential through improved water and soil conservation, and increased recourse to the artificial replenishment of water tables in arid areas. An alternative scenario (see Figure 3) accounts for potential savings in agriculture (including wastewater reclamation and reutilization, reduction of transport losses and increase in efficiency in irrigation), industry (increase in recycling rate) and domestic water (reduction of transport losses and leaks).

Analyzing potential alternatives and needs indicates that there is no single and simple solution for water scarcity because multiple causes (or stressors) require multiple solutions. Several options need to be applied when considering the existing resources. In particular, for the scenario of climate change, increased demand and decreasing resources must be

**Figure 3: Total Water Demand of Mediterranean Sub-Regions (Evolution 1950-2000) and Baseline and Alternative Projections 2000-2025)**




Source: Plan Bleu.

considered. These options need to consider the delicate coupling between social and natural systems, where each has their share. Both improved technologies and upgraded water management practices are necessary in all sectors where water is used (e.g. agriculture, manufacturing or tourism). In agreement with the European Water Framework Directive (article 9), it is essential that the full economic and environmental costs are considered in evaluating the alternatives, where conservation of resources and their quality at the source could also be included. The use of decision support systems may be helpful in integrating the multiple actors, as well as in optimizing drought management and mitigation measures.

More relevant options to deal with water scarcity in the Mediterranean area are:

- Working for a culture of water-saving and efficiency is essential. That requires an active public awareness from citizens and economic sectors. Potential savings can be stabilized into the future and these savings extended to domestic and agricultural needs. Developing water savings in irrigation, within general planning for the economic needs of the whole territory, is essential.

- Valuing ecosystem services can provide a framework for understanding that social needs and natural capital are not separated. Public education is critical to achieve the goal of compatible use of water resources and the conservation of our natural heritage.

- Improvement of wastewater treatment (WWT) quantitatively and qualitatively. Any choice of treatment technology performed should rely on those Best Available Technologies Not Entailing Excessive Costs (BATNECC) and providing the best environmental practice and option. Furthermore, new and innovative control strategies could be adopted in order to improve the biological process performance and reach a proper water quality and energy consumption. Adoption of new technologies for wastewater treatment will help to confront these goals. An interesting strategy to improve

water treatment along with maintaining power consumption under control is to combine different technologies (biological and physico-chemical) in a single wastewater treatment plant (WWTP) according to the different characteristics of the wastewater and the receiving media (combined approach).

- Pilot plant tests and benchmarking of existing works will provide a useful knowledge to help in the choice of the proper wastewater treatment plant (WWTP) technology and its layout. These activities will improve the long-term performance of the new WWT infrastructures.

- Sewage water reclamation may be considered as an adequate water source for urban, tourism and agricultural uses. With proper treatment, sewage water can even be used for drinking water under certain circumstances. There are several techniques adequate for the improvement of chemical and microbiological quality that could help to provide these uses (in Catalonia, up to 101 $Mm^3$ will be available in 2027). The solutions are linked, however, to available energy; this sometimes becomes the critical limitation. Public perception and cultural issues also need to be evaluated and improved when this source of water is considered. Thus, public consultation would help to detect future mis-understandings.

- Desalination is one of the current options to obtain water resources that could provide a source of water independent of the potential changes in climate (in Catalonia, up to 190 $Mm^3$ will be available by 2027). However, energy needs and costs are high, although recently research has been developed using solar energy in desalination (average energy costs can be estimated around 3.40 $kWh/m^3$). Nevertheless, desalination should not be considered the only option.

- Use of ground waters requires adequate protection of aquifers. Overexploited aquifers affect the water available for surface aquatic ecosystems, and may create problems of subsidence and salt water intrusion. Recharging aquifers requires good chemical and microbiological quality of the waters. Some techniques to improve the water quality of underground waters exist, even at the large scale. Recovered ground water wells can provide additional resources (up to 43 $Mm^3$ in Catalonia, which could be raised to 90 Mm3 during extreme droughts).

- There are a lot of universities and research centers with international prestige, which can provide knowledge and experience in order to evaluate or assess (during the planning of the actions) the foreseeable effects of the new water projects identified within the UfM of the global change. Furthermore, short and medium term monitoring, with adequate indicators, has to be considered in order to check the evolution of water bodies and to acquire “in situ” experience for future projects and to assess the impact of the planned “actions”.

## 2. The Union for the Mediterranean (UfM) and Sustainable Water Management

Environment – De-Pollution of the Mediterranean is identified as one of the six priority areas (programmes) of the Union for the Mediterranean and listed in the Annex of the Paris Declaration. The Programme “Sustainable Water Management and De-Pollution of the Mediterranean” aims to promote sustainable water management policies in the context of the current increasing water scarcity. In total, €22, million is allocated for 2009-2010. Part

of the funds will be dedicated to support the Mediterranean Water Strategy and the implementation of the "Horizon 2020" Programme. This initiative is built around 4 elements:

- Projects to reduce the most significant pollution sources focusing on industrial emissions, municipal waste and urban waste water, responsible for up to 80% of pollution in the Mediterranean Sea (Reduction).

- Capacity-building measures to help neighboring countries create national environmental administrations that are able to develop and police environmental laws (Capacitation).

- Using the Commission's Research budget to develop and share knowledge of environmental issues relevant to the Mediterranean (Knowledge).

- Developing indicators to monitor the success of Horizon 2020 (Monitoring).

The preparation of the long-term Strategy for Water in the Mediterranean (SWM) was the key decision of the Euro-Mediterranean Ministerial Conference on Water (22 December 2008, Jordan). Recently, the Water Expert Group of the Union for the Mediterranean, held in Athens, Greece, 7-8 September 2009, prepared the Terms of Reference for the development of the SWM. This document pointed out that SWM should be oriented to specific and measurable objectives and commitments such as water saving potential, de-pollution targets, etc. Among the different issues to be tackled by SWM, reference should be made to water allocation, water scarcity, efficiency, extreme phenomena like floods and droughts, trans-boundary water resources, sanitation, groundwater and health, among other issues.

The Water Expert Group of the Union for the Mediterranean was also informed on key strategies, processes and initiatives in water that already exist in the Mediterranean. One of these key strategies is the implementation of the Water Framework Directive (WFD), within which the river basin management plans should be adopted by 2009, after public consultation. In this scenario, it is necessary to remember that the Water Framework Directive 2000/60/EC (WFD) and the Council Directive 91/271/EEC concerning urban wastewater treatment have proved to be useful in order to improve the water quality in continental (and indirectly in marine) waters. This European experience is valuable and should be a starting point in the framework of the UfM projects in terms of: adopting the river basin as planning unit; the public participation; the cost-benefit analysis of actions, considering the receiving media quality above discharge emission limits…This expertise could be useful to deal with the big job of implementing the large number of different projects to "de-pollute" the Mediterranean.

Under the France-Egyptian Presidency, in the Ministerial meeting on sustainable development projects (Paris, June 2009), a list of 113 projects was proposed in the domain of the Horizon 2020 initiative and proposed by UfM members following priority concerns of (i) de-pollution of the Mediterranean; (ii) technologies and efficient use of water; (iii) balance between supply and demand; (iv) conservation and rehabilitation of natural environments and (v) adaptation to climate change.

To satisfy the growing demand, the proposed projects are in line with national policies that are largely dominated by efforts to increase water supply and multiply the number of large water infrastructures.

The re-activation of the UfM in June 2009 also provides the opportunity to re-activate, under the Spanish Presidency, the Programme of Sustainable Water Management and De-pollution of the Mediterranean, refining the existing projects and considering new ones aligned with the priority concerns. There should be special emphasis on the area of management of the urban water cycle (including production of drinking water, water supply, sanitation, treatment of wastewater and re-utilization of wastewater and sludge), aspects which are crucial to reach the goals of this program. The involvement of companies should be focused towards long-term projects, such as those dealing with management issues, strengthening technology research, technology transfer and capacity building, as well as monitoring water quality, which also imply the need to interact permanently with local administration and local companies, and therefore strengthen the links with those companies and in general increase commercial presence of European companies in the Mediterranean market. In addition, Spanish companies have interest in participation in short-term activities, such as construction of infrastructure (building of new treatment plants, sanitation and sewerage infrastructure and expansion of existing facilities), where they can participate as constructors, as well as experts in planning and operation.

## 3. Identification of Tentative Priority Areas (Projects)

- Drinking Water Treatment and Distribution
- Wastewater Treatment
- Reuse of Wastewater
- Reuse of Sludge

### 3.1 Drinking Water Treatment and Distribution

As the world increasingly comes to the realization that a combination of population increases, development demands and climate change means that freshwater will be in chronically short supply in rich and poor areas of the world alike, there is increasing interest in desalination as a technique for tapping into the vast and infinitely tempting water supplies of the sea. Until recently, widespread desalination for the purpose of general water supply for land-based communities has been limited by its great expense and it is notable that the area where desalination made by far the greatest contribution to urban water supplies were in the oil-rich and water poor States around the Persian Gulf. Improvements in the technology of desalination, coupled with the rising cost and increasing unreliability of traditional water supplies, are bringing desalinated water into more focus as a general water supply option with major plants in operation, in planning or under consideration in Europe, North Africa, North America, Australia, China and India, among others.

However, seawater desalination is also significantly raising the overall energy intensity, potential climate impact and the price of water. Despite improved technology and reduced costs, desalinated water remains very expensive and sensitive, in particular due to the increases of energy costs. Our knowledge of impacts is largely based on limited research from relatively small plants operating in relative isolation from each other. The future being indicated by public water authorities and the desalination industry is of ever larger plants that will frequently be clustered together in the relatively sensitive coastal environments that most attract extensive settlement.

Besides the issues on desalination plants, there is a need to implement new infrastructures or rehabilitate or upgrade the existing ones in terms of the Water

Treatment Plants (WTP), wells and pipes. To increase the efficiency of all these infrastructures, they must be properly planned, designed, built and operated. As mentioned, there is a high level of expertise in Mediterranean countries about all these items.

**Short-Term Projects**

- Planning, design, construction and operation of desalination plants
- Planning, design, construction and operation of WTPs
- Planning, design, construction and operation of urban water supply systems
- Planning, design, construction and operation of well systems
- Capacity building (practical issues, operational parameters, control, improving of analytical capabilities)

**Long-Term Projects**

- Study of long-term environmental impact of desalination
- Innovative technologies for treatment of concentrates; technology research and technology transfer

### 3.2 Wastewater Treatment

Sewage generation from coastal cities is one of the major pollution problems on the Mediterranean coast. The problem is exacerbated due to the rapid growth of many coastal cities and towns, especially on the southern Mediterranean coast. The sewage collection system is often only connected to parts of the urban population, which leads to direct discharge of untreated wastewater into the sea through other outfalls.

Existing wastewater systems are generally capital-intensive and require expensive, specialized operators. Therefore, before selecting and researching a wastewater treatment technology, an analysis of cost effectiveness needs to be made and compared with all conceivable alternatives. The selection of suitable technologies should be environmentally sustainable, appropriate to the local conditions, acceptable to the users, and affordable to those who have to pay for them. Simple solutions easily replicated, which allow further upgrading with subsequent development and that can be operated and maintained by the local community, are often considered the most appropriate and cost effective. The choice of a technology will depend on the type of wastewater. In the developing countries, usually characterized by high population density and notable shortfall in available water resources, the proper wastewater technology to be adopted under the prevailing local conditions is one of the critical issues which should be well defined. For the local application of treatment techniques, studies must be undertaken including a detailed risk assessment evaluating microbiological, chemical and biological factors, to identify necessary technologies, uses and control tools. For regional utilities, this minimum treatment level is expanded to include tertiary treatment. Therefore, rules and regulations need to be established or adjusted to the new requirements of WHO (2006). Farmers should be involved in the project as they might benefit from wastewater or sludge reuse as appropriate treated wastewater is a valuable resource that must be utilized and agriculture is given priority for reuse.

The lack of personnel with the appropriate technical and managerial skills for the use of advanced technological tools and implementation of modern management strategies are among the major constraints for achieving the goals of improving and attaining more efficient wastewater management practices. Moreover, there is a general necessity to transform the concepts of water efficiency improvement and water saving in industrial applications into implementation policies, programs and actions on the ground in the countries which are particularly affected by water shortage problems, such as the arid and semi-arid areas of the South Mediterranean and Middle East Regions. Technologies available are many and well known, but it has been widely demonstrated that certain industrial wastewaters require the application of innovative treatment technologies. Moreover, any choice performed should rely on those not entailing excessive costs (BATNECC) and providing the best environmental practice and option.

**Short-Term Projects**
- Planning, design, construction and operation of WWTPs, sea outfalls and sewer networks
- Rehabilitation and upgrading of existing WWTPs, sea outfalls and sewer networks
- Capacity building (practical issues, operational parameters, control, improving of analytical capabilities)
- Building capacities for the use of appropriate technical and managerial skills in water efficiency and water saving
- Legislation for wastewater treatment, using the combined approach to improve water quality

**Long-Term Projects**
- Projects on integrated management of wastewaters
- Monitoring of water quality and environmental risk assessment
- Development of innovative technologies for wastewater treatment, technology research and technology transfer

## 3.3 Reuse of Wastewater

The scarcity of water and the need for protecting the environment and natural resources are the main factors leading countries in the Mediterranean region to introduce the reuse of treated wastewater as an additional water resource in their national plans of water resource management. The key types of constraints to such practices are:

- Financial constraints (related, for exemple, to high costs of treatment systems and sewerage networks, high operational costs especially for electricity, low prices of freshwater compared to reclaimed wastewater, low user willingness to pay for reclaimed wastewater).

- Health impacts and environmental safety especially linked to soil structure deterioration, increased salinity and excess of nitrogen.

- Standards and regulations, which are in some cases too strict to be achievable and enforceable and, in other cases, not adequate to deal with certain existing reuse practices.

- Monitoring and evaluation in both treatment and reuse systems, often related to lack of qualified personnel, lack of monitoring equipment or high cost required for monitoring processes.

- Technical constraints, including, for instance, insufficient infrastructure for collecting and treating wastewater, inappropriate set up of existing infrastructure (not designed for reuse purposes), improper functioning of existing infrastructure, insufficient skilled and qualified personnel.

- Institutional set-up (especially poor coordination at relevant intra- and inter-sector levels) and lack of appropriate personnel capacity.

- Lack of political commitment and of national policies/strategies to support treatment and reuse of wastewater.

- Public acceptance and awareness, related to low involvement and limited awareness of both farmers and consumers of crops grown with reclaimed wastewater (and/or sludge).

Main area of application of re-use practices are:

- Agriculture and landscape irrigation.
- Groundwater recharge.
- Direct or indirect potable use.

*Treated Wastewater Reuse for Agricultural and Landscape Irrigation*
Because of the nature of sewage, fears have expressed about the possible hazards associated with effluent reuse. In assessing these hazards various pathways for the dissemination of undesirable pollutants have been examined. Two aspects of wastewater reuse in agriculture have become subjects of paramount importance: the possible risks to health and the potential environmental damages. Health considerations are centred around the pathogenic organisms that are, or could be, present in the effluent and the build-up of toxic materials within the soil, and subsequently within plant and animal tissues which might eventually reach the human food chain. The leaching of materials such as nitrates and toxic soluble chemicals into the groundwater is also a matter for concern. Environmental risks involve the effects of the use wastewater containing dissolved substances which have deleterious effects on the growth and development of plants.
The reuse of treated wastewater for agriculture irrigation has some advantages as well as some disadvantages.

Advantages include:

- Source of additional irrigation water.
- Savings of high quality water for other beneficial uses.
- Low-cost source of water supply.
- Economical way of wastewater disposal, pollution prevention and sanitary problems.
- Reliable, constant water source.
- Effective use of plant nutrients contained in the wastewater, such as nitrogen and phosphorus.
- Provides additional treatment of the wastewater before being recharged to groundwater.

Disadvantages include:

- Wastewater not properly treated can create potential public health problems.
- Potential chemical contamination of the groundwater.
- Some of the soluble constituents in the wastewater could be present at concentrations toxic to flora.
- The treated wastewater could contain suspended solids at levels that may plug nozzles in the irrigation distribution system as well as clog the capillary pores in the soil.
- The treated wastewater supply is continuous throughout the year while the demand for irrigation water is seasonal.
- Major investment in land and equipment.
- Final key question: who will pay the bill?

*Treated Wastewater Reuse for Groundwater Recharge*

- The purposes of groundwater recharge using treated wastewater can be:
- To establish saltwater intrusion barriers in coastal aquifers.
- To provide further treatment for future reuse.
- To augment potable or non potable aquifers.
- To provide storage of treated water, or to control or prevent ground subsidence.

Also, groundwater recharge will help to provide a loss of identity between treated water and ground water. This loss of identity has a positive psychological impact where reuse is contemplated and is an important factor in making treated water acceptable for a wide variety of uses, including potable water supply augmentation.

*Treated Wastewater for Direct and Indirect Potable Reuse*

Direct reuse of wastewater for potable purposes is clearly limited, indirect reuse for potable purposes takes place constantly and on a worldwide basis. Nevertheless, it will be necessary to develop educational campaign about the use of reuse water for drinking. Indirect potable reuse is more acceptable to the public than direct potable reuse as the water loses its identity as it moves through a river, lake, or aquifer. Indirect reuse, by virtue of the residence time in the water course, reservoir, or aquifer, often provides additional treatment and offers an opportunity for monitoring the quality and taking appropriate measures before the water is ready for distribution. In some instances, however, water quality may actually be degraded as it passes through the environment.

**Short-Term Projects**

- Planning, design, building and operation of infrastructure for collecting and treating wastewater for re-use purposes
- Institutional set-up (improving personnel capacity)

**Long-Term Projects**

- Planning and development of regional irrigation systems using reclaimed water
- Creation of expertise networks
- Monitoring and evaluation of reuse systems and environmental risk assessment of different re-use options
- Increase of public acceptance and awareness

### 3.4 Reuse of Sewage Sludge

*Sewage Sludge Reuse for Agriculture*
Most wastewater treatment processes produce a sludge which has to be disposed of. The reuse of sludge on agriculture has beneficial plant nutrients. Sewage sludge also contains pathogenic bacteria, viruses and protozoa along with other parasitic helminthes which can give rise to potential hazards to the health of humans, animals and plants. Thus, sewage sludge will contain, in addition to organic waste material, traces of many pollutants used in our modern society. Some of these substances can be phytotoxic and some toxic to humans and/or animals, so it is necessary to control the concentrations in the soil of potentially toxic elements and their rate of application to the soil. Apart from those components of concern, sewage sludge also contains useful concentrations of nitrogen, phosphorus and organic matter, which makes sewage sludge a valuable resource for agricultural purposes. The availability of the phosphorus content in the year of application is about 50% and is independent of any prior sludge treatment. Nitrogen availability is more dependent on sludge treatment, untreated liquid sludge and dewatered treated sludge releasing nitrogen slowly with the benefits to crops being realized over a relatively long period. Liquid anaerobically-digested sludge has high ammonia-nitrogen content which is readily available to plants and can be of particular benefit to grassland. The organic matter in sludge can improve the water retaining capacity and structure of some soils, especially when applied in the form of dewatered sludge cake.

Other options for sludge re-use include:

- Sewage sludge reuse for biogas production.
- Sewage sludge reuse for co-incineration and co-firing.
- Biosolids production.
- Sewage sludge composting.

**Short-Term Projects**
- Planning, design, building and operation of facilities for recycling and treatment of sludge
- Capacity building and legislation

**Long-Term Projects**
- Monitoring of sludge quality and environmental risk assessment
- Development of innovative technologies for sludge treatment; technology research and technology transfer

### 3.5 Irrigation

At world level, agriculture accounts for 70% of the use of water. Usually, water is used in irrigation with very low efficiency. Increasing this efficiency would then free a large amount of water for other uses. On the other hand, present and future needs for feeding a growing population will increase the need for irrigation. Therefore, there is need to improve the existing irrigation systems and plan and design the new ones from the point of view of the efficiency. Doing so, a better use of the water in irrigation will be achieved, and there will be a larger amount of water available for urban and other uses.

The water scarcity episodes in the northern Mediterranean countries along with the wide experience of eastern Mediterranean countries have led to a high development of knowledge and expertise about high efficient use of water. It would be possible to combine this knowledge and to apply it to the ongoing and future irrigation projects in other countries in the Mediterranean Region.

