

A Sustainable Future for the Mediterranean

A Sustainable Future for the Mediterranean

The Blue Plan's Environment
and Development Outlook

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Preface

This Blue Plan report brings together three topics: possible scenarios for the future, sustainable development and the Mediterranean. This preface would, and rightly should, have been signed by Michel Batisse, chairman of the Blue Plan till 2004. He guided the development of the entire project, but sadly died before the report could be published. Until his final days, he put all his talent and immense international experience into this task. He deserves our gratitude and admiration for his invaluable contribution to the analysis of Mediterranean issues.

I would also like to thank all the members of the steering committee and everyone who has contributed to this report.

As a prospective exercise, the project was faced with the same methodological questions that were present when the Blue Plan was developing various trend and alternative scenarios in 1989. But a different method has been adopted, which takes into account the lessons learned from past prospective exercises.

Far from being limited to a simple, mechanical projection of past trends, a *prospective* analysis aims to anticipate the feedback and adjustments that may be generated over time by the projected developments. For example, it is easy to imagine that a continuation of current consumption trends for fossil energy sources will produce tensions in energy markets that will result in increased prices, which, in turn, will put pressure on demand and generate multiple responses. These could include a greater competitiveness of alternative energy sources, a search for improved energy efficiency or even a reduction in the rate of economic growth because of increasing energy costs as a production factor. The same process could be imagined in the field of water resources.

The methodological difficulties associated with prospective analysis result from the need to achieve a precise introduction of economic variables and social compromises, together with physical projections, and to model the system's evolution over time. And it is precisely because of the lack of appropriate ways of achieving this that so much previous prospective work has encountered problems and produced results that were not particularly perceptive.

The Blue Plan has sidestepped these obstacles by presenting an alternative sustainable development scenario in this report, based not on mechanical market

reactions or future socio-economic changes but on the assumption that proactive sustainable development policies are implemented; this scenario is then compared with a baseline scenario that assumes a continuation of the trends in the relationships between economic growth and the growth in environmental effects that have been observed over the past 30 years. From this point of view, it reflects the approach of the Johannesburg Earth Summit, which relies on political engagement by nations and actors for a more sustainable development.

In this way, the report tackles the issue of sustainable development head-on. The Blue Plan's past work on the environment and development had drawn attention, well before the notion of sustainable development even appeared, to the interactions between population, economic development, and pressures on the coasts and natural resources such as water and the natural environment. This approach, which is systemic as well as forward-looking, corresponds in practice with the concept of sustainability with its three pillars: economic, social and environmental, a concept that has particular meaning for the Mediterranean.

Sustainable development in the Mediterranean has specific features. Particular pressures come from tourism, urban concentration in coastal areas, the development of irrigated and intensive agriculture, the trend to abandon or poorly manage mountain regions, overfishing and intercontinental (Asia/Europe) maritime transport. All these pressures are exerted on particularly limited and fragile resources: water, natural coastal areas and the marine environment.

Furthermore, the economy/environment interface cannot be separated from social issues. Among the social questions covered by the Millennium Development Goals adopted within the United Nations framework, unemployment among the young is the most burning issue in the Mediterranean area. In the southern-shore countries, 30 per cent of young people were out of work in 2003, a 'record' compared with the world's major regions (unemployment among the young is also significant in some European Mediterranean countries), while significant progress has been made in access to education, gender equality and public health.

As in every region of the world, the Mediterranean presents specific sustainable development problems.

The topics covered in this report illustrate the degree to which sustainability problems are of growing importance and the number of crucial natural resource issues.

In this regard, it is important to stress the difference between 'strong' and 'weak' sustainability, the latter allowing for the substitution of natural capital by human or built capital. This distinction is also relevant in the Mediterranean, for example, in the water sector. Today, with large scale desalinization of sea water in some countries of the region, we are seeing the gradual substitution of some natural capital (the fossil fuels used for desalinization) and built capital (the desalinization plants) for the natural capital that is being used up (freshwater in its catchment area). The often-mentioned perspective of water as a limiting factor for economic development is perhaps becoming more distant while there is a growing use of fossil fuel energy, which itself could soon reach its physical and economic limits. In this regard, prospective work is all the more important for examining possible future developments.

The adoption of a weak sustainability approach based on these mechanisms of substitution may therefore eventually turn out to be dangerous. The Precautionary Principle would suggest that, without veering from this path, the alternative approach of strong sustainability should be explored, initially through a more optimal use of water and energy resources rather than a relentless pursuit of permanently increasing supply. In other words, the questions hanging over the future of water- and energy-related matters call for the implementation of a precautionary policy, which is exactly what is needed in uncertain situations such as those presented in this report.

This situation of relative uncertainty linked to assumptions on substitution may be highly relevant to the management of renewable natural resources, but not to that of limited resources such as natural coastal areas, coastal agricultural plains and island landscapes;

these are doomed to vanish forever at the present rate of consumption of coastal space by urban sprawl, roads, tourism and harbours. Here what is lost is lost for ever. And we cannot rely on self-regulation and substitution in these fields as long as the market works poorly for matters such as the irreversible use of heritage 'goods'. Ethical principles such as the rights of future generations to have worthwhile natural heritage such as sand dunes, beaches and lagoons, should be implemented by public authorities exercising their responsibilities. The draft protocol on integrated management of coastal areas responds to this concern, a protocol that the Contracting Parties to the Barcelona Convention need to adopt and implement as soon as possible.

The Barcelona Convention plays an important role in the Mediterranean region as a forum for sustainable development, as well as a framework for cooperation in the management of common goods such as the sea. It is vital that this Convention continues and develops its actions and that it receives essential support from the European Union. It is also vital that the governance of sustainable development issues is improved and benefits from the necessary resolution of the remaining conflicts occurring around the Mediterranean Basin, that an atmosphere of detente and cooperation follows, and that increased human and financial resources are devoted to more active policies for managing cities, public transport, rural facilities, education and health, and to reducing pollution.

If this report contributes to progress in raising awareness of sustainable development issues in the Mediterranean and the adoption of the necessary actions, the Blue Plan will have successfully fulfilled its mission.

Lucien Chabason
Chairman of the Blue Plan
Sophia Antipolis, July 2005

Introduction

The Mediterranean is an original and unique eco-region because of its geographical and historical characteristics, its natural and cultural heritage and the feeling shared by its peoples of belonging to the 'Mediterranean world'. It cannot be simply defined. Fernand Braudel described it as '...a thousand things at the same time. Not just a landscape, but countless landscapes. Not just a sea, but a string of seas. Not just a civilisation, but many civilisations... The Mediterranean is an age-old crossroads. For thousands of years, everything has converged on this sea, disturbing and enriching its history...'

At the crossroads of three continents, the Mediterranean is also a north-south fracture zone, an arena for multiple international exchanges of strategic importance. Because of its special characteristics – a pattern of development highly conditioned by the natural environment, a region that brings together countries at different levels of economic and social development that share a joint heritage – it is a perfect illustration of the global problems of sustainable development. Will the region be able to show the way to a pattern of development that brings people together, which is more balanced and respectful of a heritage to be passed on to future generations? Or will it fall into an inequitable and short-term pattern that squanders the resources it has inherited? It all depends on whether it is destined to become a model for the regional regulation of globalization or to reinforce global instability.

The *Blue Plan*¹ in 1989 already highlighted the risks of a growing divide between the north and the south of the Basin and of continuing and sometimes irreversible environmental degradation. It pointed the way to a more equitable pattern of development, one more respectful of the environment, which would integrate development with the environment, and strengthen the institutional capabilities of states and cooperation between north and south and between southern countries. It already contained the principles of sustainable development, a concept that subsequently emerged as the search for a developmental mode that tries 'to meet present needs without compromising the ability of future generations to meet their own needs'. Today, has this long-term vision been realized? Have we followed the paths it mapped out?

This report constitutes an indispensable tool for each and every coastal country, the European Union and all

those trying to build a Euro-Mediterranean zone of stability and shared prosperity.² It presents a new analysis of the dynamics at work in the Mediterranean area, linked as far as possible with the social dimension. The approach highlights the relationships between development and the environment and focuses on the strategic priorities for the region. Six issues are analysed: water, energy, transport, urban areas, agriculture and rural areas, and coastal areas. All are subject to public policies and social practices that call for major changes if we want to maintain our vast natural capital, reduce risks and disparities, and get a genuine economic development process under way.

The scarcity and irregularity of *water* resources and the wide range of *energy* resources in the region require particular attention if the needs of a growing population and economy are to be met while preserving resources and avoiding crises.

The *transport* sector, which is inseparable from energy issues, urban sprawl and the spatial distribution of activities, is growing more rapidly than gross domestic product. How can this demand for mobility, which is being increased by economic liberalization and changing lifestyles, be met while minimizing the expected growth of environmental and social impacts?

By 2025, three of every four Mediterranean inhabitants will live in *urban areas*. Lifestyles and consumption patterns change rapidly with increasing urbanization, and urban sprawl and car use become ubiquitous. With shortages of space and financial, human and natural resources in cities, will we find ways and means of avoiding major impacts on the environment and human health?

The very future of *rural areas* is intimately tied to that of cities. These areas, which often suffer from human and economic abandonment, are highly dependent on appropriate management and development to ensure the conservation of natural resources (water, soil and biodiversity) and landscapes, the reduction of some risks (floods and fires) and territorial disparities. In some countries agriculture, vulnerable to the shock of globalization, plays a major role. Will we be able to reinvigorate these areas and avoid their irreversible degradation?

Finally, *coastal areas*, the interface between land and sea, a unique natural and cultural space, are the fundamental and symbolic issue of the Mediterranean's future.

They are full of potential for economic development, mainly for tourism, but also subject to every kind of pressure. Will we discover how to enhance them sustainably and succeed, better than in the recent past, in achieving the necessary reconciliation between development and the environment?

To tackle these six issues, the report is structured as follows:

- Part 1 defines the prospective framework of how the Mediterranean area may evolve between now and 2025, by building a 'baseline scenario', which extrapolates the strong current trends while taking into account the major determinants of the future: climate, population, geo-political and economic factors, and regional and national governance.
- Part 2 analyses, for each of the six key issues, the possible environmental and social impacts of the baseline scenario up to 2025, some responses underway in the Mediterranean countries, and paths to alternative scenarios.

- Part 3 summarizes the main findings of the analyses, highlights the overall impacts and risks of ongoing trends up to 2025, and suggests alternative directions for shifting policies and actions towards more sustainable development.

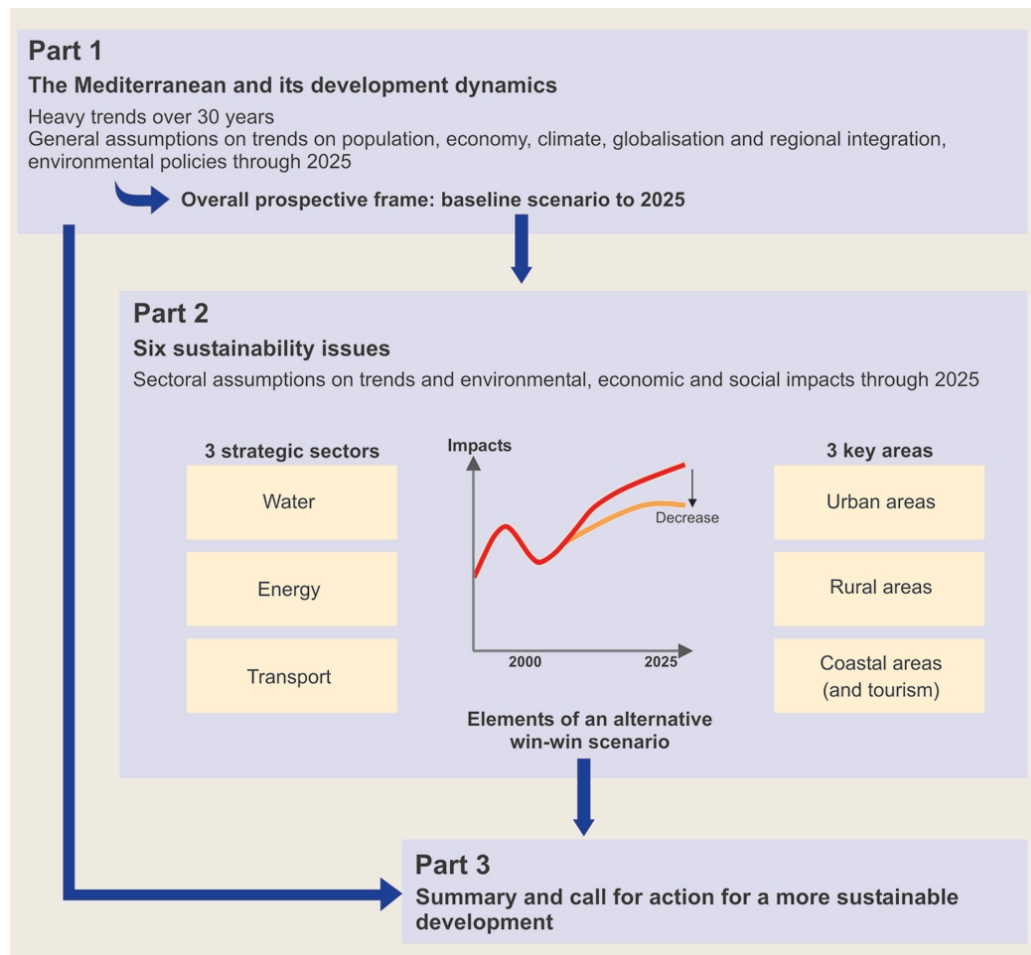
The overall approach is firmly action-oriented. The magnitude of the possible changes is of more interest than the accuracy of the projections. The challenge is to enhance the Mediterranean assets and find a better balance between the improvement of living standards and increased demand for motorized transport, water, energy and land. Although the future is not predictable, the report shows that progress should be possible through approaches that have already proved their worth in the Mediterranean.

The great diversity of the region and its multiple interactions with other regions lead to define the Mediterranean area in different ways, depending on the theme of each chapter. The political reference point remains the countries bordering the Mediterranean that

have signed the Barcelona Convention, but, as far as possible, the characteristics of the eco-region will be analysed on scales closer to the bio-climatic region and the coasts – coastal regions, catchment areas, agro-climatic region and coastal settlements.

The time horizon for analysing the past will also vary according to the issues tackled. Changes that have occurred over the past 20 years will be described and related to the long-term trends. Better understanding of what is happening may, however, be gained from looking further back in time. The development of international tourism, for example, has occurred over more than two centuries: starting in Italy towards the end of the 18th century; developing on the French Riviera in the early years of the 19th century; and

Figure 0 Structure of the report



reaching a huge scale on the Spanish, Greek and Croatian coasts in the 1960s. Regions where tourism is in full growth (Turkey, Tunisia, Malta, Cyprus and Egypt) or just emerging (Syria, Libya, Algeria and Albania) could profit from the lessons learned from this long history in order to avoid some of the past mistakes of other Mediterranean regions or benefit from the positive experiences.

The time horizon for exploring the future is 2025. This falls between the long time scales of global population and climate change and the shorter time scales of changes in consumption, production and distribution patterns. It takes a century to grow a forest, dozens of years to eliminate the commonest forms of soil or water pollution, but only a few years to destroy a landscape.

Exploring this future, which is not very far away, can point to paths that can be taken without delay, for the benefit of the Mediterranean of today and tomorrow. The imagination shown by the Mediterranean peoples at all stages of their history proves that such 'changes of scenario' are far from impossible.

Notes

- 1 Grenon, M. and Batisse, M. (eds) (1989) *Futures of the Mediterranean Basin. The Blue Plan*, Oxford University Press (shortened to *Blue Plan 89* for the rest of this book), also published in French by Economica, in Arabic by Edifra, in Spanish by the Spanish Ministry of Public Works, and in Turkish by the Turkish Ministry of Environment.
- 2 It responds to a request from all the Mediterranean coastal countries and the European Union, that is the Contracting Parties to the Barcelona Convention 'for the Protection of the Marine Environment and the Coastal Region of the Mediterranean'.

Part 1

The Mediterranean and its Development Dynamics



Section 1

The Mediterranean Region: A Unique But Neglected Heritage

The Mediterranean area, because of its geography and its history, is an exceptional region. Its features, uniqueness and permanencies (the sea, the climate, the relief, biodiversity, its populations and its landscapes), which have been described so many times in literature, together encapsulate the 'Mediterranean world'. They are briefly reviewed here.

Following on from this, the most evident signs of unsustainable development in the Mediterranean will be dealt with, by identifying the major geo political, socio-economic, spatial and environmental trends in the last 20 to 30 years.

A unique heritage

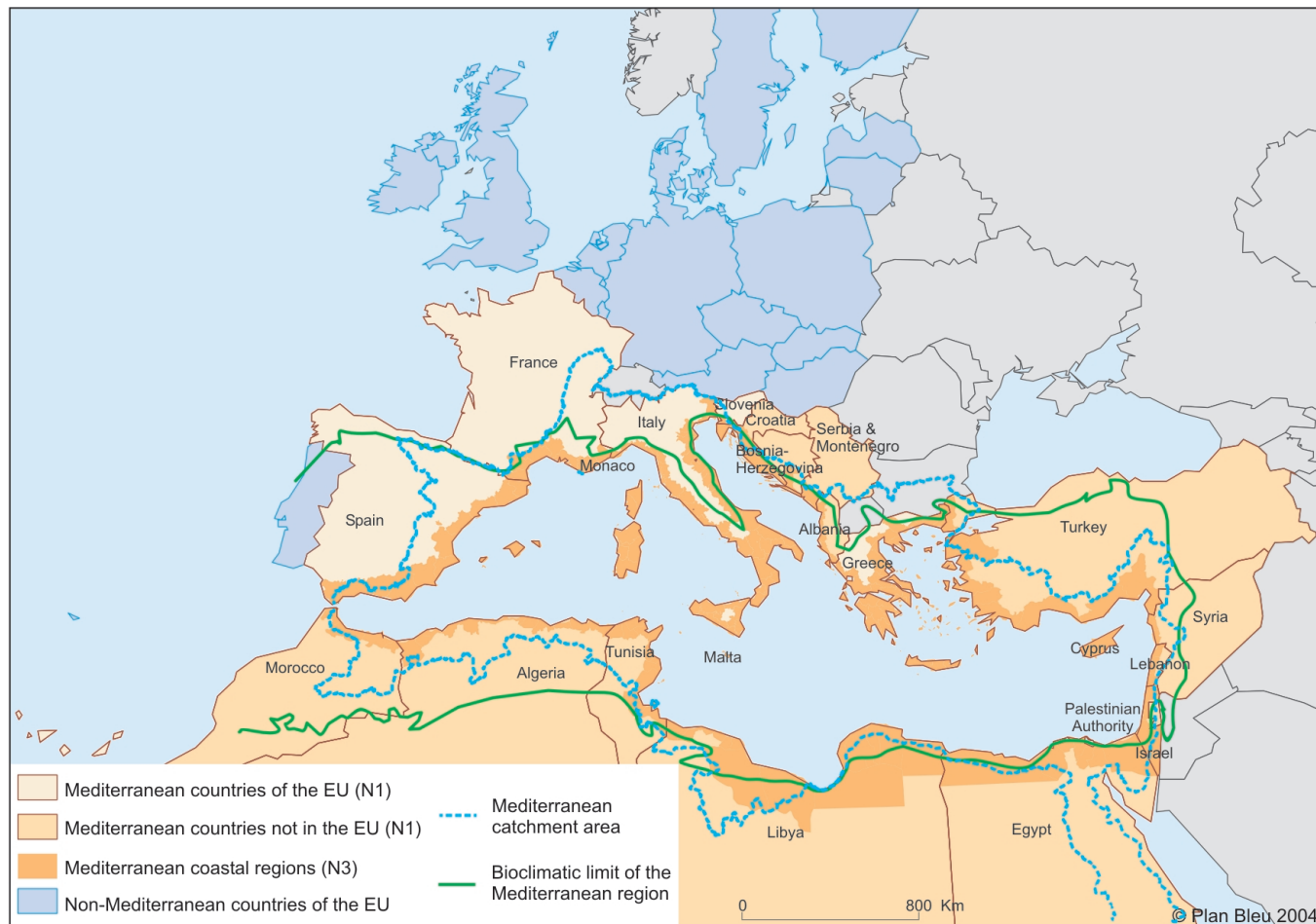
Definitions of the Mediterranean area

The Mediterranean area can be defined taking into account several dimensions (climate, vegetation, biodiversity, culture, etc.). According to the dimensions dealt with in this report, it will be described at the various levels shown in Figure 1.

The first level (given the code N1 in the illustrations) comprises the 22 countries and territories bordering the Mediterranean (Table 1). Although, strictly speaking, this is a wider area than the Mediterranean bio-geographical region (defined on the basis of climate and vegetation), it is at this level that the institutional framework, the sectoral and economic policies and the directions of regional cooperation are defined, with all the many consequences for the region. Information about current trends is more easily accessible (long term series of statistics). At this first level (N1), the Mediterranean countries and territories occupy 8.8 million km², or 5.7 per cent of the land area of the globe, and have 427

million inhabitants, 7 per cent of the world's population in 2000 (see Statistical Annex). Four demographic 'heavyweight' countries contain 58 per cent of the total: Turkey and Egypt (66 million inhabitants each), France (59 million) and Italy (57 million). For the purposes of analysis, the countries will occasionally be brought together in continents: the north Mediterranean countries (NMC) in Europe, and the southern and eastern Mediterranean countries (SEMC) of Africa and Asia, respectively, with regional subsets if necessary (Table 1). These groupings are by nature arguable. On the economic level, for example, Israel would be part of the northern Mediterranean countries and Albania of the 'southern' countries. Other groupings will be used if necessary. Turkey, for example, will sometimes be attached to the countries of the northern shore.

But whenever possible, the Mediterranean specificities are better illustrated at a second level (given the N3 code), closer to the Mediterranean eco-region and defined by the 234 coastal regions of the Mediterranean (administrative units of the NUTS' 3 level or equivalent of 'départements', 'willayas' or provinces, see Statistical Annex). The coastal region level (N3) thus defined represents 12 per cent of the total surface area of the countries and contains 33 per cent of their total population, 143 million permanent inhabitants in 2000. Some countries, such as Libya, Israel, Lebanon, Greece, Monaco, Cyprus and Malta, are very 'Mediterranean' from this point of view because their populations and their activities are concentrated in the Mediterranean coastal regions. This is less the case for Italy where the economic heart, the valley of the Po, is turned more towards Europe than the Mediterranean, and for Morocco, Spain and Turkey, which are continental countries and Mediterranean mainly because of their

Figure 1 A multi-dimensional Mediterranean region

Source: Plan Bleu

climate and vegetation, but open to other seas (the Atlantic, the Marmara Sea, the Black Sea). It is also less true of Egypt and Syria, with huge arid areas where human settlements are mainly organized around fertile valleys, oases and continental routes. It is even less true of France and Croatia (despite the importance of their Mediterranean coasts) and Slovenia, Bosnia-Herzegovina and Serbia-Montenegro, which to a large extent belong to non-Mediterranean temperate Europe.

For the issues dealt with in Part 2 of the report, other geographic levels will be used:

- Chapter 5 on Rural areas deals with an area close to the bio-climatic region (extended to arid regions);
- Chapter 1 on Water refers to catchment areas formed by rivers watersheds (level NV) in the region;
- a more accurate approach is needed for a better understanding of the changes on the terrestrial and maritime Mediterranean coast, focused on a narrow coastal strip.

Box 1 Share of the 'Mediterranean coastal regions' population in the countries, 2000 (N3, N1)

The proportion of inhabitants in the coastal regions (N3/N1) varies from country to country:

- some countries have more than 80 per cent of their total population in the coastal regions: Greece, Israel, Libya, Malta, Cyprus, Lebanon and Monaco;
- others have between 60 and 70 per cent: Tunisia and Italy (which alone has a quarter of the total Mediterranean coastal population);
- around 40 per cent: Spain, Algeria, Croatia, Egypt, Albania and Palestinian Territories;
- less than 20 per cent: Turkey, Morocco, Syria, Slovenia, Serbia-Montenegro, Bosnia-Herzegovina and France.

The report will also take into account the interactions of the Mediterranean with other areas such as the European Union (EU), with which interactions are extensive

Table 1 List of Mediterranean countries and their abbreviations, N1

Group	Shore	Sub-group	Country	ISO code	
Mediterranean (MED)	Northern Mediterranean Countries (NMC)	Northern shore	Spain	ES	
			4 EU-Med ^a	France	FR
			Italy	IT	
			Greece	GR	
	Southern and Eastern Mediterranean Countries (SEMC)	Eastern shore	Monaco	Monaco	MC
			Islands	Malta	MT
				Cyprus	CY
				Slovenia	SI
				Croatia	HR
			Eastern Adriatic Countries (EAC)	Bosnia-Herzegovina	BA
				Serbia and Montenegro	CS
				Albania	AL
			Turkey	Turkey	TR
			Israel and Palestinian Territories	Israel	IL
				Palestinian Territories	PS
	Southern shore	Maghreb	Syria	SY	
			Mashrek	Lebanon	LB
				Egypt	EG
				Libya	LY
		Tunisia	TN		
		Algeria	DZ		
		Morocco	MA		

Note: a The four riparian countries of the European Union before the integration in 2004 of Cyprus, Malta and Slovenia.

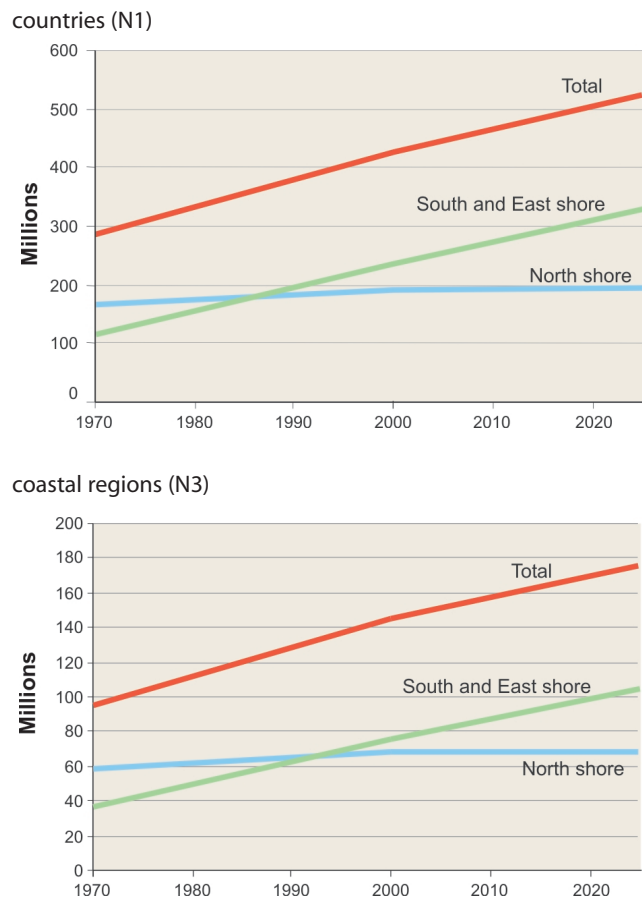
and the destiny closely linked. Figure 1 shows the superposition of these multiple areas (N1, N3, NV and bio-climatic region), which together make up, or interact with the Mediterranean area.