**Short-Term Projects**
- Planning, design, building and operation of efficient irrigation systems
- Modernization of existing irrigation systems (conversion from low efficient gravity systems into high efficient pressurized systems)
- Capacity building

## 4. Final Conclusions and Recommendations

This document should be an additional step towards the long term Strategy for Water in the Mediterranean (SWM). In this respect, water saving, water scarcity, sanitation and water demand and efficiency of non-conventional water resources are key issues of the SWM regarding climate change.

Scarcity of water resources and needs for protecting the environment and the natural resources are the main factors leading the Mediterranean Countries (MC) to introduce treated wastewater as additional water resources in the national plan of water resource management. Analyzing potential alternatives and needs indicates that there is no single and easy solution for water scarcity because multiple causes (or stressors) require multiple solutions. Several options need to be applied when considering the existing resources. In particular, for the scenario of climate change, increasing water demand and decreasing resources must be considered. It is necessary to integrate water quality in wastewater reuse and to implement a strategy and policy to promote reuse. The selection of the treatment system must be based on the type of the possible reuse. Cost-benefit analysis should include socio-economic and environmental aspects. Finally, there is also an important need of emphasis on community and end users information, and education programs with pilot areas for any wastewater reuse program to make clear both the advantages and disadvantages. From this it can be concluded that wastewater systems are generally capital-intensive and require expensive and specialized operators. This aspect gains special importance when new techniques are applied, for example membrane bioreactors, tertiary chemical oxidation treatments, or ultrafiltration and nanofiltration systems for obtaining high quality reusable water. Therefore, before selecting and researching a wastewater treatment technology, an analysis of cost effectiveness needs to be made and compared with all conceivable alternatives, taking into account that the use of solar energy in these countries will significantly reduce the operational costs in MC due to their suitability of climate and weather conditions. The selection of technologies should not only be environmentally sustainable, but mainly appropriate to the local conditions, acceptable to the users, and affordable for those who will pay the bill. Capacity building and the monitoring of new infrastructures performance are also issues of concern.

Apart from these considerations, some issues remained insufficiently addressed, which give more work for the future, including water and energy issues: the interactions between water and energy are numerous and are becoming more and more important within the present energy context. It is important that we develop a better understanding of these interactions in order to improve the sustainability of global water management.

Key issues to be considered are listed below:

- Working for a culture of water-saving and efficiency is essential. This requires an active public awareness from citizens and economic sectors. Potential savings can be stabilized in the future and these savings extended to domestic and agricultural needs. Developing water savings in irrigation, within general planning for the economic needs of the whole territory, is essential. This policy not only contributes to reducing water stress, but due to the water-energy-climate change nexus it will save energy and reduce the greenhouse gas emissions as well.

- Developing sustainable and resilient economic and legal frameworks is of utmost importance to ensure long-term solutions to the water and sanitation issues. This will open the possibility of developing public-private partnerships and improve the general efficiency of the services associated with the water cycle.

- Strategic asset management of water supply and wastewater infrastructures is of paramount importance in order to achieve a sustainable economic water policy. As a matter of fact, the length of the water distribution pipes that supply water to the 82 million people living in the Mediterranean coastal cities should be around 300,000 km with a nominal value 60,000 millions euros. And this figure does not include sewer systems and water and wastewater treatment plants. Because this infrastructure has its own technical life, it is even more important to identify and concentrate investment on critical assets than to build news infrastructures.

- Institutional building. While it is unquestionable that water must be managed in an integrated way, with the passage of time water competences and responsibilities are becoming atomized and spread between too many water bodies. This is a major problem because decisions are not usually taken in a coordinated way. To model human behavior is much more difficult than to model any other complex physical system. Because of that this issue is not easy to handle and politicians tend to skip it. But this is the only key that can open the door to governance and then to sustainable water policy.

- Desalination is a current option to obtain water resources that could provide a source of water that could be considered as independent of potential changes in climate. However, energy needs and costs are high, although researchers are developing solar energy desalination plants. Consequently, desalination should not be considered the only option. Spanish companies are already leading the construction of new desalination plants in the Mediterranean countries. In any case, a rational cost-benefit analysis of the different possible solutions will help in the decision making process.

- Reuse of treated sewage waters can be considered as an adequate water source for urban, tourism and agricultural uses. Once the appropriate tertiary treatments for these uses are proved and accepted by the users, a further step should be made in the sense that, with a proper treatment, sewage water can even be used, mixed with river or ground water in some cases, for drinking water. There are several techniques adequate for the improvement of chemical and microbiological quality that could help to provide these uses. In addition, the increasing use of wastewater for irrigation will certainly help to decrease the degree of groundwater exploitation, thus avoiding seawater intrusion in the coastal areas. Although all the solutions are linked to

available energy, this sometimes becomes the critical limitation. Public perception also needs to be improved when this source of water is considered. Several water companies have a wide experience in building up and managing wastewater treatment plants (WWTP) due to the experience acquired during the implementation of the directive 91/271/CE and WFD. It should not be so difficult for Spain to achieve a leadership in this area in a similar way as it occurs in the Mediterranean desalination projects. Other aspects where Spanish water companies will be competitive in Europe are drinking water supply (due to the implementation of 98/83/EC Drinking water directive) and the management of water infrastructures in general, including water for agriculture.

# De-Pollution of the Mediterranean

"Ministers welcome the progress on de-pollution of the Mediterranean, especially regarding a Mediterranean water strategy, as well as actions taken to address climate change impacts. At the joint Euro-Mediterranean ECOFIN and FEMIP Ministerial meeting, ministers agreed that in 2009 FEMIP will organize a conference addressing the theme of sustainable water financing including issues such as water infrastructure, water services, water efficiency, private sector involvement and environmental standards.

The results of the upcoming Water Ministerial Conference, together with the achievements since the third Euromed Ministerial Meeting on Environment (Cairo), should form the basis for the next Environment Ministerial Meeting planned for 2009. The Ministerial meeting will take note of a list of concrete projects on both sides of the Mediterranean related to integrated water management and will identify further projects linked to the Water Strategy in the Mediterranean. The annual meeting of the Horizon 2020 Steering group will be held along with meetings of each of the three sub-groups (pollution reduction, capacity building and review monitoring and research). The questions of mitigation/adaptation to climate change, biodiversity protection and conservation of the Mediterranean seabed will be considered. France is prepared to host the relevant ministerial meeting.

The Euromed Ministerial Meeting on water will be held in Jordan. Ministers agree to define the Strategy for Water in the Mediterranean, along the lines decided by the Heads of State and Government in the Paris Summit for the Mediterranean. They encourage a swift implementation of partnerships in order to implement concrete projects in line with the guidelines of the strategy."

*Final Statement Marseilles, 3-4 November 2008*

## IEMed Publications

"L'eau au Proche-Orient", Mariona Rico. *afkar/ideas,* No. 23, Fall 2009.
Ces dernières années, l'inquiétude au sujet de la potentialité des conflits concernant l'eau s'est accrue. Des accords sont nécessaires pour faire face à la dégradation environnementale. Il pourrait s'agir en outre d'une voie de résolution du conflit palestino-israélien.
**http://www.afkar-ideas.com/fr/2009/10/agua-en-oriente-proximo**

"Sustainable Development in the Mediterranean Basin in 2008: New Perspectives", Patrice Miran. *Mediterranean Yearbook, Med. 2009.*
**http://www.iemed.org/anuari/2009/aarticles/a247.pdf**

"Components of Marine De-Pollution in the Mediterranean Region", Selim L. Sanin. *Mediterranean Yearbook, Med. 2009.*
**http://www.iemed.org/anuari/2009/aarticles/a251.pdf**

## Reference Documents in the Framework of the United Nations

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# Chapter 4.

# Working Group on the Mediterranean Business Development Initiative

# 4:
# Working Group on the Mediterranean Business Development Initiative

One of the key pieces for the socioeconomic development of the southern Mediterranean is the segment of the micro, small and medium sized enterprises (MSMEs) in this region, given its effect both on Gross Domestic Product (GDP) and, especially, on the employment created in these economies. The relevance of this second variable justifies the attention paid to this segment as a large number of families depend on it, mainly from middle and working classes, the most vulnerable in a situation of crisis such as the current one.

In the analysis of these small and medium sized enterprises there is a series of specific weaknesses, threats, strengths and opportunities which should be emphasised:

- The most important weakness continues to be the difficulty of access to funding by micro, small and medium sized enterprises in the region.
- The most relevant threat is the lack of business training in the region, which will hinder the development of the MSME sector.
- The comparative and competitive advantage of the region is its strength to be integrated into the value chains of the big enterprises based in the North.
- The main opportunity of the region lies in exports as a future motor of growth.

## 1. Access to Funding

- The difficulties experienced by the MSMEs in the region to access funding must be emphasised. Moreover, a study funded by the Spanish and Italian governments is being undertaken through a technical assistance project of the European Investment Bank (EIB), which examines the shortcomings in terms of access to funding by the MSMEs.
- There is a need to solve the lack of access to financial services by the MSMEs, which is explained by the relationship between the development of the financial sector and the economic development of a country. This relationship is empirically proved by many studies showing the high correlation between increases in the financial deepening ratio, measured as a percentage of credit with respect to Gross Domestic

Product or the number of loans per capita, and increases in Gross Domestic Product per capita of the population.

· It is a constant that developing countries have low levels of financial deepening which hinder their economic development. According to statistics published by the World Bank, between 1990 and 1999 credit to the private sector as a percentage of Gross Domestic Product was on average 84% for the 24 most developed countries on the planet, while the average of the 79 developing countries analysed was only 33.6%. The problem in some developing countries is not only that the credit markets are small but also that in some cases the financial sector is even smaller than what it should be, given their level of economic development.

· The level of financial deepening in the Maghreb countries is medium or low depending on the country and the indicator used, according to a recent study published by IESE Business School. It is estimated that access of the population in the Maghreb countries to basic financial services amounts to 45% of the population in Morocco, 42% in Tunisia, and 30% in Algeria. These percentages are low compared with the level of access in developed countries. It should be noted that access to financial services of the MSME sector in southern Mediterranean countries is hindered by an inappropriate range of financial services unable to meet the existing demand. This inefficient range of products of the financial sector in the region is characterised by:

- not providing products appropriate to the demands of the MSME sector;
- not having a sufficiently capillary distribution network;
- not using a risk analysis methodology appropriately analysing the risks of the sector;
- not banking the remittances and, therefore, not using them as a catalyser of access to the financial and development services of the sector;
- acting under an inappropriate regulatory context which hinders the development of an efficient range of financial services.

· The coordination of public policies of support for this segment implemented both by the north and south of the Mediterranean is imperative. It is necessary not only to solve the problem of access to funding but also the development of the sector in the region. In this respect, and in keeping with what was set out in the document produced by the IEMED entitled “Le développement d’entreprises dans les pays méditerranéens. Constats. Stratégies. Actions”, one proposal is for a multilateral funding line devoted to the MSMEs, managed by a Euro-Mediterranean agency working for the development of the sector.

## 2. Training of Managers in the MSME Sector

An important element for the development of the MSMEs is the need to train managers in this business sector in the southern Mediterranean countries. This is essential to improve their competitiveness, thereby making their access to the northern Mediterranean markets or to the global production chains possible.

Collaboration of teachers both from the north and south of the Mediterranean is necessary to develop training courses in the MSME sector based not only on the best international practices but also on the specific needs of local markets. Moreover, the joint research projects between northern and southern Mediterranean universities are also important in order to improve the productivity and training of the MSME sector.

In this context, the Euro-Mediterranean University (EMUNI) can play an important role as catalyser of such joint programmes.

### 3. Investment Attraction

· The competitive and comparative advantages of the southern Mediterranean countries justify the potential of investment attraction of the countries in the region. The competitive advantage of the southern Mediterranean countries should result in the following investment attraction strategies:

· The MSMEs in the region should be integrated into the global production chains as suppliers, just as MSMEs in other developed and developing countries have been.

· The MSMEs in the region must specialise in order to be more competitive and efficiently integrate into such production chains. In this respect, such specialisation could also help to increase the added value provided to the client and, therefore, the improvement not only of competitiveness but also the profitability of the sector.

### 4. Promotion and Development of Exports

· The potential for businesspeople from the MSME sector in the southern Mediterranean countries of the development of exports is important, not only exports to northern countries in the region but also, through integration into the global production chains, to the world market.

· The small size of local markets does not allow an implementation of specialisation strategies and an increase in the added value; thus, integration into the global markets is imperative for the development of the sector. However, such integration will only be successful when the productivity of the MSME sector has been improved through appropriate training and innovation policies, and also when the necessary liberalisation of strategic sectors for these economies with the northern Mediterranean countries is permitted.

# Meeting of the Working Group on SMEs

*Pedro Nueno. Professor IESE Business School*

The meeting discussed the promotion of SMEs in Mediterranean countries, specifically those on the southern shore. To a large extent, the discussion was encouraged by the differences between the development of the SMEs in the North and South of the Mediterranean. Next you will find some of the issues on which the participants in the working group agreed.

## 1. Diversity

Even stressing the notable distinction between the northern and southern countries, it is clear that in the latter there is extraordinary heterogeneity. In sectors of critical importance for the development of a country, like those mentioned below, the levels are considerably backward in the South in relation to the North, but the differences within the area are very great.

- Legislation (different influences, French, Anglo-Saxon).
- Training levels.
- Transparency levels (including corruption levels).
- Multilingualism.
- Economic development.
- Infrastructure development.
- Political stability.
- Natural resources.
- Size of the country (allowing critical mass projects).

## 2. Economic Situation

The discussion was influenced by the current economic situation. There is no doubt that, mainly in the northern countries, there is a difficult economic situation and most of the institutions related to the problems under discussion are affected by budget limitations.

Curiously, in the last few weeks it seems that there has been a certain upturn in the availability of liquidity in international capital markets which, if it is consolidated, could relieve the situation. In any case, at present, we must still accept that the promotion of SMEs in southern Mediterranean countries is not a priority at high levels of decision-making.

However, it is true that there are certain international inertias which maintain a continuity of public programmes supporting causes such as the one we are dealing with and that it would be suitable to achieve the appropriate support for Spanish projects allowing a continuity of the works undertaken.

### 3. Cycle Times of the Projects in Support of SMEs

We are working in a field in which the cycle times to achieve results are long. In most southern Mediterranean countries the weakness of the institutional infrastructure makes progress in these kinds of projects slow and, if the temporal framework of the support programme is short, this can result in notable inefficiency because the project is interrupted before having yielded results which would consolidate it.

The launching of support projects for SME development should further explore the balance between the project's objective, the temporal framework and the amount of support.

### 4. Human Capital

Human capital is the fundamental basis of any economic development project. In the southern Mediterranean, with notable differences between countries, the levels of human capital training are very low. This influences labour, technical, scientific and management training. Some projects of support for training in different fields, which involve overseas programmes, have the negative effect of becoming an encouragement for the brain-drain: the best, in different fields, go abroad using subsidies, and after having completed their training, do not come back.

In the southern Mediterranean, as in other developing countries, the turnover of better skilled people can be high, which adds a factor of inefficiency. Another source of inefficiency can be the imbalance between the better opportunities for SME development and the kind of training promoted: a country can have great opportunities in a determined type of tourism, for instance, and the training supported can be targeted at industrial or health fields. A certain effort should be made to focus strategic opportunities and training while ensuring the retention of the developed talent.

### 5. Instruments

SME development is encouraged in the northern countries with a wide range of financial instruments with an increasing level of sophistication, including the following:

- Microcredits.
- Endorsements.
- Debt (of different types).
- Factoring.
- Confirming.
- Leasing.
- Risk capital.
- Private equity.
- Stock market.

All these instruments are lacking in southern countries and some are almost non-existent. The underdevelopment of the conventional banking system, which could be the distribution channel of financial instruments, hinders their promotion. The weakness of a system of guarantees complicates the possibility of advancing in the sophistication of the instruments and the amount of support.

To advance in the overcoming of these difficulties it is necessary to find appropriate institutional environments and formats. One alternative lies in concentrating the SMEs to somehow support the creation of business incubators or platforms, bringing together companies by industrial sectors, geographical areas or technology levels. Another non-exclusive alternative is the creation of highly specialised support institutions. Moreover, the potential of a model such as the CDTI (the Spanish Centre for Industrial Technology Development) was emphasised. A final alternative lies in working with those companies (gazelles) which, through their own effort, have managed to exceed determined criteria of success and future potential.

## 6. Sectors

The development of the southern Mediterranean countries has two motors to promote SMEs: the foreign demand motor, which includes sectors such as tourism or outsourcing which appear by simply providing them, because the opportunity is the country itself; or the domestic demand motor, which are the opportunities that can be identified within the country itself. In this second category, we would find construction, public works, food, health and a wide range of industrial, commercial and service activities. In the development of opportunities those derived from or including the use of new technologies (connectivity) should not be disregarded.

Obviously, the low level of development and the heterogeneity described in section 1 complicate the support for SMEs in such a wide range of small and highly varied environments.

## 7. Opportunities

Within the difficulty of the objective envisaged, opportunities which seem to offer a certain promise of results are detected.

SME promotion can be based on groups of different kinds: employers' associations, immigrants' associations, sectorial associations. The encouragement of the association movement can be an appropriate objective. The association can be a good field for distinguishing potential levels between its members. Overall analysis can allow definition of selection criteria in order to reduce risk in support instruments.

Identification and adaptation of support models. As there is evidence that the CDTI was an appropriate mechanism to foster innovative SMEs during the Spanish Transition and later, the identification of similar models with better results than others can be an efficient exercise to promote them in the area.

It seems that the promotion of ethics and good governance are the chapters which must appear in any work, but the situation in the southern Mediterranean is so serious in some countries that it constitutes a major hindrance for their development. It is, therefore, important to find ways of strengthening these issues in the area.

# Le développement d'entreprises dans les pays méditerraéens. Constats. Stratégies. Actions

*Guillaume Alméras**

## SOMMAIRE



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Le défi le plus immédiat posé à la plupart des pays méditerranéens concerne la création d'emplois. Ces pays, en effet, d'ores et déjà les plus touchés par le chômage de masse au plan mondial, surtout pour le chômage des jeunes, et qui présentent également les taux d'activité les plus bas au monde (notamment en termes d'activité féminine), vont connaître pendant encore au moins dix ans des arrivées massives sur le marché du travail.

A l'évidence, l'accroissement d'emplois ne pourra reposer en très large partie que sur de nombreuses créations de petites et moyennes entreprises (PME). Parallèlement, des milliers de petites entreprises devront se hisser jusqu'à une taille « moyenne ».
Cependant, d'importants freins pèsent sur la création et le développement d'entreprises dans la plupart des pays méditerranéens et de manière très similaire :

- Des dynamiques industrielles de trop faible portée, tenant à un manque de profondeur des marchés locaux et régionaux. Un contexte face auquel le flux récent et important d'investissements directs étrangers (IDE) n'est pas parvenu à intervertir les mouvements de fuite, caractéristiques de la région, des deux principaux facteurs de production : les hommes, sous forme d'émigration, et le capital.

- Des insuffisances en termes de productivité, face auxquelles les clés d'un rattrapage ne peuvent qu'être liées à la formation des hommes, ou plutôt, car d'importants efforts ont été entrepris en ce domaine, à l'intégration des personnes les mieux formées dans la dynamique entrepreneuriale.

- Les difficultés de financement des petites et moyennes entreprises. Malgré d'importantes réformes bancaires, il n'est pas encore permis d'assurer que la situation des banques est à même de servir de levier au développement d'entreprises sur les rives sud et est de la Méditerranée. Aujourd'hui dans la région, l'investissement relève en moyenne aux trois quart de l'autofinancement et à hauteur de 12 % seulement du crédit bancaire – c'est le taux le plus bas au monde. En attendant, les taux de créances en souffrance demeurent élevés, de sorte que les banques, en conséquence, demandent des couvertures prohibitives en termes de garantie : 230 % de l'encours en moyenne pour la région MENA, a-t-on calculé, ce qui représente l'un des taux les plus élevés au monde. L'exigence d'une garantie de nature patrimoniale (hypothèques immobilières pour l'essentiel) pour l'ouverture d'un crédit ou de la contrepartie en cash d'opérations internationales en devises, aussi bien que le faible développement de la mobilisation des effets de commerce et de la prise en gage, excluent du marché du crédit de nombreuses catégories d'entreprises et de particuliers.