Population growth in the south and east

At the N1 country level (all countries together), the area has seen spectacular growth in population, from 285 million in 1970 to 428 million in 2000. The average growth rate was 1.36 per cent per year, equivalent to adding a country the current size of Bosnia-Herzegovina each year (Figure 2 and Statistical Annex). This is slightly less than the average world annual growth rate in the same period (1.7 per cent), so the share of the Mediterranean in the world population remains quite stable (7 per cent in 2000). Population growth is essentially in the SEMC (all the riparian countries from Morocco to Turkey) where, with 3.9 million more inhabitants per year, there was a record growth rate of 2.35 per cent per year between 1970 and 2000. This was five times higher than in NMC (0.45 per cent per year on average) during the same period. Thus, since 1990, the

population in the SEMC has overtaken that in the NMC. Growth in the south was overestimated by *Plan Bleu* 89 (especially in Lebanon and Syria) since there has been a faster than predicted fall in fertility rate. The population growth forecasts, updated by *Plan Bleu*² in 2001 show that the total population in the Mediterranean countries could reach 523 million by 2025, an average increase of 1.32 per cent per year, or 96 million more in 25 years (of which 92 million would be in the SEMC).

At the N3 coastal region level, the population increased from 95 million in 1970 to 143 million in 2000. The increase (48 million in 30 years) was mostly (80 per cent) in the SEMC. The changes were underestimated by *Plan Bleu* 89. The population growth rates in the Mediterranean coastal regions between 1985 and 2000 were, in most countries, higher than the maximum of the ranges in the 1989 scenarios. The forecasts for the coastal regions, updated in 2001, show that the population of these regions could reach 174 million by 2025, an average increase of 0.8 per cent per year (31 million in 25 years), mainly in the SEMC.

Figure 2 Population of countries and coastal regions, 1970–2025

Source: *Plan Bleu*, Attané and Courbage, 2001

The sea and trade

The sea is at the heart of the Mediterranean eco-region. It belongs to all the Mediterranean people; it has fashioned their history and is a natural link between them.

Partly enclosed by the straits of Gibraltar and the Dardanelles, which make possible water renewal because of heavy evaporation, the Mediterranean sea covers only 26 million km², 0.8 per cent of the total surface area of the oceans. With small tides, the sea is as deep as an ocean (3700m in the Tyrrhenian sea and 4900m in the Ionian sea). It is fragmented into a 'complexity of seas' each possessing different biocenose and histories. The Sicily shelf that links Sicily to Tunisia at less than 400m in depth divides it into two and separates the western from the eastern basin. From the Gibraltar strait, the main natural entrance for water in the Mediterranean, the marine circulation makes a large cyclonic movement to the east that is divided into autonomous circuits and returns in deep currents to the west at the end of a 100-year water renewal cycle. These

straits are the third busiest in the world (with 240 ships a day), and are therefore particularly at risk of pollution.

The sea shelters a very varied living world. The marine fauna, including 600 species of fish, benefits from the diversity of the nature at the bottom of the sea. However, it is not very abundant because of poor water productivity (narrowness of the continental shelves, low input of organic matter). The coastal zone, which is the main area of primary production for the food chain, concentrates fauna and flora in a limited and particularly vulnerable area. Human pressures on the coasts threaten many species (turtles, monk seals, gruper) and very valuable habitats. The Mediterranean, and especially the narrow areas between the northern and southern shores (Gibraltar, Sardinia, the strait of Sicily, Crete, Cyprus, the Dardanelles), is on one of the main migration routes for terrestrial avifauna between Europe and Africa.

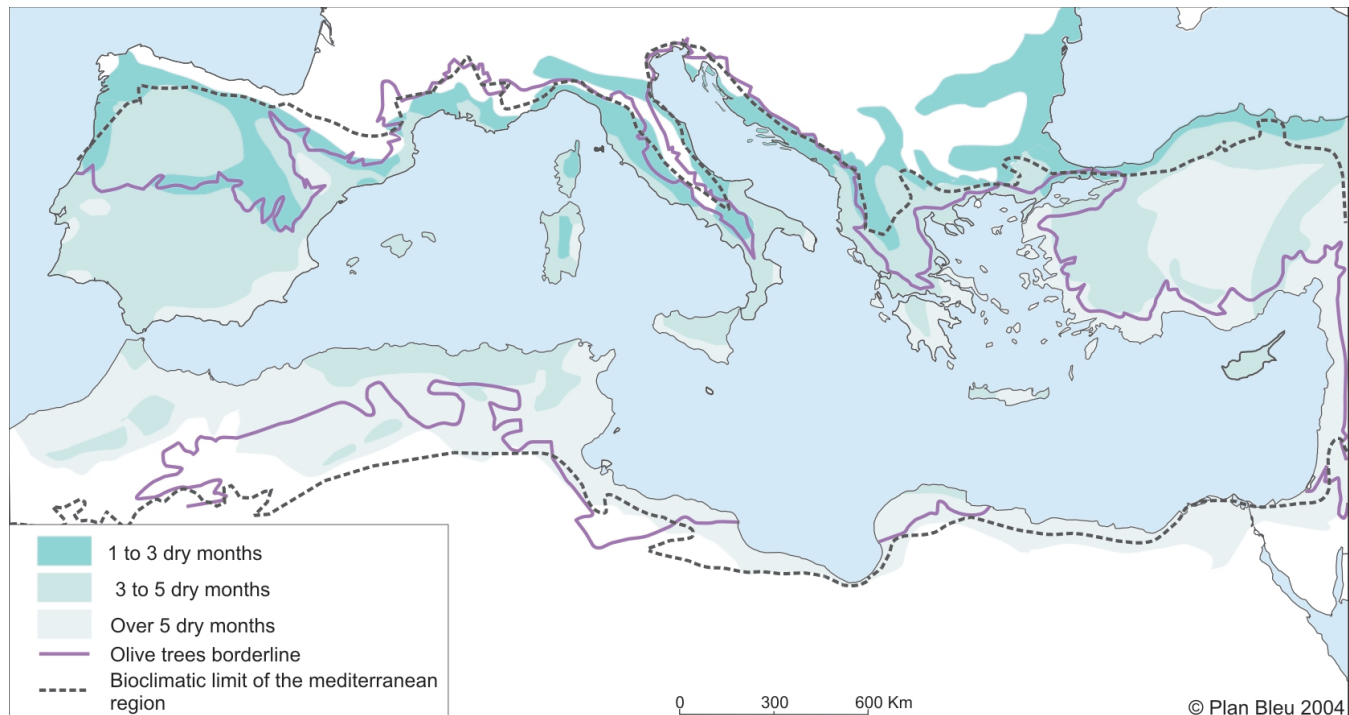
The sea has not always been the natural link between land and people, although it has often been described as such. The Mediterranean region, despite the building of great empires, was for many centuries divided into autonomous areas and it took a long time for navigation to become safe. However, maritime links have made the Mediterranean Basin become an historical area that has been essential for human trade to such an extent that Fernand Braudel described it as the prototype of a 'world economy', with its simultaneously diverse and unified nature and its heritage of civilization. This 'world economy' culminated in the 16th century by associating, in a relationship of conflictual complementarity, the great empires and powers of the time as well as their populations. Since that time, the emergence of the pole position of the Atlantic, and later Asia, have largely removed that advantage.

The sea remains a fundamental basis for trade at both regional and world levels, especially since the opening of the Suez Canal in 1869. As well as manufactured products and food for the southern economy, mainly hydrocarbons are traded. Some countries export oil and gas (Algeria and Libya), while others import them. But the main flows are from the Gulf countries and Asia to Europe and America. This transport of hydrocarbons gives a geo-strategic dimension to the region and also represents a danger to the marine and coastal environment.

An exceptional, but fragile, natural area

The Mediterranean bio-climatic area: Drought and floods

The Mediterranean is also a specific bio-climatic area characterized by a summer water deficit. The 'Mediterranean' climate is defined by warm and dry summers, forcing a phase of xeric stress to the vegetation lasting between 40 days (sub-Mediterranean limit) and 200 days

Figure 3 The bio-climatic features of the Mediterranean

Source: Lemée, G. (1967) *Précis de Biogéographie*. Masson, Paris; Desfontaines, P. (1975) *La Méditerranée, Géographie Régionale*. Gallimard, Paris; Quézel, P. and Medail, F. (2003) *Ecologie et Biogéographie des forêts du Bassin Méditerranéen*. Elsevier, Paris

(sub-desert limit). This drought obliges the vegetation to adapt (xerophytic characteristics). A delimitation of the Mediterranean bio-climatic area based on climate (temperature, precipitation) and vegetation criteria is suggested in Figure 3. In the south, it is generally based on the 100mm isohyet (locally 150mm), below which Saharan conditions are found. In the north and east, the boundaries are set according to bio-geographic criteria and can vary depending on the author. Defined this way, the area is narrow in the east Adriatic and leaves room for the desert in most of the south-east quadrant of the Basin (Libya and Egypt) and for a non-Mediterranean temperate climate from Ancona to Trieste. However, the area covers most of the countries such as Morocco, Spain, Greece and Lebanon. It includes the natural area of olive trees, the emblematic species of the Mediterranean.

Summer drought is accentuated in the south by the great irregularity of rainfall and by aridity, which may increase as a result of global warming. It is a major problem for vegetation, agriculture and societies, and explains the fundamental importance of water in the region and the scale of the efforts by successive generations for the storage, transport and use of water. The Mediterranean countries have 7 per cent of the world's population but only 3 per cent of the world's water resources and more than half of the population of

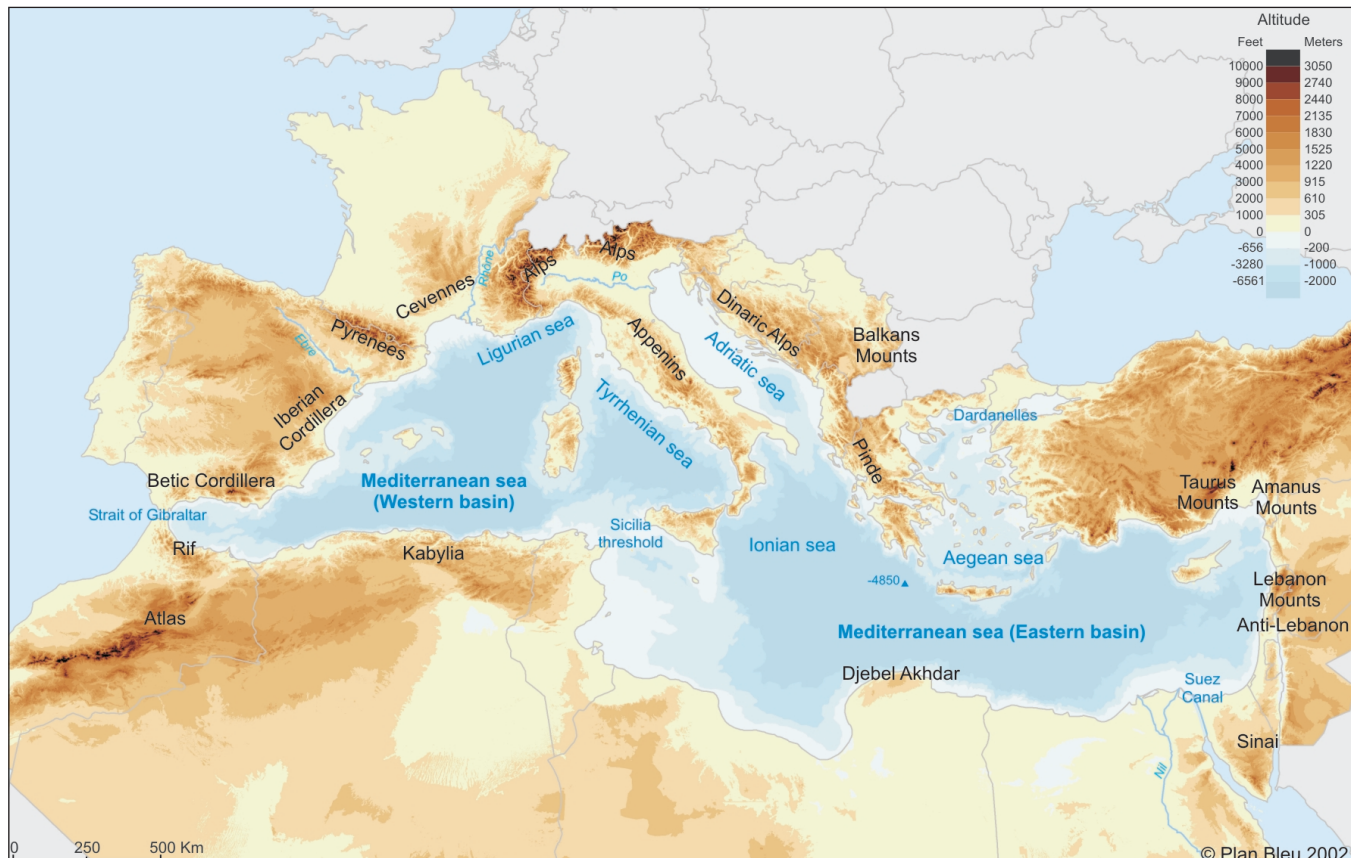
the planet that lacks water, defined as having less than 1000m³ of natural renewable water resources per capita per year.

Maximum rainfall is recorded in the winter and autumn in the north-west of the basin. The irregularity of rainfall is also the cause of violent downpours in the whole basin (except in Egypt and Libya) and floods that are often sudden and catastrophic.

A rugged relief

The Mediterranean, at the crossroads of the African and European tectonic plates, has a young relief (alpine folds) displaying two contrasting forms. In the south-east of the basin, in Libya and Egypt, the Sahara table reaches the sea directly, interrupted only by the Nile valley and delta, the Nile being the only tropical river that flows into the Mediterranean. Everywhere else, from Mount Lebanon to the Taurus and to the Pindus, the Dinaric Alps to the Apennines and the southern Alps, the Cevennes to the Pyrenees and the Sierra Nevada, and the Rif to Kabylia, the coastal regions are dominated by mountains.