Ces constats invitent à lier ensemble les problématiques de marché, de productivité et de financement, ce qui est encore rarement le cas. Ils invitent à définir des orientations stratégiques à une échelle véritablement régionale. Il manque en effet aujourd'hui de manière flagrante une stratégie euroméditerranéenne à moyen terme. Car, tandis qu'on ne constate pas de phénomène d'intégration avec les économies de l'Union européenne selon un processus d'intensification des échanges intra-branches, l'investissement international tend de plus en plus à suivre un autre modèle désormais vertical, portant sur un segment seulement de la chaîne de valeur et recherchant des avantages décisifs de localisation. Deux principales filières se dessinent ainsi autour du bassin méditerranéen, tant pour le développement des activités industrielles que des services :

- Une spécialisation internationale ou hyperspécialisation, susceptible d'intervenir sur des activités hautement technologiques, quoique dans un spectre limité.

· Une montée en gamme sur des industries et services moyennement qualifiés. Aujourd'hui, les *technology park* se développent dans les pays méditerranéens mais souvent sous la forme de zones franches consacrées à la sous-traitance européenne, à l'exemple des *maquiladoras* mexicaines. Toutefois, alors que face à la concurrence internationale, ainsi que dans le contexte actuel de récession mondiale, les pôles de développement dans les pays méditerranéens semblent particulièrement exposés à la volatilité des IDE, l'enjeu serait de leur donner une véritable dimension de cluster, plutôt que de simples plateformes délocalisées de production et de premier assemblage pour l'industrie européenne. L'enjeu serait de viser un véritable essaimage technologique et de compétitivité à une échelle proprement régionale et non seulement nationale. Une telle orientation stratégique pourrait être portée par la constitution d'un ou de plusieurs « Fonds Cluster », réunissant des capitaux publics et privés et agissant comme investisseur de long terme concentré sur une dizaine de pôles, identifiés comme filières stratégiques pour la région.

Seules de telles orientations stratégiques structurantes et pensées à l'échelle du bassin méditerranéen tout entier permettront de donner pleinement leur force aux programmes et actions d'aide au développement d'entreprises qui pourront être définis.

Aujourd'hui, la multiplicité et la superposition des bailleurs de fonds publics dans la région est frappante. Pourtant, l'aide aux entreprises demeure le parent pauvre de l'aide euroméditerranéenne, soit parce que les lignes de refinancement mises à disposition des banques nationales demeurent peu utilisées, soit parce que l'apport d'argent public aux fonds d'investissement paraît peu à même de modifier la logique extrêmement sélective et averse aux risques de ces derniers.

Dans ces conditions, l'Espagne et l'Italie ont présenté au Sommet Ecofin de mai 2008 le projet d'une Mediterranean Business Development Agency, dont les contours possibles et souhaitables paraissent les suivants :

· Définir des orientations stratégiques car ce qui manque sans doute le plus aujourd'hui aux pays méditerranéens sont des perspectives stratégiques concrètes. Songeons, par exemple, aux enjeux agroalimentaires ou aux prospectives réalisées par le Plan Bleu et l'Observatoire Méditerranéen de l'Énergie (OME) qui estiment qu'une économie de près de 20 à 25 % de la demande totale d'énergie est réalisable dans les pays méditerranéens en utilisant les technologies déjà disponibles à des coûts acceptables. À ceci pourrait être associé un programme de « Fonds Carbone » euroméditerranéen, directement animé par l'Agence.

· Faciliter le financement des entreprises, en travaillant directement avec les banques commerciales, les fonds d'investissement et les institutions de micro-finance, en leur apportant notamment, selon des orientations stratégiques précises, un rehaussement des risques d'entreprises, en liaison cette fois avec les fonds dédiés à cet emploi par la FEMIP et d'autres institutions multilatérales et nationales. Favoriser les financements dédiés à des actions de mise aux normes internationales ou destinés à renforcer l'équipement logistique (notamment à travers le leasing).

· Apporter des garanties à des lignes bancaires d'escompte (ou réescompte), pour rendre celles-ci plus accessibles et moins onéreuses face aux délais de paiement parfois extrêmement pénalisants subis par les entreprises de la part de débiteurs publics ou privés. Fournir directement des garanties ou contre-garanties à des entreprises, dès lors que celles-ci sont regroupées sous la forme de sociétés de caution mutuelle (nombreuses dans un pays comme le Maroc). Enfin, à l'instar de ce qui a été développé

au sein de l'ASEAN+3, remplir une fonction d'animateur des marchés obligataires et d'actions au sein des pays partenaires méditerranéens. Il paraît en effet judicieux d'offrir une alternative à l'intermédiation bancaire, aujourd'hui quasiment incontournable, pour satisfaire les besoins en ressources longues et capitalistiques des entreprises en croissance. Surtout, en s'inspirant notamment des solutions développées par l'Eurofidi italienne au Chili ou en Bulgarie, il conviendrait d'étudier la possibilité de mettre sur pieds un fond de garantie des crédits bancaires pour les PME de différents pays, capable de se substituer aux garanties, essentiellement hypothécaires, exigées aujourd'hui des PME pour accéder aux financements bancaires. Un système multilatéral d'assurance crédit, bénéficiant aux banques et directement souscrit par les PME, en même temps que contre-garanti par des institutions euroméditerranéennes, comme la FEMIP, pour le rendre accessible.

- Favoriser l'internationalisation des entreprises méditerranéennes et développer les transferts de compétences. À cet égard, l'Agence devra fonctionner comme une plateforme favorisant l'émergence de multiples réseaux : associations professionnelles euromed, *business angel,* diasporas d'entrepreneurs, etc., ainsi qu'en donnant les meilleurs moyens aux entreprises du Sud de trouver conseils, formations, programmes de mise aux normes, etc. Mieux même, l'Agence pourra héberger la formation de véritables places de marchés Internet – comme une plateforme de négociation de titres non cotés, ouverte aux investisseurs professionnels et aux particuliers.

## I - Constats. Les freins au développement d'entreprises dans les pays méditerranéens

*Le défi le plus immédiat posé à la plupart des pays méditerranéens concerne la création d'emplois*

Ces prochaines années, de 3 à 5 millions d'emplois chaque année devront être créés dans les pays des rives sud et est de la Méditerranée, non pas même pour atteindre le plein emploi mais pour ne pas voir se dégrader les taux actuels de chômage. Ces pays, en effet, d'ores et déjà les plus touchés par le chômage de masse au plan mondial, surtout pour le chômage des jeunes, et qui présentent également les taux d'activité les plus bas au monde

**Tableau 1. Projection de l'emploi nécessaire et à créer en 2020**

| En milliers | Emploi total nécessaire en 2020 | Emploi à créer d'ici 2020 | En % emploi 2005 |
|---|---|---|---|
| Algérie | 8 892 | 2 046 | 30 % |
| Égypte | 24 570 | 6 452 | 35,60 % |
| Israël | 3 231 | 737 | 29,50 % |
| Jordanie | 1 797 | 593 | 49,20 % |
| Liban | 1 363 | 266 | 24,20 % |
| Maroc | 12 802 | 2 889 | 29 % |
| Aut. palest. | 998 | 420 | 72,60 % |
| Syrie | 7 227 | 2 405 | 49,80 % |
| Tunisie | 3 587 | 661 | 22,50 % |
| Turquie | 27 983 | 5 937 | 26,90 % |
| Total | 92 450 | 22 406 | 31,90 % |

Source : Femise, Institut de la Méditerranée, 2008.

**Tableau 2. Répartition des PME selon la taille des entreprises (nombre d'employés) au Royaume-Uni et en France**

| | Royaume-Uni | France |
|---|---|---|
| Nb de PME (millions) | 4,2 | 2,5 |
| 0 employés | 81 % | 80 % |
| 1 à 9 employés | 94 % | 93 % |
| 10 à 249 employés | 97 % | 96 % |
| > 250 employés | 3 % | 4 % |

Source : Oséo, 2008.

(notamment en termes d'activité féminine), vont connaître pendant encore au moins dix ans des arrivées massives sur le marché du travail.

Ainsi, avec un surcroît prévisible de population de 38 % d'ici 2030, ce sont au moins 22 millions d'emplois qui doivent être créés sur les rives sud et est, soit une augmentation moyenne de 30 % de la main d'œuvre employée en dix ans.

À l'évidence, un tel accroissement d'emplois ne pourra reposer en très large partie que sur de nombreuses créations de petites et moyennes entreprises : près d'un million chaque année, soit un accroissement de 5 % par rapport aux 20 à 25 millions déjà existantes. Tandis que, parallèlement, des milliers de petites entreprises devront se hisser jusqu'à une taille « moyenne ».

Cependant, par comparaison avec des pays développés comme la France ou le Royaume-Uni, les pourcentages relativement faibles d'actifs employés par des PME dans les pays méditerranéens – de 48 % (Maroc) à 61 % (Jordanie) – sont un indice des freins qui y pèsent sur la création et le développement d'entreprises.

Ci-après, nous considérerons particulièrement trois de ces freins, sans doute les principaux : 1) un manque de profondeur des marchés, auquel se heurtent les dynamiques industrielles 2) des insuffisances en termes de productivité et 3) les difficultés de financement des petites et moyennes entreprises.

## I. 1. Un premier frein à la création d'entreprises : une dynamique industrielle de trop faible portée. Un problème de marchés

Dans la plupart des pays méditerranéens, les activités industrielles demeurent peu développées, à part quelques secteurs : agroalimentaire, textile, chaussures, meubles et petite mécanique. Il est rare que les entreprises industrielles satisfassent aux standards internationaux et, sous-traitant ou assembleur par rapport à des donneurs d'ordres ou investisseurs européens, elles se cantonnent souvent à un seul segment de la chaîne de valeur.

Tout cela est bien connu mais n'est peut-être pas le plus important pour l'avenir, tandis qu'une analyse plus fine du développement industriel dans les pays méditerranéens conduit à interroger plus particulièrement, l'insuffisant effet d'entraînement exercé jusqu'à présent par les dynamiques industrielles. L'exemple du textile maghrébin est ici instructif.

*L'exemple du textile maghrébin*

À l'abri d'un accord préférentiel dit « Multi-Fibres » avec l'UE, une industrie du textile habillement s'est développée au Maroc et en Tunisie. Dans ce dernier pays, elle aura représenté jusqu'à la moitié des exportations manufacturières, ainsi que la moitié des IDE industriels reçus. La Tunisie est ainsi devenue le 5e fournisseur de l'UE pour l'habillement ; la filière textile employant 200 000 personnes à travers 2 135 entreprises et réalisant un chiffre d'affaires de 3,7 Mds d'euros, dont 2,7 Mds d'euros d'exportations, à 75 % avec la France, l'Italie et l'Allemagne (Chaponnière et Perrin, 2005).

Toutefois, depuis la fin de l'Accord Multi-Fibres, au 1er janvier 2005, les industries textiles tunisienne et marocaine sont fort malmenées par leurs compétiteurs chinois, mexicains, indiens et turcs, leaders mondiaux, ainsi que par de nouveaux concurrents venus d'Afrique, comme le Nigeria ou le Kenya. Sur les 200 000 emplois de la filière textile marocaine, 95 000 auraient ainsi été d'ores et déjà perdus.

Que s'est-il donc passé ? Dans son développement, l'industrie textile tunisienne a été pour l'essentiel cantonnée à un rôle de façonnier, important la plupart des tissus travaillés, exportant ses productions en Europe et se tournant très peu vers son marché local. Dans le contexte d'un éclatement international des activités textiles, l'industrie tunisienne se retrouve ainsi aujourd'hui spécialisée sur un segment seulement de la chaîne de valeur et l'un des plus exposés, quand le transport d'une chemise d'Asie en Europe ne coûte qu'un euro.

L'avantage de la proximité par rapport aux marchés européens doit être relativisé, en effet. Il ne joue véritablement que pour les réassorts, permettant un moindre financement de stocks pour les distributeurs. Pour la Tunisie, les délais de réponse peuvent être de trois semaines pour une première commande et d'une semaine pour un réassort, quand il faut compter de 2 à 3 mois pour l'Asie par bateau (l'avion demeure peu utilisé : 10 % seulement pour les textiles chinois). C'est certainement un avantage sérieux face à des chaînes comme Zara, qui visent des délais de 4 à 6 semaines entre conception et mise en rayon, contre 6 à 9 mois en moyenne, et qui pratiquent le « juste-à-temps » sur de très nombreux articles (11 000 références par saison), pour répondre sans délais aux variations de demande et limiter les stocks au maximum. Mais, l'industrie tunisienne subit les délais d'importation des fils et tissus asiatiques (50 à 70 % du prix de revient), dont la production mondiale est désormais assurée aux trois quarts par la Chine, Taïwan et la Corée du Sud (de sorte que les industries textiles maghrébines se tournent vers les tissus turcs).

Surtout, face aux compétiteurs internationaux, les coûts maghrébins ne sont pas particulièrement avantageux. La productivité de la main d'œuvre marocaine est équivalente à celle de la Chine et un peu plus élevée que celle de l'Inde. Mais les salaires sont deux fois plus éle-

**Tableau 3. Salaire brut horaire moyen en 2003 ($)**

| 2003 | Salaire brut horaire moyen ($) |
|---|---|
| USA | 15,1 |
| UE | 14,0 |
| Turquie | 2,6 |
| Mexique | 2,2 |
| Maroc | 1,8 |
| Roumanie | 1,8 |
| Chine | 0,6 |
| Inde | 0,5 |

Source : Chaponnière et Perrin, 2005.

vés qu'en Chine et quatre fois plus qu'en Inde. La productivité tunisienne est comparable à celle de l'Inde mais avec des salaires deux fois plus élevés : ils ont augmenté de 46 % en 10 ans (de 120 % au Maroc). Les coûts de revient (tout compris) à la minute sont de 0,12 euros en Turquie, 0,8 euros en Tunisie, 0,5 euros en Roumanie et 0,2 euros en Chine.

Enfin, par rapport à ses compétiteurs internationaux, l'industrie tunisienne bénéficie de peu d'économies d'échelle – ceci s'expliquant notamment par le fait que les IDE textiles ont été initiés par de nombreuses PME européennes aux capacités d'investissement limitées. Alors que le textile représente 7 % du PIB tunisien aujourd'hui, 35 entreprises de ce secteur seulement apparaissent parmi les 400 premières entreprises tunisiennes. La première parmi elles, Benetton, ne réalise que 4 % des exportations textiles. Cette faiblesse capitalistique condamne les entreprises tunisiennes à la sous-traitance et leur barre l'accès au développement de produits finis, de marques, à l'inverse de ce qui a été réalisé en Turquie (devenu le 2e fournisseur textile de l'UE), en Jordanie (le textile est la première source d'exportation), au Mexique et en Asie.

Pourtant, tandis qu'entre une chemise vendue 30 euros et une chemise vendue 150 euros, la différence de fabrication ne dépasse pas 20 minutes, 60 % de la valeur ajoutée est réalisée au stade de la distribution et la valeur ajoutée est d'autant plus élevée que la marque bénéficie d'une large reconnaissance. Sur un marché local étroit, dans un environnement international très compétitif, une telle montée en gamme paraît ainsi la seule issue pour des entreprises obligées d'importer leur matière première. Mais c'est précisément ce que le textile maghrébin n'a pu réaliser.

Une insuffisante montée en gamme a ainsi freiné le textile maghrébin et l'a rendu très exposé à la concurrence internationale en le cantonnant sur un segment seulement de la chaîne de valeur. Première raison à cela : l'étroitesse des marchés locaux, n'offrant guère aux entreprises locales des opportunités de développement capables de les hisser jusqu'à un niveau de compétition internationale.

*L'étroitesse des marchés locaux et régionaux*

Dans les pays méditerranéens, le développement entrepreneurial se heurte d'emblée à une insuffisance de marchés. En effet, à part la Turquie et dans une moindre mesure l'Égypte, tous les autres pays ont des marchés domestiques étroits, que ne compensent ni une insertion forte dans le commerce international, ni l'existence de marchés régionaux.

Il faut en effet souligner d'abord la faible insertion de ces pays dans le commerce international – 4 % de la population mondiale mais seulement 2,6 % des exportations (hydrocarbures compris), lesquelles ne couvrent qu'à 78 % les importations en moyenne (sauf l'Algérie). Il faut ensuite particulièrement remarquer que la région méditerranéenne présente les taux les plus faibles du monde pour le commerce interzone, lequel ne dépasse pas au total 8 % des échanges des différents pays et reste essentiellement fondé sur les hydrocarbures ; ce qu'il faut comparer au commerce intrarégional de l'ALENA (les États-Unis attirent 83 % des exportations mexicaines et 76,5 % des exportations canadiennes ; la moitié de ces échanges sont interentreprises), de l'Union européenne (près des deux tiers du commerce total de l'UE), du Mercosur (20 à 25 %), de l'ASEAN (25 %), de la Communauté andine des nations (12 %) ou de la Communauté Économique des États d'Afrique de l'Ouest (11 %). Madagascar parvient à réaliser 15 % de ses échanges avec les autres îles de la Commission de l'Océan indien (Comores, Maurice, Réunion, Seychelles). En regard, le commerce interrégional des pays du Conseil de Coopération du Golfe ne dépasse pas 5 %, celui des membres de l'Union du Maghreb Arabe (UMA) 2,7 %, en net recul par ailleurs (3,4 % en 1995).

Or, cette faiblesse commerciale, qui pénalise la création et le développement d'entreprises au premier chef, renvoie peut-être en premier lieu à une problématique identitaire, tenant à la difficulté des pays de la région à se penser en continuité, à réaliser qu'ils forment une région rassemblant des caractères tout à la fois comparables et complémentaires dont la mise en valeur pourrait profiter à tous. Rien ne justifie économiquement cette situation en effet : les échanges sont peu concentrés au sein du groupe d'Agadir et même au sein de l'UMA. Ils pourraient donc se développer. Par comparaison des structures sectorielles, les otentiels d'intégration entre les différents États paraissent même assez élevés, avec deux pays fers de lance : le Maroc et la Tunisie (Mahjoub, 2008). C'est peut-être l'exemple du tourisme qui illustre le mieux cette faible reconnaissance identitaire régionale.

### *L'exemple du tourisme méditerranéen*

La Méditerranée est une des premières régions touristiques au monde. Pour certains pays riverains, le tourisme représente l'une des principales sources de devises et les ambitions sont fortes en ce domaine, à l'instar du « Plan Azur » marocain visant 10 millions de touristes et la création de 600 000 emplois à l'horizon 2010. Ces éléments recouvrent néanmoins des réalités bien plus disparates.

La Méditerranée compte le quart des capacités mondiales d'hébergement touristique (6 millions de lits). Mais les quatre cinquièmes sont situés dans les pays du Nord. Avec la France et l'Espagne, la Méditerranée compte surtout deux des trois leaders touristiques mondiaux et, s'il faut raisonner à l'échelle du littoral méditerranéen, les chiffres deviennent plus incertains et moins flatteurs. En 2006, les rives sud et est du bassin méditerranéen n'ont capté ainsi que 50 des 218 millions de touristes méditerranéens, soit 6 % du tourisme mondial. Ces touristes méditerranéens sont à 85 % européens et vont en premier lieu chez les « poids lourds » français, espagnols et italiens, puis en Turquie, qui est devenue la quatrième destination méditerranéenne et la 8e mondiale.

Le Maroc réalise 65 % des recettes touristiques de la rive sud et la Tunisie 30 %. Quant aux touristes français à l'étranger, ils ont pour premières destinations l'Espagne (14,8 %) et l'Italie (9,7 %) et se rendent plus nombreux en Allemagne (5,7 %) qu'en Tunisie (4,5 %) et au Maroc (4 %) – deux pays dont le tourisme est pourtant assez largement alimenté par les migrants maghrébins résidant en France (on compte 2,5 de résidents marocains à l'étranger sur les 6 millions de touristes reçus par le Maroc).

Pour la Méditerranée dans son ensemble, les termes « grande région touristique mondiale » doivent ainsi être pris avec précaution. Car, aussi incroyable que cela puisse paraître, le marché touristique autour de la Méditerranée – cette « piscine de l'Europe », comme la désignait l'un des scénarios du Plan Bleu dans les années 80 – n'est pratiquement pas organisé en tant que tel, alors même qu'il semble que peu de choses suffiraient.

Après tout, en effet, autour du bassin méditerranéen, des pays ayant acquis une forte expérience touristique (Maroc, Tunisie, Turquie) en côtoient d'autres aux potentiels énormes et pratiquement inexploités : l'Algérie, la Libye ou la Syrie reçoivent chacune moins d'un million de touristes étrangers par an. Au sein d'une offre méditerranéenne globale, par ailleurs, certaines spécialisations apparaissent, comme la thalassothérapie en Tunisie ou le tourismesanté. Cependant, le manque d'impulsion régionale demeure patent : aucun effort, aucune stratégie transnationale pour concentrer une industrie faite à 95 % de PME. En outre, il n'existe que peu d'offres variées mettant en valeur les multiples options de la zone : tourismes balnéaire, culturel, montagnard

et saharien ; peu ou pas de circuits Sud-Sud (Tunisie + Algérie, Maroc + Mauritanie…) ; pas d'image commune affichée et pas de promotion de la marque « Méditerranée » (Hatem, 2006) ; des liaisons aériennes interzone souvent peu pratiques encore. La moitié de la flotte mondiale de grande plaisance navigue en Méditerranée mais peu d'endroits sont équipés pour l'accueillir sur la rive sud.

Au total, le manque d'acteurs de poids régionaux se marque par un manque de recettes, quant on sait que 20 à 40 % seulement du prix moyen d'un voyage à forfait restent dans le pays visité. Ainsi, véritable paradigme des réalités méditerranéennes, le tourisme dévoile la difficulté de la région à se penser, au delà des clivages nationaux et politiques, en termes de marché. Dans ces conditions, les entreprises de la région ne peuvent croître que sur des marchés domestiques étroits, où elles subissent la vive concurrence des produits importés ou bien doivent directement se lancer sur les marchés internationaux, à quoi bien peu d'entre elles parviennent.

### *L'insertion des entreprises méditerranéennes dans le commerce international*

Certes, dans la région, plusieurs entreprises ont su se développer sur des marchés élargis, comme l'égyptienne Sakhr, leader pour les softwares *arabic* ou Petra, le leader jordanien de la climatisation qui, ayant d'emblée visé le marché international, est aujourd'hui présent dans cinquante pays, les États-Unis représentant son premier marché. Agent le plus visible d'un nouveau capitalisme méditerranéen conquérant, le groupe Orascom est présent lui, au delà de l'Égypte, en Grèce, en Tunisie et en Algérie. Orascom Telecom compte 50 millions d'abonnés.

En regard, cependant, la plupart des entreprises locales de taille conséquente n'ont d'autres ressources que de se tourner vers des donneurs d'ordre et actionnaires étrangers, vis-à-vis desquels elles se font immédiatement concurrence – cela s'est vu hier dans le textile et se reproduit aujourd'hui dans la sous-traitance automobile. Ainsi, à destination des publics francophones et dans une moindre mesure hispanophones, le développement des centres d'appel maghrébins paraît fragile, car très dépendant de donneurs d'ordre français, plus timides en matière de business process outsourcing (BPO) que leurs homologues américains, allemands ou anglais et n'externalisant guère que leurs centres d'appels (90 % de l'offshoring français) – quand ceux-ci représentent moins de 30 % du BPO délocalisé en Inde. 29 % des entreprises françaises de plus de 10 salariés confient à des prestataires extérieurs des fonctions requérant des personnels spécialisés dans les technologies de l'information et de la communication. Mais seules 8 % d'entre elles utilisent des prestataires étrangers et 3 % des prestataires en dehors de l'UE.

Le Maroc et la Tunisie se retrouvent ainsi directement en compétition sur un segment étroit d'un marché mondial bien plus vaste et exposés à la concurrence de l'Inde, numéro un mondial de la sous-traitance des activités de service liées aux technologies de l'information, dont les principaux offshoreurs ignorent d'ailleurs la rive sud : Wipro a choisi d'installer son centre nearshore pour l'Europe du Sud en Roumanie.

Au total, les pays méditerranéens, qui n'ont guère pu développer de spécialisations industrielles à un niveau de compétitivité international, achètent de plus en plus à une Chine toute prête à ruiner leurs efforts en ces domaines. Ils s'insèrent avec retard dans une économie mondiale de services et de nouvelles technologies d'ores et déjà fortement concurrentielle, où les marges sont sérieusement rognées sur les segments les plus accessibles, que leur présence vient encore concurrencer. Dès lors, seules des orientations stratégiques définies à une échelle proprement régionale pourraient

permettre de lever les freins puissants qui continuent de peser sur le développement d'entreprises dans les pays méditerranéens. Nous y reviendrons. En l'absence, il est peu probable que les IDE y suffisent.

*L'impact des IDE sur le développement d'entreprises*

Concernant le bassin méditerranéen, un jugement communément adopté souligne la faiblesse des IDE reçus par la région, particulièrement de la part des pays européens, auxquels on oppose l'attitude des États-Unis par rapport à l'Amérique latine ou celle du Japon vis-à-vis de l'Asie du Sud-est. Un tel jugement est assez discutable car il ne tient qu'à considérer les montants d'IDE en eux-mêmes, pour leurs montants, indépendamment des marchés qui les suscitent, ce qui ne peut être pleinement pertinent en termes économiques. Or, si l'on rapporte les montants d'IDE aux potentiels de marché des pays destinataires – dont le PIB fournit une première approximation – les flux d'investissements directs étrangers au Sud et à l'Est de la Méditerranée paraissent beaucoup plus conséquents.

Ainsi, le classement de la Conférence des Nations Unies sur le Commerce et le Développement (CNUCED) qui rapporte les flux d'IDE (en moyenne sur 3 ans) au PIB de 141 pays, n'indique pas une faible attractivité de la région pour les investisseurs étrangers, au contraire : l'Égypte, la Tunisie, le Maroc ont reçu ces dernières années – proportionnellement à leur taille économique – davantage d'IDE que la Pologne, la Malaisie, la Chine, le Brésil, l'Inde ou l'Afrique du Sud.

La région MENA recevait une dizaine de milliards de dollars d'IDE en 2000. Elle en aura reçu une quarantaine en 2006. En 2005, par comparaison, les pays de l'ASEAN ont reçu 26 Mds de dollars et l'Inde 7 Mds de dollars. Cela, qui semble bien être un phénomène régional – sauf dans le cas particulier de la Turquie, qui bénéficie d'un effet d'anticipation lié à sa possible entrée dans l'UE – est assez étonnant dans la mesure où, ces dernières années, les pays de la région ont certes enregistré une croissance plus soutenue que par le passé, mais sans être spectaculaire. Ils présentent par ailleurs, pour nombre d'entre eux, un risque d'instabilité politique non négligeable. Quant au manque d'intégration régionale, il ne permet guère les économies d'échelle et oblige à des démarches et à des investissements multiples sur des marchés étroits. Dans les trois pays du Maghreb, par exemple, on trouve trois marchés publicitaires distincts, peu connectés et fort disparates.

En 2005-2006, les IDE sont venus pour moitié de l'UE et des États-Unis et pour l'autre moitié de pays émergents dont, pour les deux tiers, des pays du Golfe. Les Émirats sont devenus le 2e investisseur dans la région (17 Mds € 2003-2006). Ils sont présents dans quasiment tous les pays, avec une préférence pour l'Égypte et le Maroc. L'Arabie saoudite, en revanche, demeure principalement orientée vers le Machreq. Enfin, il convient de souligner que les flux d'investissements interzone commencent à se développer, ayant atteint 5,1 Mds de 2003 à 2006 et se divisant, à parts pratiquement égales, en deux flux Maghreb-Machreq et Machreq-Maghreb. Tandis que, quelques gros investissements privés du Sud au Nord commencent à être enregistrés : Orascom (Égypte) a ainsi acquis Wind Telecommunicazioni (Italie) pour 12,8 Mds de dollars. Les sociétés tunisiennes Altea Packaging (emballage) ou One Tech (câbles) ont également racheté des sociétés européennes.

Au total, l'idée de pays méditerranéens délaissés par les IDE ne résiste guère à une analyse un peu détaillée – surtout au vu des années récentes et tandis que la moitié de l'industrie tunisienne est désormais contrôlée par des mains étrangères. Premier

**Tableau 4. Classement de la CNUCED IDE/PIB en 2006. Rang sur 141 pays**

| | |
|---|---|
| Malte | 6 |
| Bulgarie | 7 |
| Jordanie | 8 |
| Liban | 14 |
| Roumanie | 21 |
| Bosnie et Herzégovine | 22 |
| Chili | 30 |
| Égypte | 33 |
| Croatie | 36 |
| Hongrie | 38 |
| Tunisie | 41 |
| Israël | 42 |
| Thaïlande | 52 |
| Maroc | 55 |
| Pologne | 57 |
| Malaisie | 62 |
| Chine | 69 |
| Turquie | 73 |
| Libye | 81 |
| Mexique | 82 |
| Argentine | 83 |
| Brésil | 93 |
| Syrie | 98 |
| Côte d'Ivoire | 99 |
| Slovénie | 103 |
| Algérie | 110 |
| Inde | 113 |
| Afrique du Sud | 120 |
| Corée du Sud | 123 |
| Vénézuéla | 124 |
| Iran | 133 |

Source : Chaponnière et Perrin, 2005.

investisseur avant 2000, la France n'est plus que le troisième investisseur dans la région MEDA. Ce constat ne témoigne cependant pas d'un retrait. En Algérie, par exemple, la France demeure le premier investisseur en nombre de projets, quoique le cinquième en montants investis, après l'Espagne, l'Égypte, les États-Unis et le Koweït. Cela tient essentiellement à ce que ce sont des PME françaises qui investissent le plus dans les pays méditerranéens, tandis que 90 % des montants d'IDE reçus par la région sont cependant le fait de 72 groupes internationaux et 80 % de 40 d'entre eux. Selon Anima, seuls 6,6 % des flux d'IDE reçus par la région sont le fait de PME étrangères et touchent principalement des PME locales. Cela concerne néanmoins 32,5 % des projets d'investissement étranger, mais pour 70 % d'entre eux, sur quatre pays seulement : l'Égypte, Israël, le Maroc et la Turquie.

Une telle situation n'est pas sans risques pour les pays bénéficiaires : risques d'appréciation monétaire et de formation de bulles spéculatives pénalisantes pour les ressortissants nationaux, notamment dans l'immobilier. Tandis que la question se pose de savoir de quel pouvoir disposent effectivement les États de la région face aux groupes internationaux pour s'assurer du respect de leurs engagements, notamment en termes d'emplois.

Ensuite, ces investissements ne favorisent pas particulièrement l'émergence d'un nouvel ensemble économique intégré euroméditerranéen mais semblent plutôt se concentrer sur les deux principaux marchés : la Turquie et l'Égypte, ainsi que sur Israël, qui offre des opportunités d'investissements technologiques tout à fait singulières dans la région. Ceci, qui se constate des investissements européens, n'est pas contrebalancé par ceux venus du Golfe, pour le présent limités à quelques secteurs (tourisme et immobilier). En somme, l'investissement étranger rencontre ici le même problème d'étroitesse et de profondeur des marchés que dans le cadre des échanges commerciaux. Ainsi, sur l'ensemble de la région, les projets de plus de 100 millions d'euros ne représentent pas le tiers des investissements, sauf pour la Turquie, l'Égypte et la Jordanie. Ils se limitent par ailleurs à quelques secteurs : la banque, le bâtiment, les télécom, le tourisme, la grande distribution (dans une moindre mesure), sans oublier bien entendu l'énergie, qui recueille en 2006 48 % des IDE reçus par l'Algérie, 23 % par l'Égypte, 36 % par la Syrie et même 24 % par la Tunisie. Au delà, on peut encore citer le ciment (Algérie, Égypte, Jordanie, Maroc et Syrie) et, assez timidement, la chimie (Égypte et, plus faiblement, Maroc), ainsi que l'automobile (Turquie et, dans une moindre mesure, Maroc et Syrie ; avec les trois quarts de sa production exportée, la Turquie est devenue une véritable plaque tournante régionale). Pour le textile ou la pharmacie, les investissements sont très faibles. Ils sont quasi inexistants pour les biotechnologies, malgré les besoins agricoles.

Sans même parler du risque d'assèchement des investissements internationaux, lié à la crise financière actuelle, le « boom » récent des IDE dans la région doit ainsi être pris avec précaution. À ce stade, les sorties de capitaux des pays du Sud et de l'Est du bassin méditerranéen demeurent importantes. Quoique très difficiles à chiffrer précisément, elles ont pu être estimées à 8 Mds de dollars par an pour les trois pays du Maghreb, malgré des dispositifs de contrôle des changes assez stricts. La seule Syrie disposerait d'un stock d'avoirs à l'étranger atteignant 180 Mds de dollars. À cela s'ajoutent désormais les dividendes rapatriés par les entreprises étrangères : 1,5 Md de dollars pour la Tunisie en 2004 (5 % du PIB). Trop récents, les IDE n'ont donc pas interverti les mouvements de fuite, caractéristiques de la région, des deux principaux facteurs de production : les hommes, sous forme d'émigration et le capital. Y parviendront-ils ? La faiblesse des investissements étrangers dans certains secteurs, notamment technologiques, souligne un aspect qui paraît déterminant pour l'avenir.

Les IDE réalisés dans les secteurs de l'énergie et de l'immobilier utilisent des équipements et des travailleurs en grande partie importés et exportent souvent des produits peu transformés. Ils apportent au total assez peu de valeur ajoutée locale. Pour le présent, en effet, les IDE se concentrent sur des investissements financiers ou de rente et cor-

**Tableau 5. Nature des projects d'investissement**

| 2006 | Nature des projects d'investissement |
|---|---|
| Création | 31 % |
| Délocalisation | 1,20 % |
| Prise de participacion | 15,10 % |
| Privatisation et concession | 3,80 % |
| Filiale | 15,70 % |
| Partenariat, JV | 13,30 % |
| Extension | < 10 % (*) |
| Part moyanne des projects d'extension dans l'UE | 50 % |

Source : MIPO.

(*) Les projects d'extension représentent 50 % des projects d'investissement dans l'UE, ici 10 %.

respondent peu à des développements de marché. Ainsi, avec le ralentissement du rythme d'annonce des grands projets immobiliers et touristiques et la raréfaction des opérations de privatisation, les IDE ont baissé sur la rive sud en 2007 en pourcentage du PIB sauf en Égypte (qui aura seule attiré 50 % des IDE). Dans ce contexte, Israël paraît concentrer à lui seul dans le bassin méditerranéen (à l'exception d'une timide percée marocaine), les investissements liés aux composants électroniques, aux logiciels et prestations informatiques, aux machines et équipements mécaniques, ainsi qu'aux équipements électriques et électroniques. A contrario, il convient de souligner la faiblesse des investissements réalisés en Tunisie dans ces domaines, dans la mesure où ce pays est, avec Israël et la Turquie, l'un des trois seuls pays de la région dont les industries électroniques représentent plus de 10 % des exportations.

Ainsi, dix ans, si le rythme des flux d'IDE actuellement enregistré dans la région se maintient, les risques sont importants (mais certains heureusement sont opposés !) :

- Risque de « néocolonialisme », avec la mainmise d'intérêts étrangers sur les économies nationales. En 2001 ou en 2006, les IDE ont représenté bien plus du tiers de la formation brute de capital fixe d'un pays comme le Maroc (mais seulement 6,4 % en 2002, année de faibles privatisations).
- Risque d'extraversion des économies, soumises aux aléas de conjoncture internationaux. Risque de spécialisation poussée dans des activités de caractère *footloose* à l'échelle internationale (Jennequin et Rabaud, 2006).
- Risque de frictions concurrentielles avec certains pays de l'UE, comme l'Espagne dans l'automobile (le quart des exportations espagnoles).
- Risque d'une « croissance appauvrissante » car contribuant à faire baisser les prix mondiaux face à une demande peu élastique. Cela se constate notamment dans les activités de services informatiques (avec la baisse du tarif journalier des programmeurs SAP par exemple, du fait d'une concurrence disséminée tout autour du bassin méditerranéen).
- Risque de « mitage » des territoires avec la concentration des investissements sur certaines zones exclusives, accroissant les difficultés environnementales et urbaines. En Inde, les investissements se concentrent sur les trois régions de Delhi, de Pondichéry et de Goa.
- Risque de flux spéculatifs et volatils, générant à leur tour un risque de brusques retraits massifs dans des pays – nombreux dans la région – dont la stabilité politique ne paraît guère assurée, ainsi que dans le contexte de la crise économique actuelle : d'ores et déjà, il semble bien que les IDE aient significativement baissé.

**Tableau 6. Estimation de productivité par qualification et par pays**

| Main d'oeuvre | Ouvrière | Moins qualifiée | Très qualifiée |
|---|---|---|---|
| Maroc | 75 | 67 | 50 |
| Algérie | 77 | 62 | 41 |
| Tunisie | 76 | 65 | 48 |
| Égypte | 79 | 67 | 51 |
| Jordanie | 77 | 64 | 47 |
| Turquie | 65 | 60 | |
| Roumanie | 80 | 73 | 55 |
| Malaisie | 68 | 63 | 69 |
| Espagne | 27 | 40 | 72 |
| | De 0 à 100 (max.) | | |

Source : Cabinet McKinsey, 2006.

En regard de tels risques, il est pourtant loin d'être certain que les IDE suffisent, en contrepartie, à maintenir l'emploi à son niveau actuel, compte tenu des évolutions démographiques et de l'arrivée des jeunes générations sur le marché du travail. Les IDE ne font jamais que « voler au secours de la victoire », dit-on. Ils ne représentent pas en eux-mêmes un levier suffisant pour provoquer un décollage mais le supposent plutôt, sauf à se tarir rapidement. C'est ainsi que si le premier frein au développement d'entreprises nous a paru tenir à l'insuffisante profondeur des marchés locaux, la productivité de la main d'œuvre des pays méditerranéens doit être considérée en deuxième lieu.

## I. 2. Un deuxième frein au développement d'entreprises : les clés du développement de la productivité dans les pays méditerranéens

D'après la Banque mondiale (BM), la productivité du travail en Tunisie représente 53 % de celle de l'UE de manière globale et seulement 45 % dans les services et 33 % dans les industries manufacturières. Plus précisément, et pour plusieurs pays de la région, le cabinet McKinsey a réalisé les estimations de productivité suivantes :
D'après ce tableau, un déficit des pays de la région apparaît particulièrement quant à la main d'œuvre hautement qualifiée. De fait, des retards ont été pris et sur aucun secteur technologique porteur, notamment, les pays du Sud et de l'Est de la Méditerranée n'ont su acquérir jusqu'à présent une présence véritablement significative. L'Algérie est le premier pays importateur de médicaments en Afrique mais peu est fait dans la région pour se déployer sur le marché des génériques, qui pèse au plan mondial 48 Mds de dollars par an et sur lequel l'Inde se développe rapidement (16 % du marché d'ores et déjà). Pour toute l'Afrique et le Moyen-Orient, une seule entreprise informatique, Telnet en Tunisie, atteint le ni-veau 5 du CMMI (Capability Maturity Model Integration) du Software Engineering Institute, le standard de qualité le plus reconnu en high-tech (dans le monde, la moitié des sociétés informatiques atteignant le CMMI 5 sont indiennes).

Or, si la productivité ouvrière méditerranéenne paraît proche des standards internationaux, elle souffre, sur le marché de l'UE, de la productivité plus élevée des PECO, ainsi que, de manière générale, de cet « atelier du monde » qu'est en train de devenir la Chine pour les produits à faible valeur ajoutée : 86 % des machines à coudre, 65 % des parapluies, 31 % du textile, etc., sont désormais chinois. Dans ces conditions, les clés d'un rattrapage de la productivité ne peuvent qu'être liées à la formation des hommes, ou plutôt, car d'importants efforts ont été entrepris en ce domaine, à l'intégration des personnes les mieux formées dans la dynamique entrepreneuriale.

### *Les enjeux de la formation des hommes*

Si, dans la région, Israël attire de manière préférentielle les investissements technologiques, c'est d'abord parce que ce pays est directement en prise avec le monde high-tech américain – au point d'ailleurs que certaines sociétés israéliennes s'introduisent directement sur le Nasdaq – en regard, trois sociétés marocaines seulement sont cotées à Paris (Maroc Telecom, Attijariwafa Bank et l'ONA). Intel est installé en Israël depuis 1974 – il est aujourd'hui le premier employeur industriel du pays. Cisco est là depuis 1996. Google est en cours d'implantation. Ainsi, Israël accède à un niveau de compétitivité internationale : le tiers de ses exportations technologiques vont en Asie.