The Mediterranean area is composed of multiple cramped, steep and contrasting topographic units. Its interpenetration with the sea explains the large number of islands (Cyprus, Malta, the Greek islands, the islands

Figure 4 The Mediterranean, a fragmented area

Source: Digital Chart of The World Copyright ESRI Inc

Note: The Mediterranean is a fragmented area: a complex of seas, three maritime gateways, 46,000km of coastline and many islands; an area 'eaten up' by mountains.

of the East Adriatic and of the western basin) and the indented morphology of many coasts. A multitude of harbours and ports are narrowly inserted between water and rock. The isolation of the islands worsens the scarcity of resources such as water. Some islands that survive with difficulty on fishing and agriculture have managed to find economic and strategic 'openings' and become privileged tourist destinations.

The domination of the mountains going down into the sea reduces the size of the watersheds. Only four large rivers, the Po, the Ebro, the Rhone and the Nile go far inland. Terrestrial transport is therefore difficult. This partly explains the low rate of industrial development in the region, although the difficulty in circulation imposed by the relief is gradually being overcome by costly infrastructures such as tunnels and bridges.

Except for the four large river basins, the plains are generally narrow, and vast agricultural regions are scarce. Once they have been developed, rehabilitated and irrigated, they are of great value to agriculture, but their conquest was long and difficult. This agricultural

land is now threatened by the sprawl of the towns that it used to supply.

Mountains play a fundamental role in the equilibrium of the region. They receive rainfall and feed the rivers. Their vegetation and development (terraces, small hydraulic systems) retain the soil and regulate the water cycle. Many communities have thrived in these areas, but only after extreme efforts to develop them. Indeed, it is these mountain communities that have supplied manpower to the cities and the coasts. Mountain dwellers live in difficult natural conditions and get few rewards for their labour. These once worked areas are therefore often abandoned, leading to an increase in forest fires and a widening of regional imbalances between coastal zones and inland areas. But when there are few prospects for emigration, and poverty and strategies for survival prevail, mountain populations can be the source of overexploitation of resources and degradation of land and vegetation (erosion and desertification), of which they are the first victims, and which increases the extent of downstream floods.

The fertility of Mediterranean soils is often limited by dryness, shallowness and sensitivity to erosion (Figure 5). Many ways of preventing erosion have been developed in the region. Since antiquity, steep land has been arranged in terraces to plant crops. Because of these constraints, only 13 per cent of Mediterranean land is considered fit for agricultural purposes. The land is rich in bases: fluviosols (young alluvial soils) and luviosols (terra rossa on hard limestone). However, some of this fertile land is threatened by urban sprawl, infrastructures and the growing risk of degradation (erosion, salinization, pollution, etc.).

At the complicated crossroads of the Eurasian and African tectonic plates, geology also explains the strong seismic activity in Algeria, Italy, the East Adriatic, Greece and Turkey (Figure 6), and the strong volcanic activity in Italy and Greece with disastrous and recurring consequences for human life (Figure 7).

An exceptionally diverse eco-region

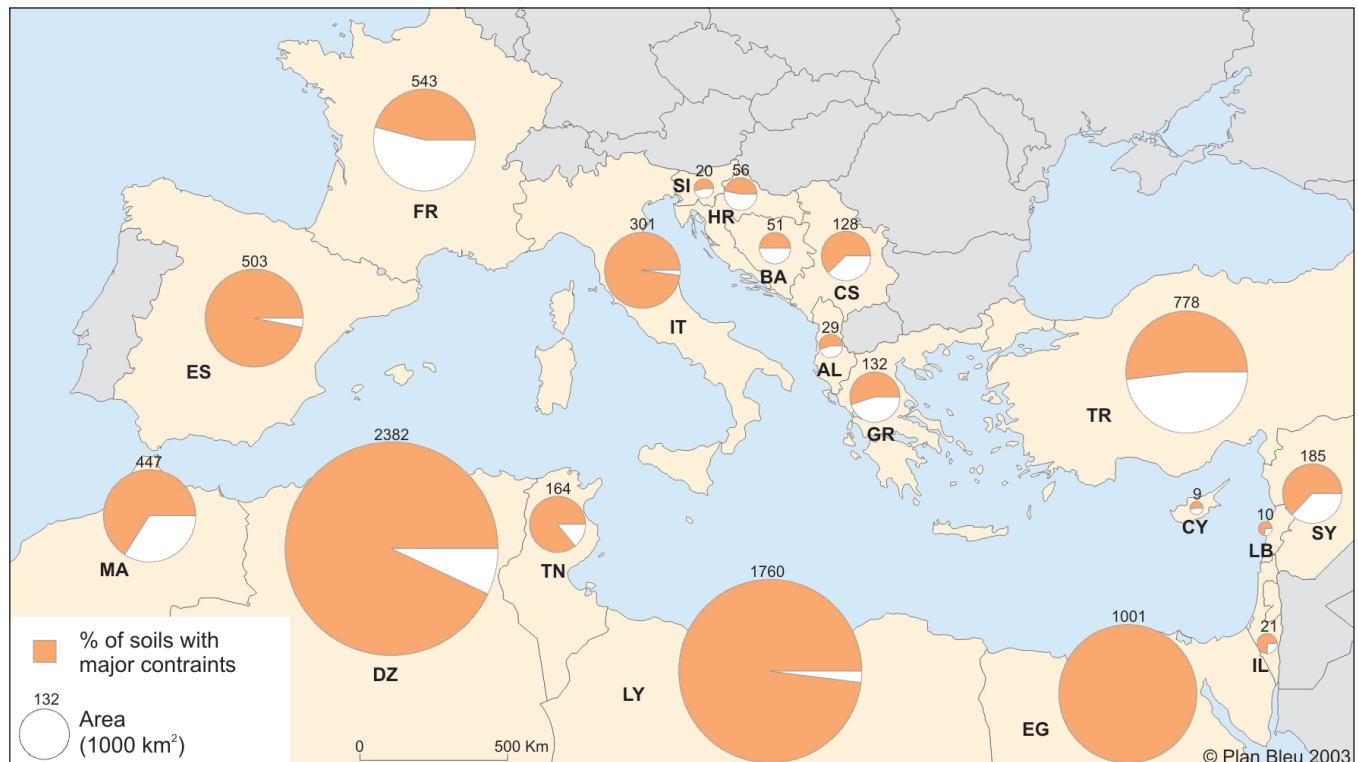
A major worldwide reservoir of biodiversity

The geographical (climate, land, split-up relief, variable frontiers over time between tropical and temperate zones) and historical specificities of the Mediterranean region make it one of the most original bio-geographical

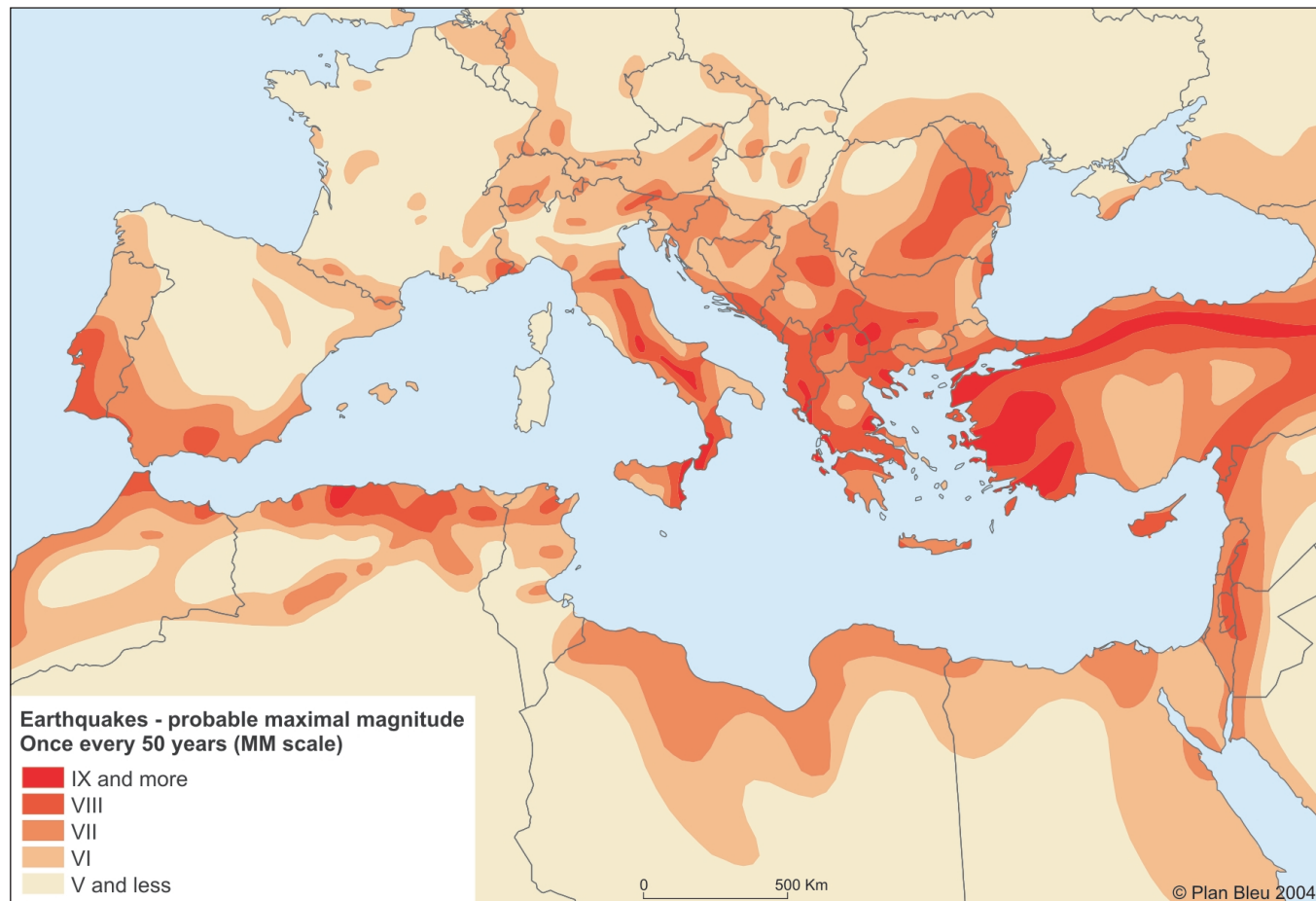
regions in the world from the point of view of biodiversity, but also one of the most threatened.

Its *terrestrial* biodiversity is of great value. It constitutes one of the main reservoir of *plant* biodiversity in the world. Mediterranean flora, which is more or less adapted to drought, has a wealth of about 25,000 species of higher plants, accounting for 10 per cent of known species in the biosphere (on less than 1.6 per cent of total land area). And more than half of these species is *endemic*, that is, peculiar to the region (Figure 8). Thus, the Mediterranean contains 4.3 per cent of the nearly 300,000 species of vascular plants known in the world; thanks to the number of endemic species, the Mediterranean lags just behind the tropical Andes (6.7 per cent of the total of the world's endemic species) and the Sundaland (5 per cent). It is also a major world area for migratory birds: about two thousand million birds, of 150 species, stop over in the Mediterranean wetlands or live there periodically. One of the reasons is the high compartmentalization of habitats because of the relief and the many islands. Moreover, there are many 'relict' plant associations, established under past climatic and ecological conditions that have not persisted. These plant species are particularly sensitive to any kind of degradation, since they cannot regenerate once they have died out. *Animal* biodiversity is often equally

Figure 5 Constraints to Mediterranean soil fertility



Source: FAO (2000) *Land Resource Potential and Constraints at Regional and Country Levels*. FAO, Rome (World Soil Resources Report 90)

Figure 6 Seisms, probable maximal intensity

Source: Data from *The World Map of Natural Hazards*; Munchener Ruckversicherung Gesellschaft

important (35 amphibian species of the 62 living in the Mediterranean, are endemic, and 111 of the 179 reptile species),³ although much less is known about the fauna. The species richness of invertebrates, particularly insects, is significant since this ecosystem is outside the inter-tropical zone. In most cases, areas with high plant and animal endemism appear to coincide.