Comment de tels liens ont-ils pu être développés ? D'abord à travers la formation et l'acquisition d'une première expérience professionnelle aux États-Unis de nombreux Israéliens. Dira-t-on que cela repose sur la proximité particulière qu'Israël entretient avec les États-Unis ? Mais l'Inde et la Chine n'ont pas agi autrement. On compte aujourd'hui 28 766 sociétés technologiques américaines réalisant plus d'1 M $ de chiffre d'affaires et

employant plus de 20 salariés. Or, le quart d'entre elles ont au moins un fondateur d'origine étrangère, parmi lesquels un quart d'Indiens et 13 % de Chinois (avec Taïwan). Dans les deux grands clusters (Silicon Valley & Research Triangle Park en Caroline du Nord), la moitié des entreprises ont au moins un fondateur étranger. En 2006, le quart des brevets internationaux déposés aux États-Unis avaient au moins un inventeur d'origine étrangère, dont l'Inde et la Chine en bonnes places. Les sociétés technologiques libanaises ou tunisiennes qui exportent leurs services, note de même la BM, sont celles où travaillent des ingénieurs formés à l'étranger (BM, juillet 2007). Dès lors, étant donné le nombre conséquent d'étudiants issus des pays méditerranéens faisant leurs études en Europe ou en Amérique du Nord, le très faible développement des secteurs technologiques dans la région souligne peut-être finalement surtout l'incapacité des pays concernés à réintégrer largement leurs élites expatriées.

2,7 millions d'Égyptiens vivent aujourd'hui hors d'Égypte, soit 10 % de la population active, dont 70 % dans les pays du Golfe et 30 % aux États-Unis, au Canada, en Italie et en Australie. Longtemps, les émigrants de la région méditerranéenne, issus du monde rural, étaient faiblement qualifiés. Ils sont aujourd'hui de plus en plus diplômés : de 20,4 % des émigrés égyptiens en 1985 à 40,2 % en 2002 (Adams, 2003). Aujourd'hui, les diplômés de l'enseignement supérieur représentent 58 % des migrants méditerranéens qui s'installent en Amérique du Nord (pour 10 % en Europe), la plupart du temps sans grande perspective de retour – cela ne concernant par exemple que 20 % des étudiants syriens ayant obtenu un doctorat dans une université étrangère. Dans les écoles d'ingénieurs des pays du Maghreb, l'émigration peut concerner entre 50 à 70 % d'une promotion, la plupart du temps sans retour. En France, le Centre National de la Recherche Scientifique compte ainsi 700 chercheurs marocains, 500 algériens et 450 tunisiens. Malheureusement, ces communautés expatriées sont faiblement organisées en diasporas, susceptibles de favoriser tout à la fois leur intégration dans les pays d'accueil, ainsi que des démarches entrepreneuriales dans les pays d'origine, à l'exemple de The Indus Entrepreneurs (TIE), un réseau, indien et pakistanais à l'origine, fondé en 1992 dans la Silicon Valley qui, rassemblant aujourd'hui 12 000 membres issus de 12 pays, est sans doute devenu le premier club d'entrepreneurs mondial, bénéficiant

**Tableau 7. Nombre d'étudiants faisant leurs études dans un pays de l'UE en 2006**

| | 2006 |
|---|---|
| Albanie | 13 447 |
| Algérie | 23 706 |
| Croatie | 8 914 |
| Égypte | 3 403 |
| Israël | 6 103 |
| Jordanie | 3 154 |
| Liban | 7 674 |
| Libye | 2 407 |
| Mauritanie | 1 313 |
| Maroc | 48 599 |
| Palestine | 668 |
| Syrie | 5 208 |
| Tunisie | 12 886 |
| Turquie | 34 609 |
| Total | 172 091 |

Source : Eurostat.

de l'appui des plus grandes entreprises. Le Maroc et la Tunisie ont néanmoins lancé récemment des programmes de coopération pour favoriser les transferts de connaissance par l'intermédiaire de nationaux expatriés. Cependant, bien des obstacles se dressent, qui demanderaient encore, pour être levés, que l'entrepreneuriat soit sans doute plus nettement favorisé dans les différents pays, alors que les entreprises privées de la région, a-t-on noté, montrent traditionnellement peu d'appétence pour l'endettement et la prise de risque, marquent de fortes réticences à ouvrir leur capital, souvent très concentré et se contentent volontiers, de manière générale, d'activités de commerce à retour immédiat et aisé, offrant peu d'opportunités de réinvestissement et, ainsi, peu de possibilités de remontée de filière. De là un tissu industriel « mité », peu concurrentiel et peu coopératif, fait d'entreprises peu diversifiées et peu complémentaires. C'est pourquoi domine l'impression que ne réussissent dans ces pays que les étrangers et les favoris (Ould Aoudia, 2006).

La région méditerranéenne se caractérise de manière générale par un climat des affaires (droits de propriété, sécurité des transactions, transparence des marchés, qualité des infrastructures, respect de la concurrence) encore très perfectible mais non pas pénalisant, au contraire – sauf pour certains délais administratifs : la construction d'un château d'eau à Alger peut engager à cinq ans de procédure, déclare un grand opérateur international ! S'appuyant sur plusieurs expériences dans les PECO, la Banque mondiale recommande à cet égard des solutions de jumelage institutionnel avec des partenaires de l'UE pour conduire les efforts de convergence réglementaire, notamment dans le domaine des services d'infrastructures (BM, novembre 2007). Dans le cadre de la Politique européenne de voisinage et des financements associés, le Maroc a d'ailleurs déjà signé trois projets de jumelage, dans les domaines de l'environnement, de la marine marchande et des procédures douanières. Néanmoins, tous ces efforts devront être accompagnés de changements profonds quant au financement du développement d'entreprises – lequel représente le troisième frein structurel qu'il nous faut examiner à présent.

### I. 3. Un troisième frein au développement d'entreprises : le financement

*La situation des banques sur les rives sud et est de la Méditerranée*

Depuis plusieurs années, sur les rives méditerranéennes, d'importants efforts ont été engagés par les pouvoirs publics pour restructurer et mettre à niveau les secteurs financiers, avec le soutien notamment de la Banque mondiale et de l'UE. Ainsi, dans le cadre de la Politique européenne de voisinage, des plans d'action ont notamment été définis avec l'Égypte, Israël, la Jordanie, le Liban, le Maroc et la Tunisie.

L'Égypte, par exemple, a adopté une nouvelle loi bancaire en 2003 qui, renforçant les ratios prudentiels des banques, révisant leurs modes de gouvernance et relevant les montants de capital minimum, visait un assainissement du secteur dans son ensemble. Sur cette base, un plan de restructuration a lancé, l'année suivante, plusieurs opérations de désengagement de l'État, de reprise de dettes et la privatisation, ouverte aux investisseurs étrangers de deux des quatre premières banques publiques.

Ces réformes ont été menées avec plus ou moins de vitesse et de vigueur selon les pays. À ce stade, avec 20 établissements de crédit, 18 banques off-shore et nenf bureaux de représentation de banques étrangères, la Tunisie paraît sur-bancarisée et demeure par ailleurs toujours dominée par des banques publiques (STB et Banque de l'Habitat). La Syrie et l'Algérie, quant à elles, paraissent nettement sous-bancarisées, tant en termes de réseaux d'agences que de moyens de paiement – on ne compte aujourd'hui guère plus d'agences bancaires en Algérie que lors de l'indépendance, malgré le triplement de la population. En 2005, le secteur public accordait 30 % des crédits bancaires au Maroc, 32 % en Tunisie

mais toujours 87,5 % en Algérie. Les banques de capitaux étrangers tenaient 34,4 % du marché tunisien, 21 % du marché marocain mais seulement 10 % du marché algérien. Dans les trois pays, par ailleurs, la présence des banques du Golfe est jusqu'ici demeurée discrète, la finance islamique ne s'étant pas encore beaucoup développée au delà de l'Égypte.

C'est aux deux extrémités des rives est et sud du bassin méditerranéen que les réformes bancaires sont aujourd'hui les plus abouties. Les banques marocaines et turques, en effet, sont tout d'abord très rentables, affichant des indicateurs de performance à faire pâlir leurs consœurs européennes. En 2006, les banques turques avaient un ROE moyen de 19 %, un coefficient d'exploitation de 46 %, un taux de couverture de leurs créances en souffrance de 89 %. Au Maroc, la même année, le ROE moyen des banques était de 15,9 % mais Attijariwafa Bank atteignait 19,5% et la Banque Centrale Populaire 24 %, avec des coefficients d'exploitation de respectivement 49,2 % et 48,6 %. Le taux moyen de couverture des banques marocaines était de 74 %. Par comparaison, le ROE de Santander, la banque aujourd'hui la plus rentable d'Europe, est de 17,4 %. Tandis qu'en France, très peu d'établissements bancaires ont un coefficient d'exploitation inférieur à 60 %, avec un taux de couverture moyen de 63 %. Par ailleurs, l'avance des banques marocaines se marque au plan réglementaire (adoption en 2007 du ratio McDonough, réglementation dite « Bâle II »), ainsi qu'en termes d'activités nouvelles : Attijariwafa et la BCP ont commencé à engranger des gains significatifs (quoique modestes) sur les opérations de marché. Enfin, comme les banques turques, les premiers établissements marocains développent une présence internationale avec pour direction le Nord (Russie) pour les banques turques et le Sud (Afrique) pour les marocaines.

Dans les deux cas, ce développement international est commandé par une situation de saturation de l'offre bancaire, rendant les gains de parts de marché de plus en plus prohibitifs. La Turquie compte 49 banques, dont trois banques publiques, 15 étrangères et 13 banques d'affaires et de développement. Les cinq premiers établissements captent 83 % des dépôts mais ne réalisent que 62 % des actifs bancaires totaux et ne distribuent que 57 % des crédits.

Cette situation de saturation de marché est paradoxale car, selon les normes occidentales, les deux marchés bancaires turcs et marocains ne sont pas particulièrement développés. La population marocaine n'est pas bancarisée à plus de 37 % (98 % en France). On compte – c'est le taux le plus élevé pour la région – un guichet bancaire pour 7 300 habitants au Maroc (1 pour 2 400 en France), mais le tiers des agences se concentre dans et autour de Casablanca. L'ensemble des crédits hypothécaires en Turquie ne représente que 4 % du PIB (47,5 % pour l'UE 25). De fait, la florissante situation des banques turques et marocaines ne s'explique que par le développement relativement faible de leurs marchés bancaires. Au Maroc, les banques se financent essentiellement sur des dépôts le plus souvent à vue et qui, à six mois, étaient rémunérés en moyenne à 3,43 % en 2006. Elles replaçaient l'argent en bons du Trésor (de 2,57 % à 13 semaines jusqu'à 4,63 % à 20 ans), ainsi qu'en crédits, dont le taux moyen était de 7,08 % (11,53 % pour les crédits à la consommation)[1]. Certes, ces éléments n'ont rien d'anormaux par rapport aux pays émergents. Par comparaison, en situation de quasi-excellence sur ce point, parmi les pays émergents, les banques chiliennes pratiquaient un taux d'intérêt débiteur réel de 4 % en 2004. Mais au même moment, ce taux atteignait 48,5 % au Brésil. Quant au développement chinois actuel, il trouve deux relais : public d'un côté, qui se matérialise par le rachat par l'État des stocks de créances en souffrance de banques assez peu performantes de l'avis général et un relais quasi informel de l'autre, avec des prêteurs (les *grey banks*) qui pra-

1. Source : Bank Al Magrib, *Rapport annuel 2006.*

tiquent l'usure (28 % de taux d'intérêt en moyenne en 2005) mais soutiennent néanmoins 20 % de l'investissement. Toutefois, dans les pays méditerranéens, de tels écarts de marges, créant un phénomène de ressource gratuite pour les banques, semblent plutôt reposer sur le fait que le crédit demeure comme un privilège pour ceux qui en bénéficient, ce qui pose par ailleurs la question du caractère concurrentiel du secteur bancaire. De fait, sur les rives sud et est du bassin méditerranéen, les banques sont sur-liquides : elles n'emploient pas la totalité des fonds qu'elles collectent. Pour la Turquie, ainsi, il n'est pas attendu que les crédits soient équivalents aux dépôts avant 2012. Aujourd'hui, les crédits n'utilisent que 26 % des ressources des banques turques, ce qui n'empêche pourtant pas ces dernières de connaître des problèmes de liquidité.

*L'accès au crédit pour les entreprises*

Un tel phénomène – général dans les pays en développement et même émergents – s'explique d'abord par le fait que le financement des banques a pour principale ressource les dépôts de la clientèle : 61,5 % des ressources des banques turques (les trois quarts des ressources des banques en moyenne dans la région), pour 20 % de ressources interbancaires. Une marge de sécurité doit ainsi être laissée pour la transformation de ces ressources, qui ne peuvent être intégralement converties en crédits bancaires. Cela s'explique par la certaine faiblesse du crédit qui singularise les pays méditerranéens par rapport aux pays européens, mais non par rapport à beaucoup de pays émergents. Le ratio crédits domestiques/PIB est de 66 % au Maroc, 12,5 % en Algérie, 65,4 % en Tunisie, 31,7 % en Turquie. Il atteint 123 % aux États-Unis et 167 % dans l'UE. Mais il ne dépasse pas 41 % au Brésil et 76 % en Corée du Sud. Or, en 2007, les encours de crédit ont cru de 28 % au Maroc.
Le problème reste toutefois que le crédit n'a guère d'alternative dans les pays méditerranéens, les marchés financiers demeurant peu développés, voire quasi inexistants (Algérie, Libye et Syrie) ; à l'exception d'Israël et de la Jordanie, comparables aux Tigres asiatiques sur ce point, ainsi que du Maroc et de l'Égypte, dont les bourses ont un profil « émergent » – jusqu'aux phénomènes de spéculation d'ailleurs, la remarquable progression du MASI, l'indice de la Bourse de Casablanca en 2006 (+ 71 %, contre + 22,5 % en 2005 ; contre 21,3 % pour le Tunindex en 2006) étant nettement supérieure à celle des 64 entreprises cotées. Les bourses égyptiennes et marocaines attirent désormais les investisseurs étrangers (29,7 % de la capitalisation boursière marocaine). Leurs performances demeurent toutefois relatives si l'on considère, par comparaison, qu'avec 193 valeurs la capitalisation de la bourse vietnamienne a été multipliée par 20 en 2006, tandis que de 2002 à 2007, le Nairobi Stock Exchange a gagné 787 % en valeur.

À cette faiblesse des bourses de valeurs mobilières, il faut encore ajouter le caractère véritablement atone des marchés obligataires et de créances négociables : 4,1 Mds de dirhams d'émissions obligataires au Maroc en 2006 (concentrées sur deux émetteurs) et 1,3 Mds de billets de trésorerie émis (un encours de créances négociables de 10,3 Mds).Dans la région, cette faiblesse des marchés financiers renvoie à celle des investisseurs institutionnels et, particulièrement, au très faible développement des compagnies d'assurance – non tant en nombre qu'en taille : l'Égypte compte 21 compagnies d'assurance, dont trois plus une compagnie de réassurance tiennent 70 % d'un marché qui ne dépasse pas 2 % du PIB. En Algérie, ce marché représentait 0,57 % du PIB en 2005, malgré l'existence de 16 compagnies (dont sept publiques). Dans ces conditions, les États ne peuvent que s'adresser aux banques – et donc aux dépôts de la clientèle – pour financer leur dette : les titres publics représentent 33,6 % des actifs publics en Turquie. Hormis pour l'Algérie et la Libye, l'endettement public est en effet élevé sur les rives sud et nord du bassin méditerranéen.

**Tableau 8. Ratio de crédits domestiques sur PIB en 2006 (en %)**

| | Crédits/PIB 2006 (%) |
|---|---|
| Portugal | 159,2 |
| Espagne | 167,5 |
| France | 99,5 |
| Italie | 95,9 |
| Malte | 105,5 |
| Slovénie | 68,8 |
| Croatie | 69,2 |
| Bosnie et Herz. | 52,2 |
| Albanie | 15 |
| Grèce | 91,1 |
| Chypre | nd |
| Turquie | 31,7 |
| Syrie | 11,9 |
| Liban | 77,9 |
| Jordanie | 97,5 |
| Israël | 97,5 |
| Palestine | 8 |
| Égypte | 52,2 |
| Libye | 7,2 |
| Tunisie | 65,4 |
| Algérie | 12,5 |
| Maroc | 66,3 |
| Mauritanie | 41,7 |

Source : Banque mondiale.

**Tableau 9. Ratio de capitalisation boursière sur PIB en 2006**

| 2006 | Capitalisation boursière/PIB |
|---|---|
| Maroc | 68 % |
| Algérie | ns |
| Tunisie | 13 % |
| Libye | ns |
| Égypte | 73 % |
| Israël | 131 % |
| Jordanie | 189 % |
| Liban | 34 % |
| Syrie | ns |
| Turquie | 34 % |
| Roumanie | 29 % |
| Brésil | 56 % |
| Inde | 75 % |
| Corée Sud | 107 % |
| Malaisie | 143 % |

Source : CIA World Factbook.

Les banques remplissent ainsi un rôle de financement de l'État par captation de l'épargne domestique, comblant des systèmes fiscaux souvent faillibles. Dans un tel contexte, les banques et les entreprises, pour leur propre développement, peuvent se retrouver à court de liquidités, notamment en devises, et être obligées d'emprunter à l'étranger, ce qui les expose à des risques considérables en cas de dépréciation de la monnaie nationale. La dette du secteur privé turc a ainsi augmenté de 266 % entre 2002 et 2007, passant de 33 % à 63 % de la dette totale du pays. Ce scénario, qui précipita l'écroulement de plusieurs économies asiatiques en 1998, pourrait sérieusement aujourd'hui se reproduire dans plusieurs pays méditerranéens.

Dès lors, malgré les efforts considérables engagés et les premiers succès rencontrés, il n'est pas encore permis d'assurer que la situation des banques est à même de servir de levier au développement d'entreprises sur les rives sud et est de la Méditerranée. Un scénario possible, en effet, serait de voir les banques des différents pays afficher une rentabilité de plus en plus forte, quoique participant assez peu au développement local – des banques engagées dans de grands projets internationaux mais ayant tendance à délaisser leur propre marché ; situation qui fut celle des banques françaises à la fin du XIXe siècle et face à laquelle il fallut développer l'épargne populaire hors de leurs circuits (caisses d'épargne) et sa transformation via la Caisse des Dépôts, tandis que des banques mutualistes apparurent pour répondre aux besoins de nombreux métiers. Aujourd'hui, les banques marocaines ne sont pas sans évoquer une telle situation : dans un pays dont la majorité de la population demeure rurale, leurs crédits ne se destinent que pour 5,7 % à l'agriculture (2006 ; 4 % en Turquie). L'industrie, quant à elle, reçoit bien moins de crédits (27,8 %) que les services (66 %).

**Tableau 10. Ratio de dette publique sur PIB en 2007 (en %)**

2007

| | Dette publique/PIB |
|---|---|
| Maroc | |
| Algérie | 64 % |
| Tunisie | 10 % |
| Libye | 55 % |
| Égypte | 5 % |
| Israël | 105 % |
| Jordanie | 83 % |
| Liban | 67 % |
| Syrie | 188 % |
| Turquie | 37 % |
| Roumanie | 58 % |
| Brésil | 19 % |
| Inde | 44 % |
| Corée du Sud | 59 % |
| Malaisie | 33 % |

Source : CIA World Factbook.

Or, avec l'afflux d'investissements directs étrangers dans la région – les investisseurs ayant largement recours à des emprunts en monnaie locale – les banques marocaines peuvent connaître de vives tensions de trésorerie, comme au dernier trimestre 2007, selon le rapport sur la politique monétaire de la Banque Al-Maghrib de mars 2008. Aujourd'hui, au Maroc, les crédits de court terme (comptes débiteurs et crédits de trésorerie) dépassent encore largement en volume les crédits d'équipement (respectivement 30 % et 24 % en 2006). Les emplois bancaires sont essentiellement à court terme, surtout pour les banques privées. Aujourd'hui dans la région, souligne la Banque mondiale, l'investissement relève en moyenne aux trois quart de l'autofinancement et à hauteur de 1 % seulement du crédit bancaire – c'est le taux le plus bas au monde (BM, 2006). Pour palier le manque de financements longs, des banques de développement ont été créées dans beaucoup de pays de la région mais elles ont aujourd'hui été converties en banques universelles et privatisées ou peinent à trouver leur place. Le problème est bien plus vaste sans doute et recouvre en fait un problème de captation et de transformation de l'épargne.