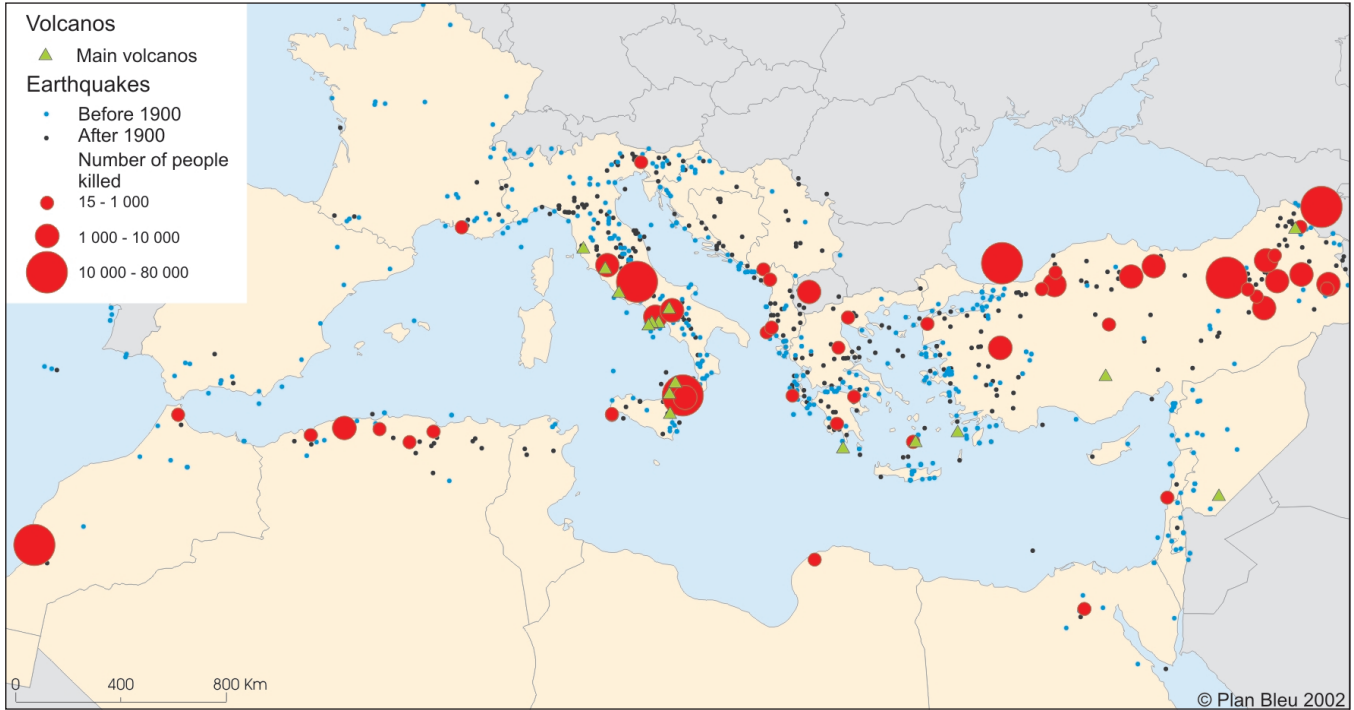
In this region, civilizations have 'domesticated', or transformed the milieu and 'shaped' landscapes and the environment significantly over a prolonged period. Almost everywhere, the primary vegetation has been replaced by landscapes affected by humans, in some cases degraded, but in others improved, abandoned or re-conquered. Because of these changes, a number of animal and vegetable species have disappeared or are under threat (some Felidae, certain antelopes, a number birds such as birds of prey and limicolous birds). *Agricultural biodiversity*, which has been enriched over the ages (with many varieties of cereal, vegetables and fruit, plus horned cattle, sheep and goats) has turned the

Mediterranean into one of the world's eight most important dispersion centres for cultivated plants. This rich genetic heritage is experiencing a remarkable change and is now facing a serious threat as a result of the abandonment of traditional practices.

Marine biodiversity is also both especially rich and endangered. The Mediterranean contains 7 per cent of the world's known marine species in 0.8 per cent of the oceans (in terms of surface area). The ratio of endemic marine species is also very high, often more than 20 per cent (for algae, sponges, Echinodermata, and 50 per cent for the ascidians). This biodiversity is highly concentrated in the sublittoral zone.

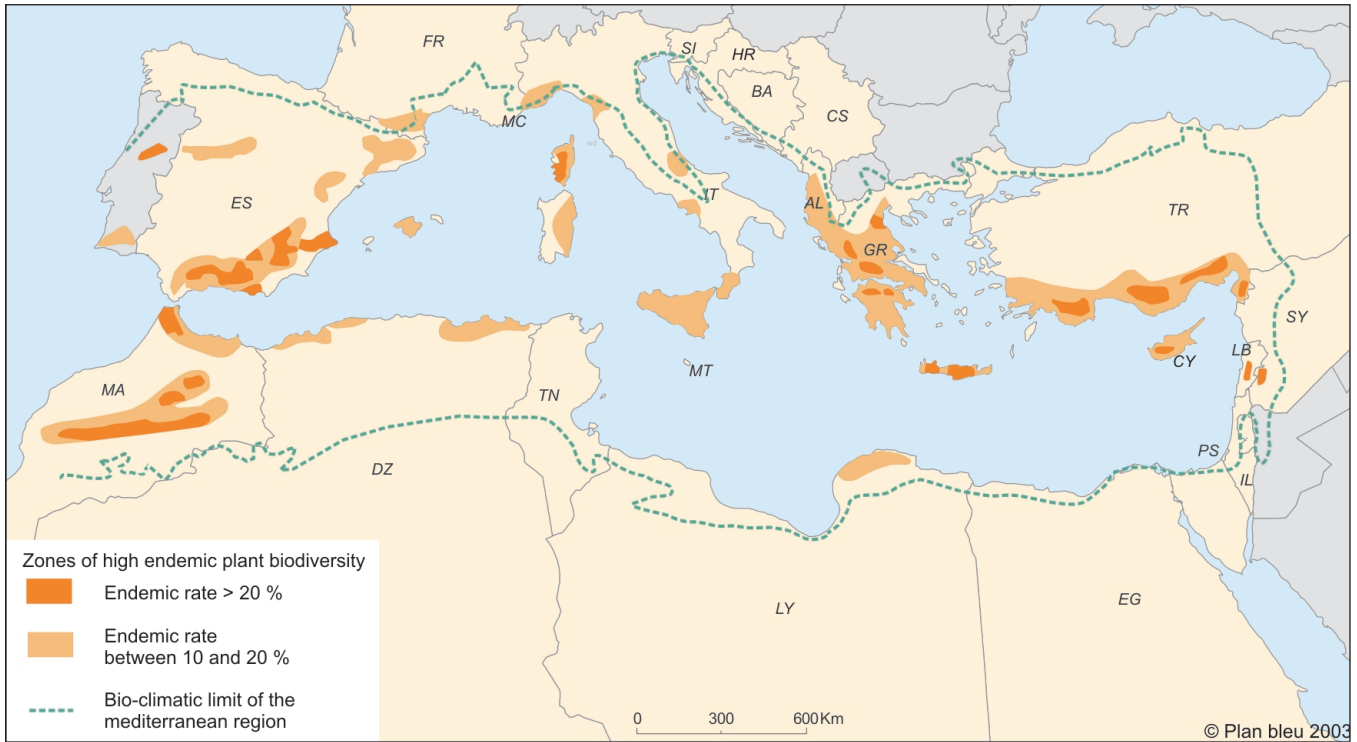
The current *threats* to this heritage (climate change, destruction of habitats and species by urban development, infrastructures, pollution and practices or agricultural abandonment, invasive species, tourism and leisure, etc.), combined with its exceptional wealth have made the Mediterranean region one of the world's main *critical hot spots* for terrestrial biodiversity.⁴

Figure 7 Volcanic activity and earthquakes in Mediterranean cities



Source: Data from NOAA (www.ngdc.noaa.gov); Weber, C. (1990) *Sismicité en Méditerranée*. BRGM, Paris (modified)

Figure 8 Zones with high levels of endemic plant biodiversity in the Mediterranean bio-climatic area



Source: Adapted from Médail and Quezel, in *Annals of the Missouri Botanical Garden*, 84 (1997)

Landscapes, a cultural heritage and specific lifestyles

The Mediterranean countries are characterized by a valuable cultural, historical and landscape heritage.

The great majority of Mediterranean towns are extremely old and rich in *historical sites* of exceptional architectural value. The old cities matched the landscape and were adapted to the environment and the climate. Quiet narrow streets and residential areas are combined with public places where animated crowds can gather. Shade and the circulation of air are enhanced. Fountains are often an important component. Today's building, however, seems to be turning its back on what were once recognized as the qualities of towns. Now, sprawling towns, horizontal constructions and shopping centres are gradually altering the Mediterranean area, with serious repercussions in the north as well as in the south.

More generally, all the valuable *Mediterranean landscapes*, coastal, urban or rural landscapes formed over centuries, are now *under threat*. Sometimes mythical and idealized in painting, literature and films, Mediterranean scenery offers inhabitants and visitors the beauty of the sea, the coastlines and the ancient towns, an exceptional luminosity that has inspired many painters and film-directors, the vast horizons of the sea and the mountains, the wise mixture of culture and nature, variety of the relief, and vegetation that differs from that of temperate Europe. To this can be added an incomparable *historical and archaeological heritage*. In 2003, around 191 sites in the Mediterranean countries (N1) were on the UNESCO World Heritage List, of which 86 are in the coastal regions (N3).

Finally, Mediterranean *lifestyles*, characterized by great conviviality and 'sociability' and a special tradition of quality food (taste, health), also appear to be undergoing major change.

Signs of unsustainable development

The Mediterranean region encountered much disruption during the 20th century, which lead to questions about the 'sustainability' of its development. Sustainable development is a worldwide objective. According to a widely agreed definition, it aims to 'meet current needs without compromising the ability of future generations to meet their own needs'.⁵

The concept of sustainable development, already present in *Plan Bleu 89*, requires development to be considered from several points of view. According to the OECD, it refers to promoting a process to facilitate 'the reconciliation of economic, social and environmental objectives of society or, if necessary, to arbitrate between them'. One major challenge is to guarantee the *rights of future generations* to develop their potential at least to the

level that we enjoy today, which leads to questions about the *future* impacts of *current* development, particularly when they are irreversible. Another major challenge relates to equity for *current generations*, which leads to the complex questions of poverty, social justice, health and education.

Many signs of the poor sustainability of Mediterranean development, already identified in *Plan Bleu 89*, have been confirmed and are increasing. They will be detailed in Part 2 of this report, for each one of the selected issues (water, energy, transport, urban areas, rural areas, coastal areas). But the general past trends and the most evident signs of poor sustainability are reviewed⁶ here: the persistence of conflicts, the poor performance of economies, the continuation of social and territorial disparities, and the increases in pressure on the environment (an essential element of support for economic development in this region).

Persistence of conflicts

First of all, it is difficult to talk in a reasonable way about progress in terms of sustainable development when one considers the huge conflicts that have caused bloodshed in the region during recent decades. The collapse of the former Yugoslavia in the 1990s and the resumption of the Israeli–Palestinian conflict in 2000 have marked the recent history of the region. Conflicts in the Mediterranean are solidly anchored in history and culture. Social and economic differences between countries and increasing difficulties of access to natural strategic resources such as water and energy could perpetuate the risk of conflicts.

To the instability in the Near East, which to a large extent conditions the future of the region, many other tensions can be added, for example those between communities within the various countries (separatist factions in Corsica for France, in the Basque country for Spain, Kurdish ones in Turkey, de facto partition in Cyprus). The region has also been indirectly affected by the Gulf wars and the embargo imposed in Iraq (reduction in trade with Syria, Lebanon and Turkey, Mafia-style activities, smuggling, etc.).

These conflicts involve considerable *human costs*. In 20 years, more than 500,000 people have been killed in the Mediterranean countries. Millions have been displaced. Direct environmental impacts (bombs launched and accumulated in the Adriatic sea, pollution linked to the destruction of industrial sites, the destruction of forested areas, etc.) are high and often persistent, even if often ignored. Conflicts destroy societies for long periods: the displacement of populations that increases migration flows, the capture of land, the destruction of local solidarity, long-term malfunctioning of institutions, and the justification of exceptionally authoritarian regimes, etc.

These conflicts also act to monopolise important financial resources, particularly in countries on the eastern shore where *military expenditure* accounted for 5.9 per cent of GDP, on average, between 1988 and 2002, compared with 2.7 per cent for all Mediterranean countries. It reached more than 9 per cent of GDP in Israel, 6.8 per cent in Syria, more than 5 per cent in Croatia (1992–2002) and in the Lebanon, and more than 4 per cent in Turkey and Greece. In comparison, it accounted for 2.3 per cent of GDP in East and Pacific Asia, 1.2 per cent in Latin America and 2.4 per cent worldwide. Even if total Mediterranean military expenditure has decreased slightly in absolute value since the second half of the 1990s and at the beginning of the new millennium, some countries still devote a significant part of their public funds to it: one-quarter in Syria in 1999, around one-sixth in Greece in 1998 and in Israel in 2001.⁷ Such a mobilization of public (national and international) funds linked to the many conflicts in the Mediterranean put a severe strain on budgets that could be allocated to action to promote sustainable development.⁸

Finally, these conflicts slow progress towards regional cooperation, the importance of which will be seen throughout this report.

Poor economic performance, persistent north–south gap and high unemployment

The Mediterranean has stabilized its macro-economic balances, but shows slow growth and has not managed to reduce the gaps in wealth between its shores.

Slower growth

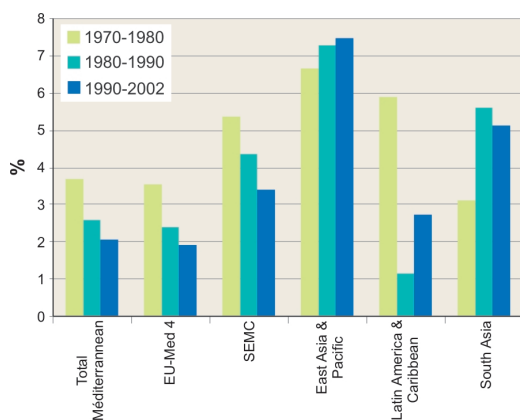
The Mediterranean recorded slower growth than the world average between 1970 and 2002. Indeed, during that period, real GDP in the Mediterranean⁹ increased from nearly US\$1,900 thousand million to just over US\$4,500 thousand million (\$1995), an average of 2.7 per cent per year. This is below the rate of growth in other emerging regions (7.2 per cent in East and Pacific Asia, 3.2 per cent in Latin America, 3.1 per cent worldwide). Thus, the Mediterranean share of global GDP has been falling steadily for 30 years.

Mediterranean growth itself fell steadily between 1970 and 2002, from 3.7 per cent on average during the 1970s, to 2.6 per cent during the 1980s and 2.1 per cent between 1990 and 2002. This is in contrast with southern Asia, in particular, where growth has been accelerating from one decade to the next for the past 30 years.