Au total, dans beaucoup de pays méditerranéens, la distribution de crédit demeure étranglée par un double phénomène :

- De ressources peu stables et de manque de profondeur des marchés financiers pour y remédier.
- D'asymétrie d'information en défaveur des banques, les comptes d'entreprises souffrant d'un manque très général de transparence : comptes non certifiés, pratique générale de la « double » comptabilité favorisant l'évasion des profits et réduisant d'autant les fonds propres, etc. Or, ceci qui pousse à la restriction de l'accès au crédit, en est aussi bien la conséquence, car beaucoup de petites et moyennes entreprises ayant appris à faire sans les banques ne se sentent guère contraintes de développer beaucoup de transparence. D'autant qu'un grand nombre manquent sans doute de formation et de compétences pour le faire. Différente dispositions légales sont néanmoins introduites à cet égard (la loi tunisienne de sécurité financière d'octobre 2005 rend ainsi les commissaires aux

comptes obligatoires pour les sociétés par actions). Tandis que, promues par la Banque mondiale, les formules de fichiers positifs et Crédit Bureau, centralisant les informations sur les emprunteurs et les délivrant aux établissements prêteurs, se développent.

En attendant, les taux de créances en souffrance demeurent élevés : 3,74 % de l'encours total de crédit en Turquie en 2006 (3,5 % en France) mais 11 % au Maroc, 19 % en Tunisie et 25 % en Égypte. De sorte que les banques, en conséquence, demandent des couvertures prohibitives en termes de garantie : 230 % de l'encours en moyenne pour la région MENA, a-t-on calculé, ce qui représente l'un des taux les plus élevés au monde. L'exigence d'une garantie de nature patrimoniale (hypothèques immobilières pour l'essentiel) pour l'ouverture d'un crédit ou de la contrepartie en cash d'opérations internationales en devises, aussi bien que le faible développement de la mobilisation des effets de commerce et de la prise en gage, excluent du marché du crédit de nombreuses catégories d'entreprises et de particuliers.

Or, un tel système, pénalisant pour le développement de l'économie dans son ensemble, est tout aussi nocif pour les banques, qui doivent souvent se contenter de partager l'hypothèque d'un bien dont la valeur est fixée sur un marché souvent fort spéculatif (immobilier) ou susceptible de subir d'importants creux (infrastructures touristiques en Tunisie par exemple).

Par ailleurs, de telles pratiques sont peu favorables au développement d'une réelle culture du crédit au sein des banques, les décisions ayant tendance à se fonder moins sur une analyse des risques et des projets que sur la valeur faciale des garanties patrimoniales proposées ; ce qui cantonne les banques à une fonction de conservation de valeurs, dont le montant décide de l'accès ou non des clients au crédit. Cela se traduit par un manque d'expertise technique pour évaluer les risques, en même temps que par l'absence d'ingénierie financière et de conseils adaptés pour répondre aux besoins des entreprises. Une situation renforcée par le manque de visibilité sur la situation comptable de ces dernières. Dans un tel contexte, les marges bancaires sont peu différenciées et ne sont pas bâties pour tenir compte de la réalité des risques. Du fait de l'exigence de garantie, le coût du risque n'est, en effet et de manière générale, guère répercuté dans les marges.

Pourtant, l'inadaptation des systèmes juridiques (droits de propriété mal protégés, lacunes dans la tenue des registres fonciers, nature des baux) rend l'exercice des garanties souvent incertain et difficile pour les établissements financiers. Et parce qu'elles accumulent ainsi au total de nombreux impayés et défaillances, en même temps qu'elles sont fragilisées par un difficile traitement des contentieux (procédures judiciaires longues, coûteuses, à l'issue très incertaine, faibles incitations fiscales au provisionnement des créances en souffrance), les banques limitent l'offre de crédit en quantité (beaucoup d'entreprises n'y accèdent pas), en qualité (peu d'engagements à moyen-long terme), ainsi qu'en termes de conditions (garantie patrimoniale impérative, cash collateral exigé pour les opérations de commerce international).

### *Le micro-crédit, l'exclusion bancaire et la question de la mobilisation de l'épargne*

À ceci est susceptible de s'ajouter dans toute la région l'orientation vers la pure usure – favorisée par la tendance au désencadrement total des taux débiteurs, comme au Maroc – avec le crédit à la consommation et le micro-crédit, dont les concours flirtent volontiers avec les 50 % d'intérêt, alors même que bénéficiant de systèmes de cautionnement mutuel entre emprunteurs, ils enregistrent des taux de remboursement extrêmement élevés.
La faveur unanime dont bénéficie actuellement le micro-crédit dissimule trop souvent ses dé-

rives possibles et table sur des impacts que les chiffres ne valident pas, notamment en termes de création d'emplois. Au Maroc, 12 associations de microcrédit ont ensemble un million de clients (elles estiment leur marché à 3,2 millions de clients), dont 66 % de femmes mais créent moins de 5 000 emplois par an (3 882 en 2006 ; 2 562 en 2005)[2]. Les constats sont du même ordre au Bangladesh : le micro-crédit redistribue de la richesse mais n'en crée guère, finançant souvent des activités peu rémunératrices. Il doit s'accompagner de programmes sociaux, notamment éducatifs.

Le Maroc est sans doute l'un des pays les plus développés au monde en matière de microfinance et l'un de ceux qui auront reçu le plus d'aides publiques et internationales à cet égard. Au Maroc le micro-crédit relève aujourd'hui pour l'essentiel de fondations privées, quand il est ailleurs davantage porté par l'initiative parapublique – ainsi, la Banque Tunisienne de Solidarité qui accorde des concours à taux bonifiés (5 % par an), en utilisant le réseau de guichets de la Poste (la micro-finance en Tunisie présentant un caractère particulier : la forte proportion de bénéficiaires ayant fait des études secondaires ou supérieures).
Or, malgré ces évolutions récentes, les rives sud et est de la Méditerranée affrontent encore aujourd'hui un problème important d'exclusion bancaire, concernant tant les particuliers que les entreprises. Dans des pays où la part de l'économie informelle est considérable (de 15 à 20 % du PIB turc, selon les estimations), les banques ne paraissent pas pleinement en prise avec l'ensemble des démarches entrepreneuriales, ne servant finalement que quelques « privilégiés » : 62 % des crédits bancaires aux entreprises en Turquie dépassent 300 000 euros, très au delà des besoins courants de l'immense majorité des entreprises : aussi les crédits au secteur privé ne représentent que 12 % des actifs bancaires turcs. Or, l'alignement général des établissements financiers du bassin méditerranéen sur les normes et standards européens semble plutôt conforter cette situation. Les banques occidentales qui s'implantent localement soulignent en effet, assez fréquemment, l'insuffisance à leurs yeux de projets productifs, attrayants ou même simplement « bancarisables ». Malgré ses rapides progrès dans la région, on ne peut donc encore affirmer à ce stade que l'économie bancaire est à même de véritablement remplir un rôle de levier par rapport au développement et de briser ce qu'on a nommé « le cercle vicieux de la pauvreté » (Nurkse, 1953), qui tient à un double problème de formation et de productivité du capital : une faible productivité génère des revenus bas, donc une épargne faible et peu de formation de capital. De faibles capacités d'investissement n'autorisent qu'une faible productivité et ainsi de suite.
Comment sortir d'un tel cercle ? L'étroitesse des marchés domestiques, en général, ne le permet pas. Sur leur propre marché, les producteurs affrontent de plus la concurrence des produits occidentaux, lesquels bénéficient d'une nette préférence et même d'un « effet de démonstration » assez général dans le monde en développement : au Mali, note Érik Orsenna, on se vante de l'origine de ses vêtements, laquelle ne doit pas être africaine. Ainsi ce pays, gros producteur de fibres, n'a aucune industrie textile (Orsenna, 2006). Les marchés occidentaux, quant à eux, demeurent assez inaccessibles, du fait de la faible productivité et même une fois levées les barrières tarifaires, les politiques commerciales n'étant plus tellement fondées de nos jours sur des éléments tarifaires au plan international mais sur des normes et réglementations techniques et sanitaires – qui ne vont pas sans un certain protectionnisme au niveau de l'UE et des États-Unis. Cela explique sans doute que, malgré la préférence communautaire qui leur est accordée, les pays ACP ont vu leur part de marché européenne passer de 6,7 à 2,8 % de 1976 à 1994.
Dès lors, seule une forte mobilisation de l'épargne serait à même de briser le cercle, ce que firent les Tigres d'Asie, au gré d'une politique très dirigiste néanmoins, notamment en termes d'incitations fiscales et de bonification de taux. Tandis qu'une telle mobilisation satisfait moins immédiatement aux objectifs d'une économie bancaire privée, telle qu'elle se développe aujourd'hui dans les pays méditerranéens. Le « retard » entre l'Afrique et l'Asie prend ici son origine. Dans les années 50 et 60, la situation entre les principaux pays des deux zones

2. Source : Bank Al Magrib, *Rapport annuel 2006.*

était, sur bien des points, comparable. Mais depuis, le dynamisme commercial puis industriel (souvent porté par la diaspora chinoise) et surtout la mobilisation de l'épargne par les banques, engagée dès les années 50 dans un pays comme la Thaïlande, ont fait la différence. Tandis que dans beaucoup de pays méditerranéens, un certain paradoxe se constate entre une véritable course aux dépôts entre banques, à travers l'ouverture de guichets – ceci pouvant aller jusqu'à créer une impression de sur bancarisation par endroits (Casablanca) – et le faible développement des produits d'épargne. Du fait de l'offre restrictive de crédit, les clients des banques restent avant tout de simples déposants, et bien peu est fait pour leur proposer des formules d'épargne attractives. Ceci s'explique notamment par la faiblesse des systèmes financiers locaux et, en conséquence, par le manque de placements porteurs permettant une gestion différenciée, dynamique, des fonds collectés. Développer des produits d'épargne spécialisés par finalité et échéance supposerait de définir les conditions d'une gestion d'actifs bien plus performante que celle actuellement permise.
En somme, il faut suggérer que la surliquidité des banques n'est pas l'effet d'un manque d'initiatives entrepreneuriale mais, malgré l'apparent paradoxe, de la mobilisation insuffisante d'une épargne généralement constituée et conservée hors des circuits bancaires, sous une forme purement liquide. Cela vaut tant pour les épargnes nationale qu'internationale, reçue des migrants. Par rapport à l'Asie – la Corée du Sud notamment ayant bien davantage compté sur la mobilisation de l'épargne nationale que sur les IDE – l'investissement privé national demeure faible dans la région : de 12 à 13 % du PIB en Tunisie, par exemple, pour 19 % en Roumanie et Bulgarie et 30 % en Asie (mais 25 % au Maroc en 2005).

Ces constats invitent surtout à lier ensemble les problématiques de marché, de productivité et de financement, ce qui est encore rarement le cas. Ils invitent à retenir des orientations stratégiques à une échelle véritablement régionale.
Nous l'avons vu, le développement d'entreprises dans les pays méditerranéens se heurte à des freins structurels d'accès aux marchés, de productivité et de financement. Pour lever ces entraves, des orientations stratégiques s'imposent, c'est-à-dire des choix en termes de mobilisation des ressources, en regard des opportunités qui s'offrent véritablement aux pays de la région.

Certes, plusieurs pays ont développé une réflexion à cet égard, notamment en termes de spécialisation industrielle internationale – comme le démontrent les plans « Émergence » et « Envol » marocains. Il manque néanmoins d'inscrire ces réflexions dans le cadre d'une stratégie véritablement régionale – autrement dit une stratégie euroméditerranéenne à moyen terme ; qu'il ne s'agit bien entendu pas d'élaborer ici mais dont il faut s'efforcer de tracer les premiers contours, dans la mesure où ils conditionnent directement le développement des entreprises dans le bassin méditerranéen. Nous nous efforcerons ainsi de décrire : 1) les processus d'intégration industrielle avec l'UE, puis 2) les stratégies de développement qui paraissent les plus ouvertes.

## II. 1. La question de l'intégration industrielle des pays méditerranéens avec l'UE

À travers les flux d'IDE qu'elle reçoit, la région méditerranéenne paraît marquée par un triple phénomène :

- L'amorçage timide d'une diversification industrielle au Maroc, en Jordanie et en Syrie.
- Le renforcement de marché pour la Turquie et l'Égypte, la diversité de projets industriels permettant de parler de « décollage en attente de confirmation » pour la Turquie, un peu comme pour le Brésil ou l'Argentine.

- L'insertion spécialisée à un niveau mondial d'Israël quant aux nouvelles technologies.

Sans doute l'avenir à 15 ans de la région est en train de se jouer en partie maintenant, dans la possibilité que ces trois phénomènes se renforcent et se complètent, en associant d'autres pays du Nord et du Sud et finalement convergent pour créer une économie véritablement méditerranéenne. Bien entendu, les barrières, notamment politiques, qui pèsent aujourd'hui sur de telles orientations viennent immédiatement à l'esprit. Pourtant, s'il est permis de les oublier un court instant, en voyant loin et large, force est de reconnaître que la région méditerranéenne voit actuellement émerger en son sein un leader technologique, deux marchés de taille conséquente, ainsi que quelques « tigres » industriels potentiels – peut-être vaut-il mieux les appeler « lions » ! – parmi lesquels les places sans doute ne sont pas encore vraiment distribuées (l'Algérie, notamment, ne pourrait-elle pas être l'un d'eux ?).

Ce qui ne se constate pas, en revanche, est un phénomène d'intégration avec les économies de l'Union européenne selon un processus d'intensification des échanges intrabranches, sous l'effet des IDE, qu'auront connu l'Espagne et les PECO, ou le Mexique aussi bien avec l'Alena. Sauf dans le cas d'Israël, les pays des rives sud et est de la Méditerranée demeurent insérés dans des échanges de forte spécialisation interbranches (selon l'indice de Krugman), liés à des ressources naturelles (énergie), ou à un positionnement géographique et culturel particulier (délocalisation de services, tels que les centres d'appel). Ainsi, les économies du Sud ne sont pas tant intégrées aux marchés du Nord qu'accrochées à eux, au moyen de liens étroits et dans un rapport de diffusion quasi unilatéral de l'UE à sa périphérie qui isole finalement chaque pays dans une relation bilatérale avec ses voisins du Nord, malgré les efforts d'intégration Sud-Sud et notamment l'ouverture à certains pays partenaires méditerranéens (Égypte, Israël, Jordanie, Maroc) du système du cumul de l'origine (les tarifs préférentiels d'entrée dans l'UE s'appliquent également aux marchandises ayant subi une transformation dans un autre pays de la région).
On souligne souvent la faiblesse des investissements européens en Méditerranée en comparaison avec ceux réalisés dans les PECO. Toutefois, comme on a pu le souligner, la comparaison n'est guère valable pour deux raisons. À l'Est, d'abord, existait un tissu industriel vétuste et peu productif mais assez complet, y compris en termes de formation de la main d'œuvre ou d'unités de R&D. Il était donc possible d'y conduire des investissements importants, car horizontaux, portant sur la totalité d'une chaîne de production, dans le cadre d'une spécialisation intrabranche. Au Sud et à l'Est de la Méditerranée, la situation des économies ne permettait et ne permet toujours pas de tels investissements (Védrine et le Cercle des économistes, 2007).

De plus, et c'est la seconde raison, l'investissement international tend de plus en plus à suivre un autre modèle désormais vertical, portant sur un segment seulement de la chaîne de valeur et recherchant des avantages décisifs de localisation. Dans le contexte d'une économie mondialisée, il s'agit par exemple d'extraire du marbre en Italie, de le façonner en Mauritanie, de le commercialiser à Londres et de l'exporter aux États-Unis. Chaque segment de production cherche sa localisation optimale dans un schéma réticulaire qui agrège des éléments quasi autonomes. De sorte qu'il ne s'agit plus véritablement de sous-traitance mais de partenariats au sein desquels chaque acteur tente de reporter sur ses partenaires les charges d'investissement et de montée en gamme, dans le cadre d'une compétitivité mondiale. Dans cette perspective, l'important n'est pas de développer une industrie mais de trouver les moyens de s'insérer dans des processus de production variés, de manière peut-être extrêmement ponctuelle au démarrage – de simples « cottage industries » d'assemblage et de réexportation – mais avec le double objectif

d'acquérir une spécialisation de niveau international et de monter en gamme, même quand le marché national ne permet pas d'y consolider d'abord ses positions pour être agressif ensuite à l'international.

### *Le rôle des États*

De telles démarches font moins appel à l'investissement public et à la planification d'ensemble que les grands programmes industriels par branches du passé. Ces démarches ne peuvent néanmoins reposer entièrement sur les IDE car l'État est appelé à y jouer un rôle important mais de stratège et d'incubateur plus que de producteur et de chef de chantier. En effet, l'insertion dans le commerce mondial se joue désormais moins à travers une politique industrielle volontariste d'État que sur la capacité de ce dernier à organiser la part la moins immédiatement marchande de l'économie : éducation, infrastructures, normes, contrôles. Ainsi, les sociétés indiennes de services externalisés sont devenues championnes au plan mondial mais l'Inde, avec ses routes encombrées, ses pannes d'électricité à répétition et son droit de propriété incompréhensible, attire finalement assez peu les industriels étrangers.

Au delà des infrastructures, l'insertion dans l'économie mondiale passe encore, prioritairement, par des actions visant à refondre des systèmes fiscaux qui, dans la région, en plus d'être complexes, lourds et pénalisés par une collecte inefficace, sont encore largement assis sur la tarification douanière, et également des actions visant également à organiser le marché du travail et à développer le marché du crédit. Mais, ces actions sont pourtant peu mises en avant par les nombreux plans de développement de la région, qui leur préfèrent plutôt les perspectives de libre-échange, le soutien à la R&D, les fonds de capital investissement, les pôles de compétitivité… – mesures certes louables mais qui, à ce stade, paraissent encore représenter davantage des résultats devant être recherchés à terme que des variables d'action immédiatement accessibles.
Lorsqu'on enjoint aux pays émergents de privilégier les secteurs à forte valeur ajoutée, ce n'est pas sans un brin d'économisme naïf, souligne Paul Krugman (1998). Comme si cela était gratuit ! Comme si ces secteurs n'étaient pas les plus intensément consommateurs de capital – notamment public, en termes d'infrastructures ou de formation. Dans le bassin méditerranéen, à l'exception d'Israël, qui consacre l'équivalent de plus de 4 % de son PIB à la R&D, ce ratio ne dépasse 1 % nulle part ailleurs et les financements demeurent essentiellement publics. Ils représentent 52 dollars par habitant en Tunisie, pour 66 dollars en Chine, 77 dollars au Brésil, 305 dollars en Italie, 617 dollars en France ou 649 dollars en Norvège. Faut-il créer des pôles de compétitivité pour mieux les fixer, pour favoriser la diffusion des innovations, profiter des synergies de filière et mieux concentrer talents, idées et capitaux ?

### *La problématique des clusters*

On sait que l'idée en fut notamment défendue par Michael Porter, comme source de développement original en « grappe » autour d'une industrie principale, multipliant les relations de coopération et de concurrence (Porter, 1993).

Inséparable de cette recommandation est celle qui pousse à développer les véhicules d'investissements, les fonds de *private equity* : amorçage, capital-risque et capital-investissement. Les bailleurs de fonds publics, en ce sens, n'hésitent pas à intervenir en « fonds de fonds ». Ainsi le Fonds régional français Averroès, monté en 2003, rassemble des filiales de l'Agence Française de Développement et de la Caisse des Dépôts.

Aujourd'hui, les *technology park* se développent dans les pays méditerranéens : un en Jordanie, trois en Égypte, quatre (prévus) au Maroc et cinq en Tunisie. Celui de Ca-

sablanca rassemble plus de 130 entreprises, start-up locales et multinationales occidentales. Et l'on parle de connecter ces clusters à leurs vis-à-vis européens. Quant aux fonds d'investissement, le Maroc en compterait déjà 17 et la Tunisie 38. Entre 1994 et 2005, 5,8 Mds de dollars ont été levés pour être investis dans la région MENA (pour l'essentiel en Égypte et dans le Golfe), dont 41 % en 2005. Au total, Anima recensait 350 fonds de *private equity* actifs en 2008 dans la région méditerranéenne – mais Israël concentrant à lui seul 57 % de ces fonds (2007) et 55 % des ressources collectées. Pour le capital-risque, les fonds levés sont passés de 545 à 962 M de dollars de 2004 à 2005. Mais pour quels investissements ? Ici, les chiffres font largement défaut (OCDE, 2006). Il semble cependant qu'en 2003, seulement 22 % des fonds de capital-risque en Tunisie étaient investis dans des activités de haute-technologie, ce qui serait l'un des ratios les plus faibles au monde. Tandis que les fonds considèrent peu les projets inférieurs à 2 M de dollars, jugés trop risqués et pour lesquels les frais de due diligence paraissent élevés. Au total, l'impact en volume des différents fonds ne saurait être surestimé : avec 30 M d'euros de dotation, le fond Averroès Finance I dégage un TRI de 10 à 15 % mais n'a servi jusqu'ici que 50 à 80 entreprises…

Dans les pays du Sud et de l'Est de la Méditerranée, il faut s'interroger sur la possibilité de créer une compétitivité technologique de toutes pièces, sans l'accumulation préalable d'une masse critique de talents et d'entrepreneurs. 569 brevets ont été déposés au Maroc en 2004, dont 104 seulement par des nationaux et la grande majorité (72 %) par des particuliers (64 % de même en Tunisie, pour 20 % de brevets déposés par des entreprises). De 1977 à 2005, l'Algérie a déposé quatre brevets à l'USPTO, l'Office américain des brevets et la référence internationale, le Maroc 31, la Tunisie 14 et la Turquie 154. Le nombre de publications scientifiques par million d'habitants est de 40 en Tunisie, 15 au Maroc, 24 en Égypte et six en Algérie, contre 16 826 en Espagne ou 31 971 en France – 60 à 70 % des publications nord-africaines étant de plus faites en partenariat avec des centres de recherche européens. Le nombre de citations internationales de ces publications dans les domaines scientifiques et informatiques était en 2003 de 619 pour la Tunisie, 926 pour le Maroc, 3 319 pour l'Égypte, 10 130 pour la Turquie, et 11 996 pour la Grèce (Djeflat, 2007).
Il conviendrait par ailleurs de chiffrer les coûts d'investissement nationaux que supposent, en amont, de tels développements. Comment imagine-t-on la sortie d'investisseurs dans des pays où l'état et la taille des marchés financiers ne permet guère de l'envisager ? Qui est à même d'investir de manière conséquente dans des pays où les banques ne paraissent guère en avoir l'appétence et où l'épargne reste le plus souvent individuelle et liquide ? Où l'on compte peu d'investisseurs institutionnels : une poignée de fonds de pension en Égypte, en Jordanie et au Maroc et un secteur des assurances peu développé (1 % du PIB des pays MENA) ?

Enfin, quelles retombées sur l'emploi envisage-t-on exactement à l'issue de tels développements ? En Inde, les secteurs technologiques emploient 3 millions de personnes, pour une population active de… 400 millions de personnes. En Inde, un tiers de la population vit encore avec moins d'1 dollar par jour et 55 % des emplois demeurent agricoles.

En fait de pôles technologiques, on décrit souvent des zones franches consacrées à la sous-traitance européenne, à l'exemple des *maquiladoras* mexicaines, rassemblant des industries de transformation à la frontière avec les États-Unis. L'industrie automobile marocaine leur correspond, en effet : plus de 30 000 emplois, une centaine d'entreprises sur Casablanca et Tanger (faisceaux électriques, plaquettes de freins, coiffes et chemises, articles en plastique et caoutchouc), dont la moitié sont des filiales ou des joint-ventures de grands donneurs d'ordre équipementiers internationaux (Renault, actionnaire majoritaire de la Somaca, est le seul constructeur présent). Un chiffre d'affaires d'environ 1,2 Md d'euros, au total, dont l'essentiel à l'exportation.

Ainsi, alors que face à la concurrence internationale, et dans le contexte actuel de récession mondiale, les pôles de développement dans les pays méditerranéens semblent particulièrement exposés à la volatilité des IDE, l'enjeu serait de leur donner une véritable dimension de cluster, plutôt que de simples plateformes délocalisées de production et de premier assemblage pour l'industrie européenne. L'enjeu serait également de viser un véritable essaimage technologique et de compétitivité à une échelle proprement régionale et non seulement nationale. Une telle orientation stratégique pourrait être portée par la constitution d'un ou de plusieurs « Fonds Cluster », réunissant des capitaux publics et privés et agissant comme un investisseur de long terme concentré sur une dizaine de pôles, identifiés comme filières stratégiques pour la région. Sachant que deux principales filières se dessinent autour du bassin méditerranéen, tant pour les activités industrielles que pour les services :

- Une spécialisation internationale ou hyperspécialisation, susceptible d'intervenir sur des activités hautement technologiques, quoique dans un spectre limité.
- Une montée en gamme sur des industries et services moyennement qualifiés.

## II. 2. Deux stratégies de filières : l'hyperspécialisation et la montée en gamme

*L'hyperspécialisation*

L'hyperspécialisation suit un modèle d'intégration verticale, à l'échelle internationale, qui a déjà été présenté. Il s'agit de s'intégrer à des réseaux de production, souvent fédérés autour de marques leader. Ainsi, le Boeing 787 sera réalisé par un ensemble de partenaires de neuf pays différents, la société Boeing ne produisant elle-même que la dérive verticale. De même, dans l'automobile, 70 à 80 % des coûts de fabrication d'un véhicule sont désormais externalisés. Dans un tel contexte de modularité de la production, on ne peut plus parler de sous-traitance. La concurrence entre les plus grandes firmes a en fait lieu entre tout un système de cotraitants, sur lesquels sont reportés les coûts de développement mais ces derniers sont intéressés réciproquement à un pourcentage des ventes.

Participer à de tels réseaux ne repose pas tant sur l'attrait de bas salaires (le travail d'exécution ne représente plus que 25 % des coûts de fabrication dans l'automobile) qu'il ne suppose d'abord de satisfaire aux normes internationales : les entreprises marocaines et tunisiennes, en ce sens, ont engagé ces dernières années de gros efforts de certification. Enfin, la mise en réseau peut permettre aux entreprises des pays émergents de renforcer leur pouvoir de marché face à leurs fournisseurs internationaux de services (transport) ou de matières premières et énergétiques. La fédération agroalimentaire chilienne (FEPACH) négocie ainsi des tarifs de navigation pour l'ensemble de ses membres.
Il ne faut pas comprendre l'hyperspécialisation comme le développement de compétences très parcellisées car la fragilité d'un tel modèle serait assez évidente. Il s'agit plutôt de choisir quelques secteurs de pointe pour se hisser à un niveau de compétition internationale, en capitalisant sur ce vecteur pour développer l'ensemble de l'économie – ainsi l'Algérie se spécialise actuellement dans les technologies du dessalement d'eau de mer. L'hyperspécialisation doit donc être portée par une stratégie d'image pour un pays – et ceci alors qu'entre tourisme et terrorisme, l'image des pays du Sud de la Méditerranée peut encore les desservir. Il faut citer en ce sens les efforts déployés par l'APEX brésilienne, notamment aux États-Unis, pour donner au Brésil une image crédible en matière d'activités high-tech, en soulignant ses capacités créatives pour se démarquer de l'offre indienne.

L'hyperspécialisation suppose donc de gros efforts d'investissements nationaux : formation, infrastructures, mise à niveau des législations sociales (travail des enfants, etc.) et fiscales, développement d'un environnement favorable à l'investissement et politique d'image. La ten-

tation est alors inévitablement de limiter de tels efforts à quelques zones privilégiées, en comptant sur des entreprises étrangères pour les animer, avec le risque de « miter » les territoires, en laissant apparaître quelques îlots ne changeant que peu la donne en termes d'emplois et de retombées économiques mais étant exposés à des investissements volatils. En regard, la stratégie des pays asiatiques fut bien plus « agressive », portée par des bureaux de recherche publics (le fameux MITI japonais) et surtout par une négociation permanente avec les entreprises étrangères désireuses de s'implanter pour organiser des transferts de technologie et introduire un seuil minimal de production locale – ceci, particulièrement, à l'occasion d'achats publics importants (flottes aériennes, ferroviaires…).

*La montée en gamme*

Si le développement d'articles de qualité moyenne peut sans doute être plus largement apporté par les IDE (le montage de la Logan au Maroc en fournit un bon exemple), la montée en gamme sur ce genre d'articles nécessite une stratégie proprement nationale. Une stratégie qui passe par le développement d'une présence sur les marchés cibles et qui impose donc de quitter le pays pour connaître les marchés de destination : dynamique des prix, habitudes de consommation et réseaux de distribution. Cela s'effectue donc à rebours d'une politique de substitution aux importations qui, dans la région méditerranéenne, aura été trop souvent synonyme de gabegie industrielle et que la Turquie a su abandonner dès 1979.

S'implanter dans les pays de débouché correspond désormais à un phénomène sensible dans les pays émergents. En 2006, les investissements brésiliens à l'étranger ont dépassé en montant les IDE reçus par le Brésil. Pour l'essentiel, les IDE brésiliens ont concerné des activités de base (mines et sidérurgie). Mais Sabo (équipement automobile) s'est également implanté en Europe. Des alliances ont été conclues dans le secteur textile en Espagne ou aux États-Unis. La Corée du Sud, de même, est devenue le premier investisseur étranger en Chine, où les entreprises coréennes délocalisent leur production. Les IDE indiens sont beaucoup plus importants que les IDE reçus par l'Inde. Ayant d'abord visé à prendre pied sur les marchés technologiques avancés, sans attendre les transferts technologiques, ils se diversifient désormais (automobile, textile, chimie, sidérurgie).

De telles démarches, après tout, sont déjà fréquentes en Europe : lors de son essor, Nokia n'hésita pas à aller aux États-Unis. Dans ce cadre, on voit des entreprises des pays émergents entrer en bourse sur les places internationales ; à Londres en premier lieu aujourd'hui (à travers les programmes de Depositary Receipt) et demain peut-être, particulièrement pour les entreprises méditerranéennes, à Dubaï. Enfin, il faut souligner qu'acquérir une présence sur les marchés internationaux dans une perspective d'apprentissage et de mise à niveau peut être un objectif des fonds souverains ou plutôt de holdings d'État, car la confusion entre ces deux types de véhicules est assez patente aujourd'hui. Les principaux fonds souverains, chinois ou appartenant à des pays du Golfe, dont on parle désormais beaucoup et qui ont acquis une puissance financière colossale, répondent au double objectif de réinvestir les réserves de change pour éviter inflation et surenchérissement de la monnaie nationale, tout en développant et en diversifiant les revenus des pays en investissant sur les marchés internationaux – un fonds souverain libyen a été ainsi créé (Libyan Investment Authority), avec une première dotation de 40 Mds de dollars. Les holdings d'État, quant à eux, poursuivent une stratégie d'investissement public domestique et ceci, avec beaucoup d'efficacité dans plusieurs pays asiatiques : l'économie singapourienne est ainsi contrôlée à 60 % par l'État. Dans la région méditerranéenne, néanmoins, seule l'ONA marocaine peut être comparée au Khazanah malais ou au Crown Property Bureau thaïlandais.
En 1980, le textile et l'habillement représentaient 68 % des exportations coréennes, lesquelles étaient très dépendantes du marché américain. Ils ne représentent plus que 7 % des mêmes exportations aujourd'hui. Après une montée en gamme réussie dans de nom-

breux secteurs de pointe et un élargissement de ses marchés (les États-Unis n'absorbent plus que 15 % des exportations), la Corée du Sud exporte à présent automobiles (26 %), semi-conducteurs, équipements téléphoniques (12 %), ordinateurs. Les excédents commerciaux malais, proportionnellement supérieurs à ceux de la Chine, reposent désormais pour moitié sur les matériels électriques et électroniques. Face au faible coût de la main d'œuvre chinoise, en effet, la Malaisie, tout comme Singapour, a fait le choix de se concentrer sur les services et les industries de précision.

Au total, pour les pays méditerranéens, ouvrant la possibilité de développements industriels ou de services ultérieurs plus intégrés, les deux pistes stratégiques de l'hyperspécialisation et de la montée en gamme sur des articles de qualité moyenne, paraissent aujourd'hui les plus accessibles, étant donné la faible amorce de diversification des pays de la région dans les activités fortement capitalistiques et compte tenu de l'étroitesse des marchés locaux et de leur faible intégration régionale, allongeant les délais d'amortissement et limitant les effets d'échelle. D'ores et déjà, un certain nombre de réussites pourraient en ce sens être citées, par exemple au Maghreb dans le secteur agroalimentaire (Maroc), la pêche (Maroc, Mauritanie), les engrais (Tunisie et Maroc), et les huiles et graisses végétales (Tunisie). En somme, la question du développement dans le bassin méditerranéen est une question de marchés et particulièrement d'accès aux marchés internationaux en attendant la formation de marchés locaux plus consistants. C'est après tout la voie suivie par les pays d'Asie et celle que pourrait prendre une intégration euroméditerranéenne. Le Japon a en effet généré une telle croissance, d'abord avec la Corée du Sud et Singapour, dans les années 80, puis avec la Malaisie, les Philippines et la Thaïlande au cours de la décennie suivante. Suivant le modèle d'intégration verticale présenté ci-dessus, le Japon a d'abord délocalisé les étapes les plus intensives en main d'œuvre de sa production industrielle mais ceci, il faut le souligner, en visant les marchés mondiaux : l'essentielle de la production était en effet exportée hors zone. Or, c'est précisément là que pourrait de même se situer l'opportunité méditerranéenne, plutôt qu'une intégration économique fondée sur des échanges totalement dissymétriques entre le Nord et les autres pays du bassin méditerranéen. Le Japon, ainsi, a pensé l'externalisation de son industrie dans la perspective d'une offre concurrentielle mondiale. On a ensuite assisté à une montée en gamme dans la chaîne de valeur des différents pays asiatiques. L'intégration est devenue plus horizontale et a alors été portée par le développement de la consommation chinoise. La montée en gamme a ainsi eu lieu sur des marchés extérieurs, notamment chinois et américains, tandis que le commerce avec le Japon est demeuré déficitaire concernant les produits technologiques.

Seules de telles orientations stratégiques structurantes et pensées à l'échelle du bassin méditerranéen tout entier permettront de donner pleinement leur force aux programmes et actions d'aide au développement d'entreprises qui pourront être définis. A partir des principaux freins au développement d'entreprises que nous avons recensés et compte tenu des orientations stratégiques que nous avons dégagées, des programmes d'aide au PME peuvent être définis ou renforcés dans le cadre d'une coopération euroméditerranéenne. Nous indiquerons d'abord ci-après 1) quels programmes ou projets existent d'ores et déjà, pour tenter ensuite 2) de tracer quelques li-gnes d'action.

## III. 1. Les programmes d'aide euroméditerranéens

### *L'aide européenne en Méditerranée*

La multiplicité et la superposition des bailleurs de fonds publics dans la région est frappante. À côté des institutions européennes (MEDA, BEI, BERD) et des institutions nationales des pays européens (comme l'Agence Française du Développement), le Groupe de la Banque

**Tableau 11. Financement MEDA (déboursement) et IEVP (engagements) en direction des partenaires méditerranéens**

| Millions € | MEDA I 95-99 | MEDA II 00-06 | IEVP 07-10 |
|---|---|---|---|
| Algérie | 30,2 | 142,3 | 220 |
| Égypte | 157 | 695,4 | 558 |
| Israël | non éligible | non éligible | 8 |
| Jordanie | 108,4 | 345,5 | 265 |
| Liban | 1,2 | 181,5 | 187 |
| Maroc | 127,5 | 917,4 | 654 |
| Syrie | 0 | 90,9 | 130 |
| Aut. palestinienne | 59 | 486,4 | 632 |
| Tunisie | 168 | 489,2 | 300 |
| Total aide bilatérale | 651,3 | 3 348,6 | 2 954 |
| Cooération régionale | 222,5 | 711,9 | 343,3 |
| Total budgété | 3 000 | 4 470 | 3 297 |
| Total décaissé | 874 | 4 060 | - |

Source : EuropAid.

mondiale gère un encours de 2,6 Mds de dollars sous forme de crédits, dons et garanties au profit de 18 pays MENA, du Maroc à l'Iran et finance plus de 40 projets et programmes, notamment en matière d'amélioration du climat des affaires. La Banque Africaine du Développement est également présente, ayant par exemple budgété une enveloppe de prêts non concessionnels de 320 M de dollars par an de 2007 à 2013 en faveur du Maroc. La Banque Islamique de Développement et le Fonds Arabe pour le Développement Économique et Social portaient quant à eux 1,17 Md de dollars d'engagements en 2005 sur la région MENA, dont 77 % en Méditerranée. À toutes ces contributions, s'ajoutent bien entendu celles de l'UE.

L'Instrument Européen de Voisinage et de Partenariat (IEVP) a remplacé en 2007 les programmes MEDA et TACIS (ce dernier en partie). Avec une enveloppe de 11,2 Mds d'euros pour la période 2007-2013, il couvre également plusieurs pays de l'Est. Toutefois, l'Espagne, la France et l'Italie ont obtenu que les aides soient distribuées pour les deux tiers aux pays méditerranéens, jusqu'en 2010.

**Tableau 12. Nombre de fonds de *private equity* actifs par étapes d'investissement en 2007**

Nombre de fonds de *private equity* actifs par étapes d'investissement

| 2007 | R&D | Capital initial | Capital risque | Croissance | LBO(*) |
|---|---|---|---|---|---|
| Algérie | | | 1 | 1 | |
| Maroc | | 3 | 7 | 14 | 9 |
| Tunisie | | 1 | 7 | 7 | 5 |
| Maghreb | | | 3 | 7 | 9 |
| Total Maghreb | | 5 | 19 | 31 | 24 |
| Égypte | | 3 | 3 | 7 | 2 |
| Jordanie | | | | 3 | 1 |
| Liban | | | 1 | 1 | |
| Total Machreq | | 3 | 4 | 11 | 3 |
| Israël | 110 | 120 | 82 | 63 | 4 |
| Turquie | | 1 | 4 | 8 | 3 |
| Total fonds | 110 | 121 | 86 | 71 | 7 |

Source : Anima. (*) LBO : Leverage Buy Out. Opération de rachat d'entreprise à effet de levier.

Aux financements de projets MEDA qui, en réalité, paient souvent (jusque pour un tiers, selon les estimations) une assistance européenne, notamment de bureaux d'études, aux pays partenaires méditerranéens, s'ajoutent les prêts de la Banque Européenne d'Investissement (BEI), financés sur ressources propres de la Banque, ainsi que sur le budget de l'UE et regroupés depuis 2002 au sein de la Facilité Euroméditerranéenne d'Investissement et de Partenariat (FEMIP) : 6,5 Mds d'euros de 2000 à 2006 ; 8,7 Mds d'euros pour 2007-2013. Dédiés au développement du secteur privé et à la création d'un environnement propice aux investissements, ces prêts sont directs pour les projets (le plus souvent d'infrastructure) dépassant 25 M d'euros (60 % des encours). Le reste est distribué par l'intermédiaire de banques locales partenaires, à travers le refinancement de lignes de crédit aux PME, le financement de fonds de capital-investissement ou l'assistance technique – interventions qui soulèvent parfois des difficultés, puisque les prêts en devises font supporter un risque de change aux banques bénéficiaires. Des prêts sont également accordés à des institutions de micro-finance : ainsi ENDA (Tunisie). Par ailleurs, la FEMIP soutient également le développement des Technoparks et des pépinières d'entreprises. Au total, les encours FEMIP ne sont distribués que pour 30 % au secteur privé et bénéficient essentiellement aux grandes entreprises. En 2006, les encours FEMIP étaient distribués de la manière suivante par secteurs : 43 % pour l'énergie, 24 % pour l'environnement, 15 % pour l'industrie, 8 % pour les crédits aux PME et 5 % pour le capital-développement. La Banque Européenne d'Investissement (BEI) est devenue le premier bailleur de fonds au Sud de la Méditerranée et le premier acteur en capital-investissement (380 M euros d'encours en 2006 sur capitaux à risques, investis directement ou en fonds de fonds). La BEI assiste également la Turquie : 4,6 Mds d'euros de prêts de 2002 à 2006 et un objectif de 2 Mds d'euros de prêts par an à partir de 2007 et jusqu'en 2013 ; ainsi que les pays des Balkans non-membres de l'UE : 2,1 Mds d'euros depuis 1995. Ces derniers reçoivent également une assistance de la BERD, de la Banque de Développement du Conseil de l'Europe, ainsi que de l'Agence Européenne pour la Reconstruction. Au titre de l'aide européenne, la Turquie a reçu 852 Ms d'euros de 1995 à 2002.