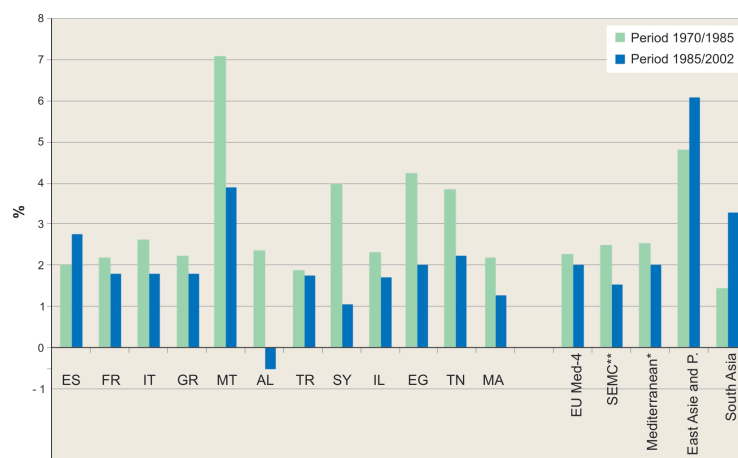
The decrease in economic growth is a common feature of the four EU-Med countries and the SEMC. However, these overall results hide great differences (see Statistical Annex). The four EU-Med countries, with 90 per cent of the total GDP in the Mediterranean region, experienced rather lower annual growth between 1985 and 2000 (2.3 per cent per year) than the *Plan Bleu* 89 projections (Spain stands out with 3.3 per cent). But GDP growth in the SEMC was greater (4.1 per cent per year), at the higher end of projections of the 1989 *Plan Bleu* scenarios. However, for the SEMC, as a result of population growth, GDP growth *per capita* fell between 1985 and 2002 compared with 1970–1985 (Figure 9). Thus, over the 1985–2002 period, average GDP growth per capita was higher in the four EU-Med than in the SEMC.

Figure 9 GDP growth rates, 1970–2002

Total GDP growth rates per period with constant prices (annual average rates)



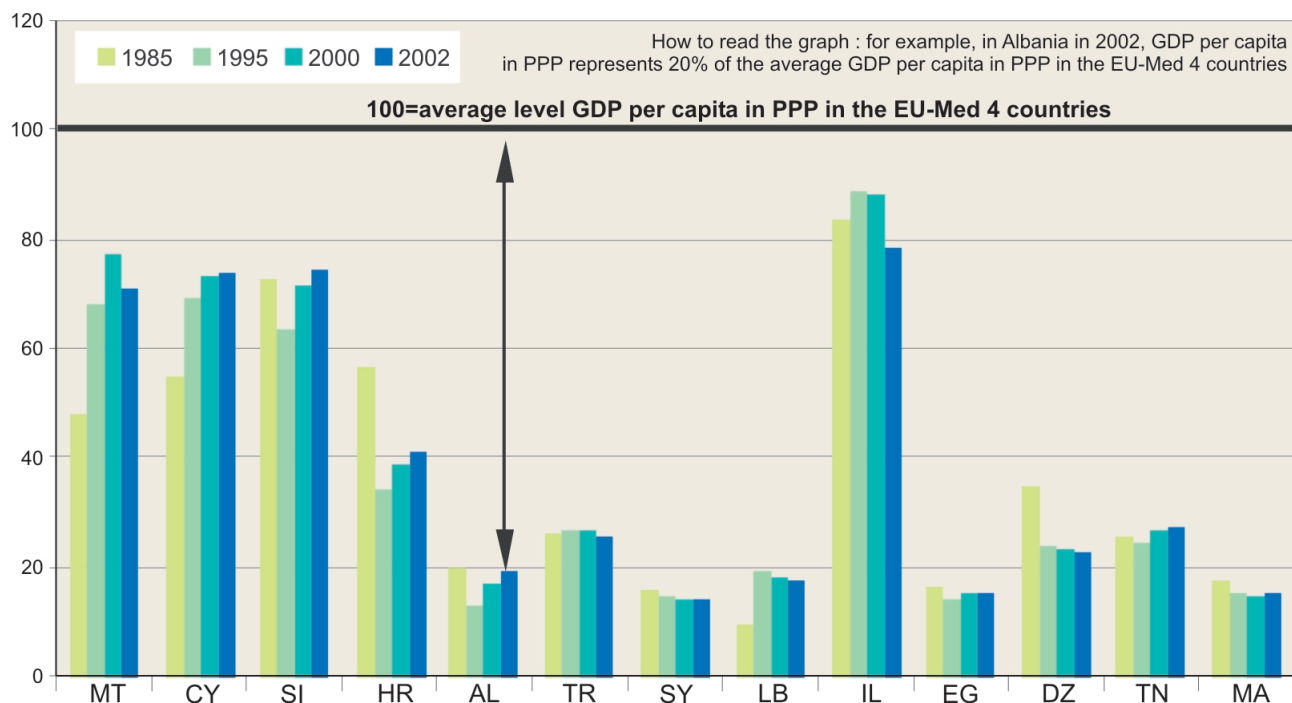
GDP growth rates per capita (PPP constant) per period



Source: World Bank, 2004

* Cyprus, Monaco, Palestinian Territories, Lebanon, Libya and East Adriatic countries not included.

** Palestinian Territories, Lebanon and Libya not included.

Figure 10 Income gaps: SEMC income per capita compared with four EU-Med average income (GDP per capita PPP)

Source: Blue Plan from World Bank, 2004

Note: Croatia and Slovenia: 1990 and 1993 instead of 1985. Lebanon: 1989 instead of 1985. Cyprus: 2001 instead of 2002.

North–south income gaps not reducing

Thus the gaps in per capita income between the north, and the south and east have not been reduced. Only four countries got near to the average level of the four EU-Med countries: Cyprus, Israel (decreasing since 2000), Malta and Slovenia, but these make up only 2 per cent of the population of the Mediterranean countries. When comparing average income in all the Mediterranean countries (Figure 10) with average income in the four EU-Med countries over the past 15 years, little progress is seen, indeed the reverse trend appears, with the gaps increasing slightly in some countries. Turkey and Tunisia have a standard of living equivalent to one-third of that in the four EU-Med countries; in Egypt, Lebanon, Morocco, Albania and Syria, it remains less than a fifth. A particularly worrying increase in the income gap between 1985 and 2002 can be seen in Algeria. On the other hand, after strong falls, Albania (now enjoying once again a rank previously achieved 15 years ago) and Croatia are improving.

Very high unemployment rates

Unemployment has become a major concern for societies and governments, in the north as well as in the

south. It represents a strong disparity between those with access to a job and those who are excluded. All the Mediterranean countries have experienced severe increases in unemployment since 1980 (see Statistical Annex).

In the four EU-Med countries (Spain, France, Italy, Greece), the unemployed accounted for more than 9 per cent of the active population in 2002. Spain was most badly affected with 11.4 per cent in 2002, and a peak of 24.1 per cent in 1994.

In the SEMC, unemployment grew faster than in any other region of the world, due to a combination of several factors: slower growth in public employment, privatization, increase in population, agricultural modernization, a decrease in opportunities for migration, and insufficient economic growth. Unemployment rates in this area are among the highest in the world, with an average of 15–20 per cent of the working population out of work.

In 2002, unemployment reached 18 per cent of the active population in Morocco, and 12 per cent in Syria. It reached 14 per cent in Tunisia in 2003. Algeria and the Palestinian Territories experienced the highest rate with almost 30 per cent in 2001; Egypt went from 5 to 9 per cent unemployed between 1980 and 2001. The figure is

more than 24 per cent in Serbia-Montenegro and approached 15 per cent in Croatia and Albania in 2002. Only Turkey experienced a fall in unemployment between 1980 and 2000 but it increased again in 2002 to 10 per cent of the active population.

Where work precariousness (insecurity) exists, a disparity occurs between workers who profit from welfare benefits and those in the informal sector who are excluded. In the SEMC, the informal sector is estimated to account for between 30 and 40 per cent of the urban work force and has been the main supplier of jobs in recent years.

Exclusion from the world of work often leads to social exclusion and generates poverty. In this respect, *long-term unemployment* (more than 12 months), is especially worrying: in 2002, 58 per cent of the unemployed were long-term unemployed in Italy, 50 per cent in Greece, 40 per cent in Spain and 33 per cent in France.

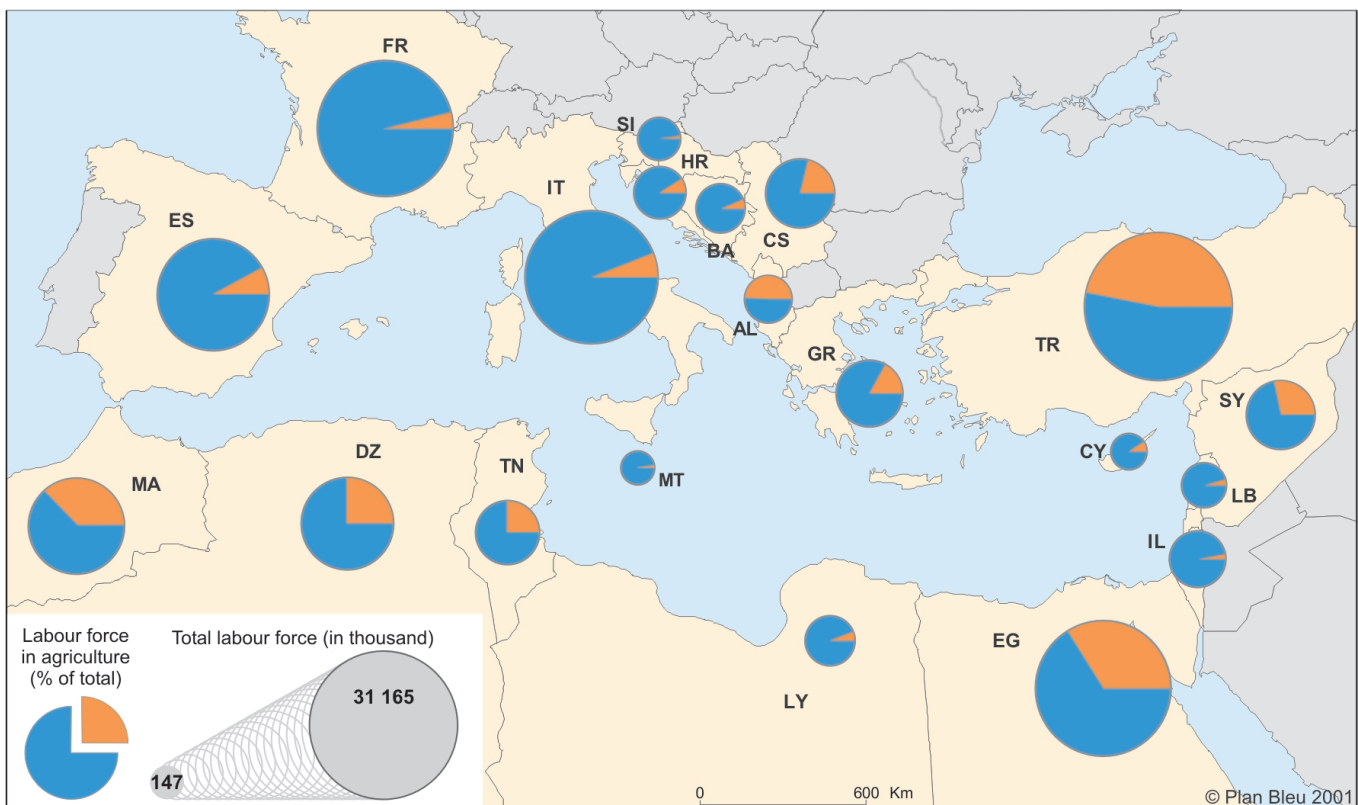
It is the least skilled persons, the young and women, who are most badly affected. The youth (between 15 and 20 years old) unemployment rate is, everywhere in the region, 15–40 per cent of the active population. It is more than 20 per cent in Spain, Italy and Greece. In many eastern and southern countries, almost half of the unemployed have never had any experience of work.

Economic development based on the exploitation of declining natural resources

The Mediterranean economy remains highly dependent on natural resources (agriculture/water, tourism/coastal areas, residential economy/space, energy/hydrocarbons) that it paradoxically tends to overexploit.

Despite a relative decline, *agriculture* is still a driving sector for the economy in several countries (Figure 11). Agriculture accounts for between 10 and 16 per cent of GDP in all Maghreb countries, 12 per cent in Lebanon, 13 per cent in Turkey, 17 per cent in Egypt, 18 per cent in Bosnia-Herzegovina and up to 23 per cent in Syria and 25 per cent in Albania in 2002 (against 2 per cent for the 15 EU countries in 2001). Being the main water consumption sector (but also a sector consuming marginal lands in the poor countries), agriculture always makes a large contribution to employment (48 per cent in Albania, 46 per cent in Turkey, 36 per cent in Morocco, 33 per cent in Egypt, 28 per cent in Syria, 25 per cent in Tunisia against roughly 4 per cent in the EU-15 in 2000). The agro-food network represents no less than 10 per cent of manufactured production. By far the first sector in terms of water consumption, agriculture is, in several countries, at the root of serious problems of water resource overexploitation and soil degradation.

Figure 11 The social importance of agriculture in 2001



Source: FAO (<http://faostat.fao.org>)

The share of the *industrial sector* in national economies has tended to increase in the SEMC but has fallen in the four EU-Med countries. It generally accounts for between one-third and one-fifth of GDP and shows signs of gradual diversification. The share of 'low-technology industry based on resources'¹⁰ is still high in the SEMC, and accounts for 61 per cent of the added value in the manufactured sector (Egypt) and 81 per cent (Tunisia) compared with 46 per cent (France) and 69 per cent (Greece).

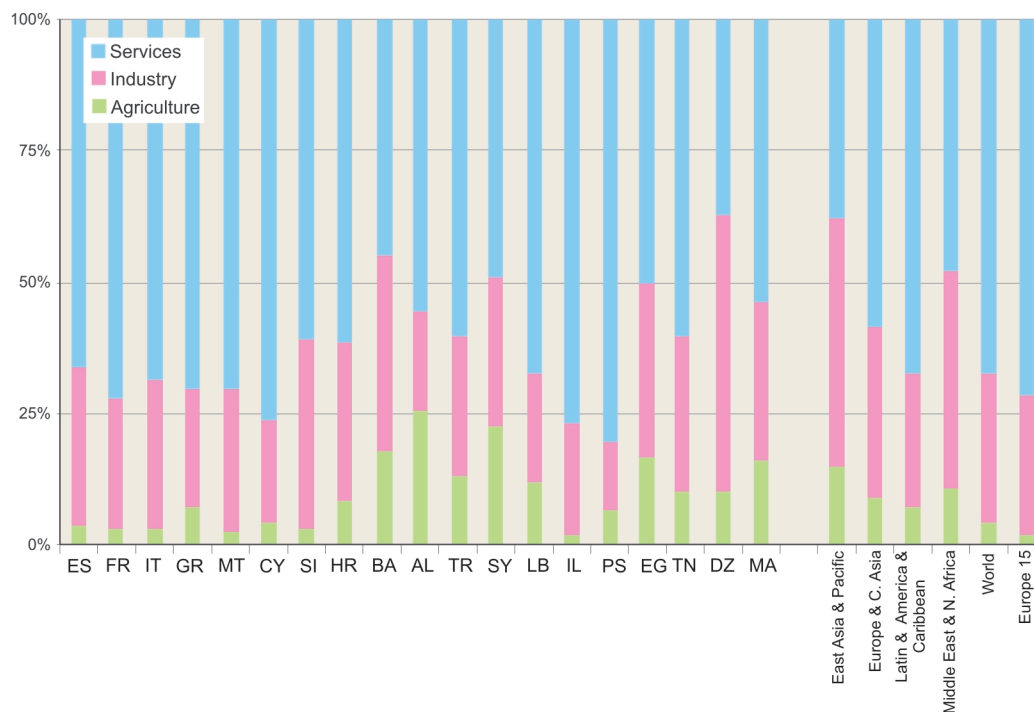
Four Mediterranean countries remain highly dependent on the *extraction* industry: Algeria with 23 per cent of GDP, Libya with 18 per cent, Syria with 12 per cent and Egypt with 6 per cent.

Overall, in the SEMC, the substitution of technical capital for natural capital in the production process remains rather slow compared with the NMC. All these features clearly affect the export structure of a country. The proportion of *energy product* sales account for more than 95 per cent of Algerian and Libyan export income and 32 per cent of Algerian GDP. Agricultural products retain an important position in total foreign trade (imports + exports): 9 per cent in the Maghreb countries, 19 per cent in the Mashrek countries in 2001. A recent Femise study indicates that several SEMC are specialized at the international level in intensive non-skilled products (particularly the textile and clothing industry) or in natural resources exploitation.¹¹

In almost all the Mediterranean countries, the *service* sector has become the largest (Figure 12) as a result of

Figure 12 GDP structure and services structure

GDP structure in per cent, in 2002



Source: World Bank, 2004

Services structure in 2001 (as % of GDP)

	TN	SY	MA	LY	LB	EG	DZ
Commerce, rest. and hotels	15.9	12.5	21.1	11.4	28.8	1.5	21.8
Transport, communications	8.4	12.3	7.2	8.2	3.1	8.4	
Finance, insurance, banking	4.1	3.9		2.2	6.2	20.3	
Domestic services	3.3			3.1	7.1	1.9	
Government services	13.0	7.9	13.9	19.8	21.0	7.4	11.4
Other services	1.6	2.3	11.3	2.6	6.7	7.5	

Source: Arab Monetary Fund

tourism-connected activities, which particularly exploit shared public assets such as the sea and the coasts. The services sector generally accounted for more than 50 per cent of GDP in the SEMC in 2002 and more than 60 per cent in the NMC. However, in the SEMC this sector has a dual economic nature with formal major added-value activities (banking, finance, mass marketing) coexisting with informal activities, often at the survival level (door-to-door salesmen, shoe-shiners, car minders, servants, etc.).

Apart from providing considerable employment, the tourism sector constitutes an important source of currency for Mediterranean countries. Between 1990 and 2002, it accounted for approximately 27 per cent of world tourism receipts. For the Mediterranean countries, this is equivalent to 12 per cent of total receipts from the export of goods and services (compared with a 6 per cent world average) (Figure 13). However, receipts from tourism require major investments, often from public sources, and tourism can have negative impacts on the environment.

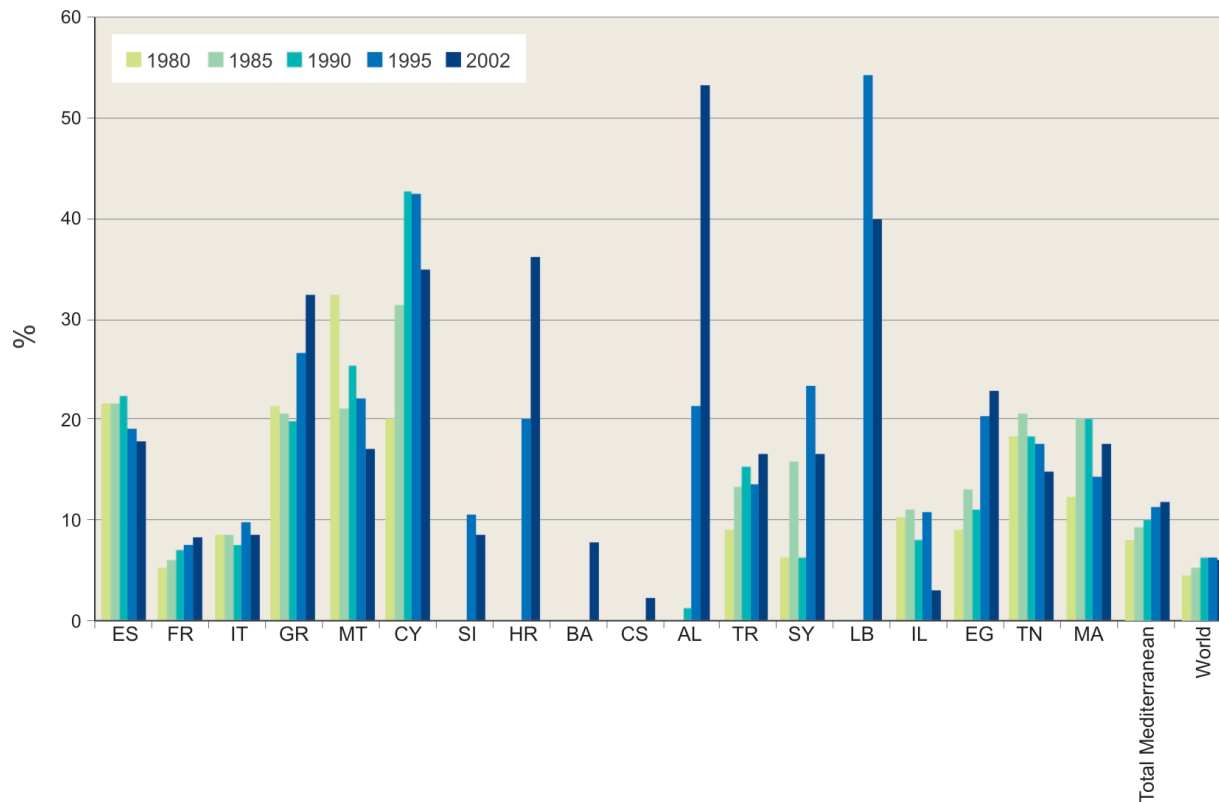
Tourism receipts have been particularly important for the economic growth of some east Adriatic countries, Lebanon and Cyprus where they were equivalent to between 35 and 53 per cent of the export value of goods and services in 2002. The contribution was also significant in Syria, Malta, Greece, Egypt, Tunisia, Morocco,

Turkey and Spain, where the ratio is around 20 per cent on average.

Exploitation and, sometimes, waste of natural resources

A strong dependence on all sorts of natural resources (water and soil for agriculture, coastal zones for tourism, lands for residential economies, hydrocarbons for energy, etc.) contributes to the ‘rent economy’ and a ‘mining-like’ exploitation nature of the Mediterranean economy, which is often mentioned as a reason for its weak performance. It should lead to attempts to reconcile development and the environment and result in considerable attention being paid to resource management. However, urban, tourism and agricultural development is often poorly controlled, with uneconomical consumption or use of water, energy, land and coastal zones, as will seen in Part 2 of this report. Strictly speaking, the ‘ecological footprint’ is not an indicator of sustainable development, but it appraises, in a synthetic way, the pressure exerted by human activities on the environment and natural resources. According to this indicator, the environmental capital of each Mediterranean country is being spent more quickly than it is being renewed (Box 2).

Figure 13 Share of the receipts from international tourists as a percentage of goods and services exports



Source: World Tourism Organization, World Bank, 2004

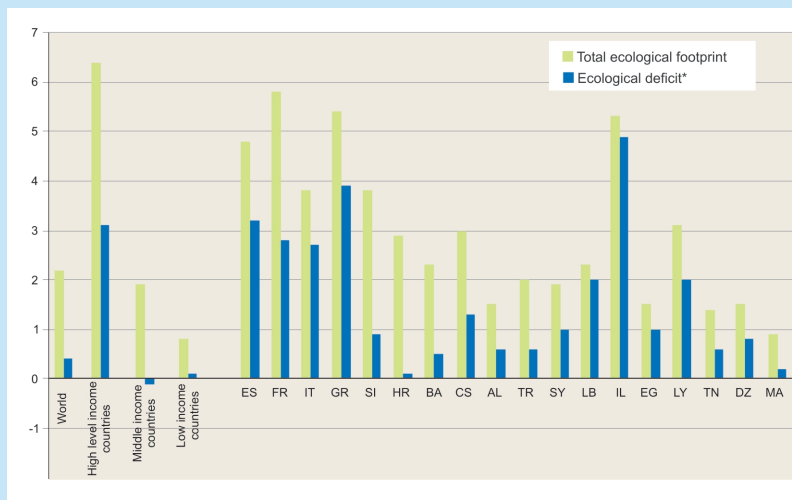
Box 2 Ecological footprint of Mediterranean populations, (N1)

The **ecological footprint** is a measure of the theoretical size of the biologically productive area (of land and water) required by an individual, a city, a country, a region or humankind to produce the resources consumed and absorb the wastes generated, while using technologies and existing management modes.

The ecological footprint gives information on human demand pressures on natural resources. The method of calculation of footprints may be complicated, since it assumes that one can take all the resources and intermediate consumptions involved in the production of goods into account and convert them into area-equivalents. For this reason, the information must be used with care since the methodology is still under debate and collecting reliable environmental data remains difficult.

According to the WWF, the global ecological footprint (for all the world's population) in 2001 was 13.5 thousand million hectares, or 2.2 hectares per capita. This can be compared with the Earth's total bio-capacity, estimated at 11.3 thousand million hectares, one quarter of the Earth's land surface, or 1.8 hectare per capita. In 2001, the human ecological footprint was therefore 21 per cent, or 0.4 hectare per capita, larger than the Earth's bio-capacity.

The **ecological deficit** is the extent to which a population's ecological footprint exceeds the bio-capacity of its territory. When compared with bio-capacity, the ecological deficit is obtained. All the Mediterranean countries, without exception, had an ecological deficit in 2001, which means that the environmental capital of each country is spent faster than it is renewed.



Source: WWF, Living Planet Report, 2004

* difference between the ecological footprint and the bio-capacity.

Insufficient decoupling between economic growth and pressures on environment

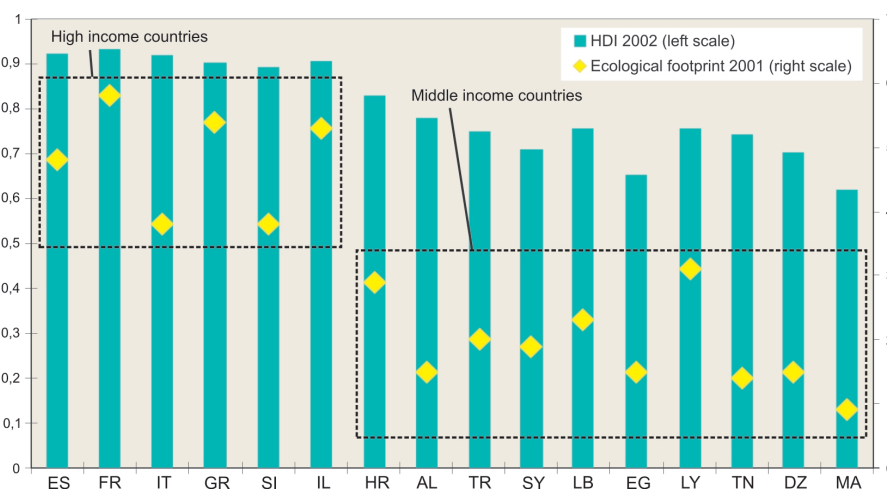
The ecological footprint concept takes into account the *eco-efficiency* of development patterns, that is, the consumption of natural resources or emission of pollutants per unit of created wealth.

Indeed, when countries' ecological footprints are compared with their Human Development Index (HDI), which takes account of GDP per capita, life expectancy and education level (Figure 14), the highest HDIs are generally in the countries with the largest ecological footprint per capita.

A given increase in development results in a parallel increase in HDI and ecological footprint per capita. This illustrates that there is no or little decoupling between economic growth and pressures on the environment. The high income countries (the four EU-Med countries, Slovenia and Israel) are

further from sustainable development in terms of ecological impact and those countries with intermediate income (SEMC and East-Adriatic except Slovenia) are further away in terms of human development.

Figure 14 Human Development Index (HDI) and ecological footprint



Source: PNUD, WWF

Box 3 The concept of decoupling between economic growth and pressure on the environment

Decoupling occurs when the growth rate of environmental pressures is below that of economic activity. Decoupling is absolute when environmental pressure is steady while economic activity grows. It is relative when pressure on the environment is increasing but less rapidly than economic activity.

Decoupling can be measured by comparing an environmental pressure variable (such as CO₂ emissions) with an economic variable (such as GDP). Comparison between an environmental pressure and population change or other variables may also be made.

Source: OECD, 2002a

The challenge for the northern countries is therefore to decrease their ecological impact while maintaining a high HDI level, and for southern countries to increase their HDI while retaining a relatively low ecological impact. Examples of successful decoupling are given in Part 2.