### *L'aide aux PME*

Elle demeure le parent pauvre de l'aide euroméditerranéenne, soit parce que les lignes de refinancement mises à disposition des banques nationales demeurent peu utilisées, soit parce que l'apport d'argent public aux fonds d'investissement paraît peu à même de modifier la logique extrêmement sélective et averse aux risques de ces derniers. De fait, extrêmement rentables (un TRI moyen de 21,1 % selon Anima), les fonds d'investissement qui opèrent dans la région servent une poignée d'entreprises déjà nettement développées et de manière plus opportuniste que véritablement stratégique : les fonds multisectoriels sont les plus nombreux (35 %) et si les activités technologiques recueillent 31 % des investissements, cela concerne principalement Israël et ne représente pas une donnée générale pour tous les pays de la région. L'énergie et les services attirent 2 % des investissements, les biens de consommation 7 % et les travaux publics 6 %. En regard, l'immobilier et les grands projets de promotion touristiques captent une large part des ressources disponibles. Avec des « tickets » allant en moyenne de 1,9 M de dollars à 12,6 M de dollars par investissement, l'immense majorité des petites et surtout des moyennes entreprises méditerranéennes n'est pas concerné par le *private equity.* Tout de même, les possibilités de soutien à des projets naissant (capital initial) demeurent très limitées (sauf Israël). Dans ces conditions, l'Espagne et l'Italie ont présenté au Sommet Ecofin de mai 2008 le projet d'une Mediterranean Business Development Agency, dédiée aux PME, ainsi qu'aux projets de micro-finance et chargée tout à la fois d'évaluer leurs besoins de financement et de définir en conséquence des solutions appropriées : accès aux financements bancaires, leasing, factoring, fonds d'investissement, et marchés monétaires et d'actions.

## III. 2. Une Agence euroméditerranéenne pour les PME

Nous en savons assez à présent pour dessiner les contours possibles et souhaitables d'une telle institution : 1) retenir des orientations stratégiques, 2) faciliter le financement des entreprises, 3) favoriser leur internationalisation et développer les transferts de compétences.

### *Retenir des orientations stratégiques*

Ce qui manque sans doute le plus aujourd'hui aux pays méditerranéens sont des perspectives stratégiques concrètes, définies à une échelle régionale – à une échelle proprement euroméditerranéenne (Alméras et Jolly, 2009).

Dès lors, le premier rôle d'une agence euromed dédiée au *business development* serait sans doute de faire émerger de telles orientations stratégiques, permettant de piloter des investissements et financements sectoriels – ainsi des « Fonds Cluster », tels que présentés ci-dessus qui, à notre connaissance, n'existent nulle part aujourd'hui.

Songeons par exemple aux enjeux agroalimentaires. Selon tous les indicateurs, une dépendance accrue à l'égard des importations alimentaires nécessitera une réorganisation de la chaîne agroalimentaire domestique dans les différents pays méditerranéens et favorisera ainsi le développement de réseaux de distribution encore très inégalement répartis sur les territoires des pays du Sud et de l'Est de la Méditerranée. L'apparition actuelle de grands groupes agroalimentaires nationaux (Poulina en Tunisie, Cevital en Algérie, Sabanci Holding en Turquie) et l'implantation de groupes internationaux européens (Nestlé, Danone, Unilever) et américains (Procter and Gamble, Coca Cola, Pepsico et Sara Lee Corp.) préfigurent cette réorganisation. De même, la poussée des grands centres commerciaux nationaux ou internationaux (comme Carrefour), encore très concentrée dans les principaux centres urbains – le Maroc compte déjà de nombreuses grandes surfaces de plus de 300 m2, dont 17 hypermarchés de plus de 2 500 m2 – devrait répondre tout à la fois aux nécessités de distribution de produits de plus en plus importés ainsi qu'à la modification en cours des modes de consommation.
À terme, c'est l'ensemble de la chaîne de valeur des entreprises agroalimentaires locales que ces évolutions modifieront. Les besoins sont énormes : semences, technologies, engrais. Tout doit être fortement renforcé. En Inde, le manque d'infrastructures occasionnerait la perte de 30 % des récoltes : routes et axes de communication pour relier les producteurs aux transformateurs et ceux-ci aux consommateurs dans un paysage de fort exode rural, systèmes d'irrigation et de stockage, réfrigération. En Méditerranée, les besoins sont de même hauteur.

Songeons encore aux prospectives réalisées par le Plan bleu et l'OME, qui estiment qu'une économie de près de 20 à 25 % de la demande totale d'énergie est réalisable dans les pays méditerranéens en utilisant les technologies déjà disponibles à des coûts acceptables. Des gains d'efficience énergétique sont en effet identifiables dans la production et la distribution d'électricité (rendements, efficacité des réseaux), dans le secteur industriel et dans les secteurs du résidentiel et tertiaire (bâtiment particulièrement, production d'eau chaude, équipements ménagers, éclairage, chauffage, climatisation). Selon l'OME, la part des énergies renouvelables pourrait atteindre, dans un scénario volontariste, 14 % du bilan primaire en énergie en 2025 (hors biomasse) au lieu de 4 % pour le scénario de base – ce sont des millions d'entreprises qui sont ainsi concernées. A ceci pourrait être associé un programme de « Fonds Carbone » euroméditerranéen, visant l'intégration solidaire des pays du Sud et de l'Est de la Méditerranée dans le Mécanisme de Développement Propre du Protocole de Kyoto, par lequel les industriels de l'énergie, de la chimie et du ciment des pays développés peuvent s'associer à des projets de réduction d'émissions et de développe-

ment de sources d'énergies non polluantes dans des pays non contraints par le Protocole, en gagnant ainsi des « crédits carbone » en échange de leurs financements et de leur aide logistique, avec la possibilité d'inscrire ces crédits dans leurs bilans de réduction d'émissions ou de les revendre sur le marché international. Le Mécanisme de Développement Propre a représenté 12,8 Mds de dollars en 2007 et l'Asie accueille aujourd'hui la moitié de ces projets, dont un tiers pour la Chine. Or, un objectif de baisse de 21 % des quotas d'ici 2020 a néanmoins été fixé par l'UE…

### *Faciliter le financement des entreprises*

Nous l'avons vu, dans plusieurs pays des rives sud et est de la Méditerranée, les banques sont l'un des secteurs qui a le plus vite changé, qui s'est le plus développé. Pour autant, marchés bancaires domestiques peuvent se révéler assez rapidement étroits, les logiques de rentabilité ne permettant pas d'améliorer une exclusion bancaire demeurant massive. Il conviendrait dès lors qu'une institution euromed s'attache à travailler directement avec les banques commerciales, les fonds d'investissement et les institutions de micro-finance et leur apporte, selon des orientations stratégiques précises, un rehaussement des risques d'entreprises, en liaison cette fois avec les fonds dédiés à cet emploi par la FEMIP et d'autres institutions multilatérales et nationales, comme vu ci-dessus.

Les modalités de telles interventions resteraient à fixer. En la matière, les exemples internationaux montrent qu'une institution dédiée peut faire directement des prêts aux PME ou en complément des crédits bancaires dont elles bénéficient (on parle de cofinancement). Dans certains pays, les aides sont ainsi directement distribuées aux PME (Japon, Suède, Belgique) et dans d'autres, à travers les banques (États-Unis, France et Finlande). Dans le cas de prêts directs, il s'agit d'apporter aux PME une ressource stable, assimilable à des fonds propres. Les aides confortent l'*Equity* des PME (sous différentes formules : avances remboursables, prêts subordonnés, obligations convertibles, etc.). Dans le cas de cofinancement, il s'agit de permettre aux banques de limiter le risque qu'elles encourent. On peut encore garantir (c'est-à-dire assurer) les crédits que les banques accordent aux PME (en général pour un montant se situant entre 30 et 70 % du montant du crédit ; la garantie est en dernier ressort, c'est-à-dire qu'elle porte sur la somme qui restera impayée une fois appelées les éventuelles garanties données par l'emprunteur). Ces garanties peuvent être accordées aux banques :

1) à travers l'examen individuel des crédits concernés, comme en France ou 2) pour l'ensemble d'un portefeuille de prêts, par titrisation (*securitization*), comme aux États-Unis. Enfin, entre cofinancement et garantie, on trouve encore la formule des prêts bonifiés, c'est-à-dire la prise en charge d'une partie du risque et des coûts du crédit, permettant d'abaisser le taux payé par les PME. Cette formule présente l'inconvénient de pousser les banques à accorder des crédits de manière automatique, sans exercer de regard sur la qualité des emprunteurs, ce qui explique qu'elle ait été abandonnée dans un certain nombre de pays (en France notamment). Peu de pays se contentent uniquement de formules de garantie et il s'agit surtout de pays où l'intermédiation bancaire (c'est-à-dire la nécessité de passer par les banques pour trouver des financements) n'est pas très élevée : États-Unis et Royaume-Uni. Certains pays ignorent même la garantie et ne connaissent que le financement (Suède et Canada). Mais la plupart des pays proposent les deux (Allemagne, Italie, Japon, Finlande et France). Enfin, alors que beaucoup de PME maghrébines sont très pénalisées par les délais de paiement qu'imposent les administrations et entreprises publiques, il serait possible de favoriser l'escompte bancaire des créances notamment détenues sur des administrations publiques (formule particulièrement développée en France et aux États-Unis).

Par ailleurs, pour aider les PME maghrébines à travailler avec de grands groupes internationaux, très exigeants dans le choix de leurs prestataires et partenaires, il faudrait sans doute favoriser les financements dédiés à des actions de mise aux normes internationales ou destinés à renforcer l'équipement logistique (notamment à travers le leasing). Tout cela suppose qu'informations et expertises soient mises à disposition des PME. On peut à cet égard s'inspirer de ce qui existe ici et là : large call centers d'information (États-Unis), assistance de consulting (partout sauf en France), allant jusqu'à être une condition impérative pour bénéficier des aides (Japon, Suède et Canada). Pour finir, il convient de souligner qu'à côté des banques et investisseurs, les collectivités locales pourraient également représenter des interlocuteurs privilégiés pour le développement d'entreprises.

Certaines formules pourraient particulièrement être développées. Or, à notre connaissance, elles ne sont pratiquement jamais évoquées dans le contexte euroméditerranéen :

- Des garanties apportées à des lignes bancaires d'escompte (ou réescompte), pour rendre celles-ci plus accessibles et moins onéreuses face aux délais de paiement parfois extrêmement pénalisants subis par les entreprises de la part de débiteurs publics ou privés (grandes entreprises industrielles ou de commerce imposant leurs conditions).

- La possibilité d'apporter directement des garanties ou contre-garanties à des entreprises, dès lors que celles-ci sont regroupées sous la forme de sociétés de caution mutuelle (d'ailleurs assez nombreuses dans un pays comme le Maroc).

- À l'instar de ce qui a été développé au sein de l'ASEAN+3, remplir une fonction d'animateur des marchés obligataires et d'actions au sein des pays partenaires méditerranéens, pour offrir une alternative à l'intermédiation bancaire, aujourd'hui quasiment incontournable, et satisfaire aux besoins en ressources longues et capitalistiques des entreprises en forte croissance. Cela permettrait encore aux investisseurs internationaux de se financer en monnaie locale, ce qui paraît déterminant dans le cadre des programmes de partenariats public privé notamment, parce qu'enfin et surtout favoriser l'investissement suppose de fixer et de mobiliser l'épargne davantage qu'aujourd'hui dans la région. Or, développer des produits d'épargne spécialisés par finalité et échéance (épargne liquide, épargne immobilière, épargne santé et retraite, etc.) suppose de définir les conditions d'une gestion d'actifs bien plus performante et dynamique que celle actuellement permise. Dans le cadre de l'ASEAN+3 ont ainsi été développés une Asian Bond Market Initiative, ainsi que des Asian Bond Funds, c'est-à-dire un système de fonds actions et obligataires alimentés par les pays membres et investis sur leurs différents marchés. Aujourd'hui, la Corée du Sud ou la Thaïlande présentent ainsi un ratio marchés obligataires publics et privés/PIB parmi les plus élevés au monde.

- Surtout, en s'inspirant notamment des solutions développées par l'Eurofidi italienne au Chili ou en Bulgarie, il conviendrait d'étudier la possibilité de mettre sur pieds un fond de garantie des crédits bancaires pour les PME de différents pays, capable de se substituer aux garanties, essentiellement hypothécaires, exigées aujourd'hui des PME pour accéder aux financements bancaires. Un système multilatéral d'assurance crédit, bénéficiant aux banques et directement souscrit par les PME, en même temps que contre-garanti par des institutions euroméditerranéennes, comme la FEMIP, pour le rendre accessible.

- Favoriser l'internationalisation des entreprises méditerranéennes et développer les transferts de compétences.

À cet égard, l'Agence devra fonctionner comme une plateforme favorisant l'émergence de multiples réseaux : associations professionnelles euromed, *business angels,* diasporas d'entrepreneurs, etc., ainsi que donner les meilleurs moyens aux entreprises du Sud de trouver conseils, formations, programmes de mises aux normes, etc. Mieux même, l'Agence pourra héberger la formation de véritable places de marchés Internet – à l'instar d'Alternativa, créée en Suède en 2003 et désormais présente dans plusieurs pays européens (agréée par l'AMF en France). C'est une plateforme de négociation de titres non cotés, ouverte aux investisseurs professionnels et aux particuliers (dès lors qu'ils bénéficient d'incitations fiscales en ce domaine, comme avec la loi Tepa française de 2007), ainsi qu'à de très nombreuses PME (réalisant seulement un chiffre d'affaires d'au moins 1 m€), non éligibles au capital-risque du fait de leur taille ou de leur jeunesse et qui bénéficient de conditions très favorables pour lever des fonds (10 k€ pour s'introduire sur Alternativa, contre 200 k€ sur une place comme Alternext).

Sur ce chapitre, comme sur les deux précédents, la première obligation d'une Mediterranean Business Development Agency sera donc d'innover !

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# The Mediterranean Business Development Initiative

"The 8th FEMIP Ministerial Meeting (Luxembourg, 7 October 2008) agreed to organise a conference focusing on financial assistance to SMEs in 2009. It also highlighted the importance of the Mediterranean Business Development Initiative aiming at assisting the existing entities in partner countries operating in support of micro, small and medium-sized enterprises by assessing the needs of these enterprises, defining policy solutions and providing these entities with resources in the form of technical assistance and financial instruments and based on the principle of co-ownership. Contributions by countries from both rims of the Mediterranean will be done on a voluntary basis. Italy is candidate to host an informal meeting in Milan involving Governments, the private sector and experts focused on promoting economic cooperation in the Mediterranean.

Ministers of Foreign Affairs of the Barcelona Process: Union for the Mediterranean will meet in the second half of 2009 in order to take stock of the progress achieved in the implementation of the working programme for 2009, and the projects agreed and in particular the key initiatives as agreed at the Paris Summit, as well as prepare for the next summit in 2010."

*Final Statement Marseilles, 3-4 November 2008*

## IEMed Publications

*Le développement d'entreprises dans les pays méditerranéens. Constats. Stratégies. Actions,* Guillaume Alméras. "PapersIEMed.", No. 8, September 2009.
**http://www.iemed.org/publicacions/Paper8.pdf**

## Other Publications

*What Economic Future for the Southern Mediterranean Rim? The Prime Role of SMEs and Their Financing,* Bénédict de Saint-Laurent, ANIMA, Invest in Med Programme, March 2009.
**http://www.animaweb.org/uploads/File/Inv_MedEconomicFuture%20&SMEs_15-1-09.pdf**

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# Chapter 6.

# Barcelona Euromed Forum Programme

# PROGRAMME

## 5th November 2009, Casa Llotja de Mar, Barcelona

9.15-10 am Opening Session

Welcome address

**Miquel Valls,** President of the Chamber of Commerce, Industry and Navigation of Barcelona
**Jordi Hereu,** Mayor of Barcelona
**Ángel Lossada,** Secretary of State for Foreign Affairs, Ministry of Foreign Affairs and Cooperation, Spain
**José Montilla,** President of the Government of Catalonia

10 am-10.40 am Inaugural Plenary Session

Speakers

**Senén Florensa,** Director General of the European Institute of the Mediterranean
**Mohamed Naciri,** Ambassador, Director of the Department for European Affairs, League of Arab States
**Habib Ben Yahia,** Secretary General of the Arab Magreb Union
**Ángel Lossada,** Secretary of State for Foreign Affairs, Ministry of Foreign Affairs and Cooperation, Spain

10.40 am-11 am Coffee break

11 am-1.45 pm Working Group simultaneous sessions

### Working Group on Renewable Energies:

President

**Fidel Sendagorta,** General Director of Foreign Policy for the Mediterranean, Maghreb and Middle East, Ministry of Foreign Affairs and Cooperation, Spain

Coordinator

**José María Marín,** Director, Research Group on International Political Economy – Energy, National University of Distance Education (UNED), Spain
**Gonzalo Escribano,** Professor of Applied Economics-Policy at the National University of Distance Education (UNED), Spain

Comments

**Salha Abusabaa,** Head of Renewable Energy Section, League of Arab States
**Roberto Vigotti,** Senior Advisor, Observatoire Méditerranéen de l'Énergie (OME)

### Working Group on Land and Maritime Infrastructure:

President

**Salem Miladi,** General Director for Planning and Studies, Ministry of Transport, Tunisia

Coordinator

**Saki Aciman,** Director General of the Centre for Transportation Studies for the Western Mediterranean (CETMO)

Comments

**Hocine Souidi,** Head of Transportation Division, Council of Arab Transportation ministers, League of Arab States

**Arif Davran,** Consultant to the Board, International Freight Forwarders Association (UTIKAD)

### Working Group on the Water Sector:

President

**Sotiris Varouxakis,** Ambassador – coordinator for the UfM, Ministry of Foreign Affairs, Greece

Coordinator

**Jesús Yagüe,** Deputy Director of Water Affairs, Ministry of the Environment and Rural and Marine Affairs, Spain

Comments

**Fernando Rayón,** Director of Technical Planning, Aigües de Barcelona (AGBAR)

**Laila Mandi,** Director, Centre for Studies and Research on Water and Energy, Université Cadi Ayyad, Morocco

### Working Group on the Mediterranean Business Development Initiative:

President

**Domenico Giorgi,** Minister Plenipotentiary, Directorate-General for the Mediterranean and Middle East, Ministry of Foreign Affairs, Italy

Coordinator

**Pedro Nueno,** Professor at IESE Business School

**Francesc Prior,** Professor at IESE Business School

Comments

**Carmen Castaño,** Technical Counsellor, General Secretariat for European Financial Institutions, Ministry of Economy and Finance, Spain

**Pietro Masci,** Director of the Department of Treasury, Ministry of Economy and Finance, Italy

**Joseph Mifsud,** President, EMUNI University, Slovenia

**Guillaume Alméras,** International consultant, Compass Management Consulting, France

2 pm-3.30 pm Lunch

3.30 pm-4.30 pm Working Group simultaneous sessions

### Working Group on Renewable Energies:

Comments

**José Alfonso Nebrera,** President, European Solar Thermal Electricity Association (ESTELA)

**Abderrahim El Hafidi,** Director of Electricity and Renewable Energy, Ministry of Energy an Mines, Morocco

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**Patricia Fontaine,** Policy Officer for Mediterranean Transport Relations, Directorate-General for Energy and Transport, European Commission
**Mateu Turró,** Professor of Infrastructures for Transport, Universitat Politècnica de Catalunya (UPC), Spain

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Comments
**Abd-Allah Gad,** Head, Environmental Studies and Land Use Division, National Authority for Remote Sensing and Space Sciences, Egypt
**Gert Soer,** Team Leader, MEDA Water Programme

**Working Group on the Mediterranean Business Development Initiative:**
Comments
**Bénédict de Saint-Laurent,** General Manager, ANIMA
**Chekib Nouira,** President, Arab Institute of Business Managers

4.30 pm-6.30 pm Plenary conclusion's session

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**Gonzalo Escribano,** Professor of Applied Economics-Policy at the National University of Distance Education (UNED), Spain
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**Francesc Prior,** Professor at IESE Business School
**Jesús Yagüe,** Deputy Director of Water Affairs, Ministry of the Environment and Rural and Marine Affairs, Spain

Closing Speeches
**Anna Terrón,** Secretary for the European Union, Government of Catalonia
**José Riera,** Ambassador on Special Mission for Mediterranean Affairs, Ministry of Foreign Affairs and Cooperation, Spain
**Philippe de Fontaine-Vive,** Vice-President of the European Investment Bank (EIB)
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# Chapter 7.

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