Environmental pressure on regional commons: a shared but differentiated responsibility

The NMC, because of their economic activity, consumption patterns and lifestyles, contribute even more to pressures on the environment than the SEMC. For example they are responsible for almost 70 per cent of total CO₂ emissions from the energy and transport sectors in the Mediterranean. The industries of the four EU-Med countries (Spain, France, Italy, Greece) emit 1500 tonnes of liquid discharges per day, measured in terms of Biologic Oxygen Demand, one and a half times more than the 18 other riparian countries together (1000 tonnes per day).

This differentiated responsibility appears even more clearly when comparing indicators per capita. The four EU-Med countries emit twice as much industrial CO₂ and nitrogen oxide and consume three times more energy per capita than the other Mediterranean countries.

Persistent social disparities, despite progress

Other signs of unsustainable development come under the social sphere. In absolute terms, despite progress in the fields of health, education and access to basic facilities, many social inequalities remain both between and within countries (particularly between rural and urban areas). These gaps could widen further in the future and move the region away from sustainable development. Even if the average standard of living, measured in terms of GDP per capita, has improved in nearly all Mediterranean countries, its conversion into 'social well-being' is conspicuously unequal. In the absence of a global 'development' index (Box 4), some

large indicators have been chosen to show this on the national scale. Additional analyses of internal differences within the countries would no doubt be extremely useful but remain to be done.

Continuing poverty

Poverty affects all Mediterranean countries. It makes a large part of the population vulnerable by depriving them of access to essential basic services and equipment. It is difficult to measure it because it is a 'relative' concept, and reliable and comparable data are scarce.

In *monetary* terms, *poverty* affects almost 10 per cent of the population of the Mediterranean countries, including the high income ones. The proportion of the population living below the *threshold of absolute poverty* (US\$14.4 PPP per capita per day in the developed countries) is 12 per cent in France, 21 per cent in Spain and up to 23 per cent in southern areas of Italy. In the other countries, scarce official statistics indicate between 6 per cent and 18 per cent of the population living on less than US\$2 per day (Turkey, Tunisia, Algeria, Morocco) and up to 44 per cent in Egypt. In terms of *relative poverty thresholds* (the value of which, for each country, depends on the standard of living) the proportion is between 8 and 19 per cent. As regards income disparities, for the countries for which UNDP publishes information, there is a distinction between countries with *low income inequality* (Egypt, Italy, France, Spain, Slovenia, Croatia) and those with *large income inequality* (Algeria, Israel, Tunisia, Turkey, Morocco). However, these disparities do not reach the extreme values of some countries in South America, Central America and even subtropical Africa.

In the broadest sense of *human poverty* (a concept that integrates deprivation in health, education, living conditions, etc.), poverty rates are significant. The UNDP human poverty index, the definition of which varies according to the level of development, indicates that between 10 and 12 per cent of the population in Italy, Spain and France, a total of 17 million people, are affected by human poverty in these three countries. In the other countries, the proportion varies between 10 per cent (Lebanon) and 35 per cent (Morocco).

In the absence of long time-sets of data, it is not possible to measure changes over time. However, most analysts agree that the level of poverty in the Mediterranean is not as high as the alarming levels in other parts of the world. Family solidarity helps to lighten it (Box 5), even though there are *locally* very high levels, especially in rural areas. The inequality between social groups, the rise in poverty (linked to the degradation of social services) and the emergence of new forms of urban poverty are more and more worrying for national and international institutions. *Impoverishment* generates both social and political tension. Governments are led to rede-

Box 4 Sustainable development indicators. The example of HDI

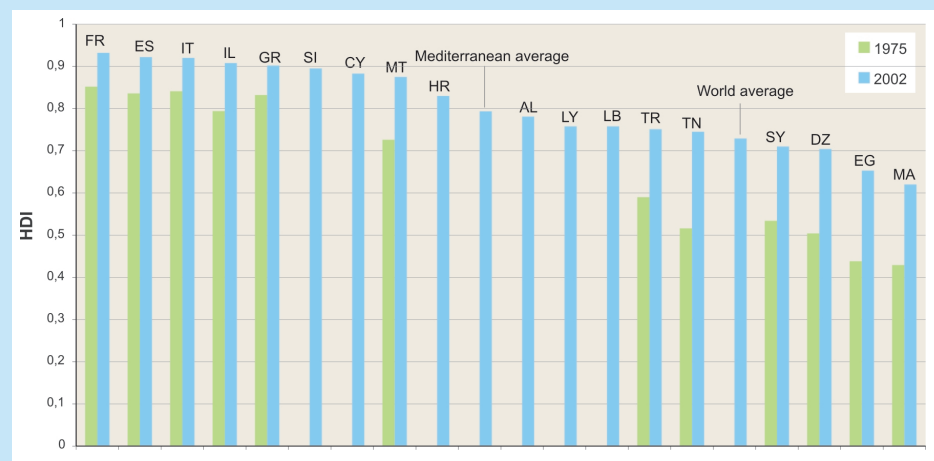
GDP and even GDP ppp (in purchasing power parity) is not an adequate way of measuring development level. For example, it does not take into account the cost of much environmental and social damage or social progress. Initial studies have tried to assess the cost of environmental and social degradation and collect various types of information that better account for overall progress in a society, by defining new synthetic indicators, without systematic valuation of the variables in monetary terms. The best known is the UNDP's Human Development Index (HDI), which, in addition to GDP PPP per capita, takes into account the expected life span at birth and the level of education. An HDI of more than 0.8 is deemed as being high, less than 0.5 as low.

This indicator shows that the Mediterranean region is globally quite well placed compared with the rest of the world, with an average HDI, estimated at 0.8 with, nevertheless, many differences between countries:

- nine countries have a high HDI, above 0.8: France (16th out of 177 on a world scale), Spain, Italy, Israel, Greece, Cyprus, Slovenia, Malta and Croatia (48th on a world scale).
- nine have an HDI between 0.7 and 0.8: Libya (58th on a world scale), Albania, Bosnia-Herzegovina, Lebanon, Turkey, Tunisia, the Palestinian Territories, Syria and Algeria (108th on a world scale).

- five have an HDI between 0.6 and 0.7: Egypt and Morocco (120th and 125th on a world scale).

HDI has been increased continuously in absolute terms since 1975 in all Mediterranean countries. However, countries with a lower HDI have fallen by between 10 and 20 places in the world ranking since 1994 and seem to be less able to convert economic growth into social well-being than other regions of the world.

Human Development Index (HDI) of some Mediterranean countries

Source: PNUD, 2004

More recently, other indices that integrate social and/or environmental variables have been proposed and calculated in some developed countries. However, there are currently no synthetic indicators of the 'Social Health' type in the Mediterranean that would group together approximately 15 variables such as drug use and suicide among young people, unemployment and health insurance, child poverty, fatal road accidents or violent offences; there are also no indices of 'real progress' or 'sustainable well-being'. This would certainly be a direction to be explored for the Mediterranean countries that have already adopted a common set of 130 indicators for sustainable development in 1999.

fine their social and economic policies: education and training, primary and secondary redistribution systems, and more precisely targeted social protection networks. Without this, the 'social contract' will certainly fail, bringing with it more migration to towns or abroad, or, in the south, a strengthening of the power of fundamentalist movements.

Box 5 Resilience of Mediterranean societies towards impoverishment

The impoverishment observed may lead to less social exclusion than in the north of Europe thanks to the presence of family solidarity networks that are still very powerful. Indeed, the family solidarity networks play a major role and confer a particular 'resilience' to Mediterranean societies.

Thus, in the Mediterranean, poverty is not experienced in loneliness. The proportion of poor persons who live alone is 3.9 per cent in Spain, 6.1 per cent in Italy and 10.5 per cent in Greece, compared with 18 per cent in the United Kingdom and 46 per cent in Denmark. The long-term unemployed are more integrated into social life and benefit from a stronger family solidarity.

This is probably inherited from a certain 'view' of the poor. In the Catholic and Muslim religion, unlike the Protestant one, the poor are considered more as victims than as persons to be blamed. However, this resilience could be affected by a growing pressure due to a possible increase in the ratio of dependents to workers.

Source: Reiffers, 2000

Health, food security and education

In the field of health, signs of degradation with regard to sustainable development can also be seen, even though there has been considerable progress in the SEMC since 1960. *Life expectancy at birth* has increased from 50 to more than 70 years in 2002 and *infant mortality* has been nearly halved in many countries. It has been a remarkable achievement in the context of high population growth.

With regard to *health facilities*, gaps of four to one persist between the four EU-Med and the other Mediterranean countries, for simple indicators such as the number of hospital beds (about eight per 1000 inhabitants compared with two) or the number of doctors per inhabitant. Many SEMC still have less than one doctor per 1000 inhabitants. The lowest health cover is in Morocco and some areas in Algeria.

Another worrying sign is the low level of *public health expenditure* in the SEMC, despite growing needs due to population growth. Public health expenditure was overall less than 5 per cent of GDP in 2002 and the per capita figure is actually falling in some countries (Algeria, Egypt). In Albania, Bosnia-Herzegovina, Morocco and Egypt, expenditure is less than 100 euros/per capita/year. On the other hand, *private health expenditure* has gone up considerably in most Mediterranean countries in the past ten years. In Lebanon there are record levels of spending (more than 8 per cent of GDP in 2002) and also in Algeria. There may be a risk of a slow-down in the progress achieved up to now, as a result of reductions in public health spending and the growing difficulties of access to the health system by poorer people. The return of diseases that had been suppressed (typhoid, cholera, the plague) could be the first signs.

In the very different demographic context of ageing, the NMC are having difficulty controlling public health expenditure, which accounts for a growing proportion of GDP (from 5 per cent to 7 per cent of GDP in 2002). For example, the cost per capita reached US\$2000 per year in France in 2002. The emergence of new illnesses linked to changes in lifestyles (sedentary) and food habits, for example obesity and cardio-vascular disease, is a public health concern. Some cancer specialists are becoming alarmed by the doubling of the death rate from cancer since 1945 and attribute it mainly to degradation of the environment. Air pollution may have been responsible for the death of 6500–9500 persons in France in 2002.¹² These concerns, which are also beginning to affect the SEMC, confirm the need to assess lifestyles and production methods, not only from an economic perspective but also in terms of health and environment.

Overall improvements in *food security*, for example average daily caloric input in the Mediterranean increasing to 3340 cal/day¹³ (a value close to that of the

OECD countries), masks many differences linked to poverty.

In Egypt, Algeria and Morocco, about 6 million people are undernourished, 3–7 per cent of the population. According to the FAO, in Turkey and in the East Adriatic countries there were 1.2 and 1.7 million undernourished people respectively in 2000. In most of the SEMC, between 5 and 20 per cent of children under five years of age still show clinical signs of malnutrition, even if infantile malnutrition has dropped considerably in the past 15 years. The share of food in total household consumption exceeded 40 per cent in Morocco and Egypt, 35 per cent in Tunisia, 25 per cent in Greece, while it was less than 15 per cent in France, Slovenia and Italy.¹⁴ In this context some fringes of the population are especially vulnerable to drought and to increases in the price of basic foodstuffs.

Access to *education* is one requirement for sustainable development. Here too, the SEMC have made considerable efforts to generalize school education at the primary level, within a context of high population growth and budgetary constraints. On the other hand, there are still many differences between countries at higher levels of education. In 2000, some countries had a rate of schooling at secondary level very much lower than the world average, for example Morocco (31 per cent) and Syria (39 per cent). This rate deteriorated considerably (by 16 per cent) between 1990 and 2000. At the higher education level the gap between countries with a high schooling level (more than 50 per cent in the four EU-Med countries) and others such as Albania, Algeria, Morocco and Syria (less than 15 per cent) has grown since the middle of the 1980s.

Public expenditure on education has increased significantly since 1960. This reached an average of US\$700 per capita in 2000, 5 per cent of Mediterranean GDP (varying in 2000 between 2.7 per cent in Libya and 7.3 per cent in Israel). The four EU-Med countries, the islands and Israel increased public spending on education per capita threefold between 1980 and 2000, and reached US\$1000 per capita in 2000 (current \$), while such spending remained, at best, stagnant in Albania and Morocco, or even decreased in Syria and Algeria. Although this indicator does not necessarily reflect the quality of teaching, there is a high risk of an increase in the gaps between countries. The education system in many SEMC is deteriorating (status and remuneration of teachers, staff, etc.) and it is often considered as not well adapted to the job market. According to the World Bank, even though the *illiteracy rate* of people above 15 years of age was halved in the SEMC between 1970 and 2000, from 60 to 30 per cent, the East Asia and Pacific region cut their illiteracy rate by more than four, from 45 to 10 per cent, at a lower cost per capita, showing a relatively greater efficiency.

Shortage of housing and basic facilities in many SEMC

Due to high population growth in the south and the east of the basin, changes in family lifestyles and migration to cities, a large part of the Mediterranean population remains excluded from decent accommodation. The shortage of accommodation is still high in Algeria (a shortage of 6.9 million dwellings), Morocco (5.9 million) and Egypt (9.8 million) (1997–1998 figures). Public efforts, as well as more and more private ones, are insufficient to deal with the growing needs (there is coverage of less than 60 per cent in some countries). Accommodation is often dilapidated because of bad maintenance and 'over-occupation'. Informal housing is continuing to develop in cities (see Chapter 4).

Households with modest incomes are hard hit by the accommodation crisis, since housing for this category is becoming scarce. Accommodation takes a growing part of family savings in the south and east (70 per cent in Tunisia). Although not as acute, a growing number of people in the four EU-Med countries are also experiencing problems with access to accommodation.

Basic facilities (drinking water, sanitation, waste collection, electricity) are often lacking in rural zones and in the unregulated urban housing areas of the SEMC. As many as 27 million Mediterranean people are still without adequate sanitation, 30 million lack access to drinking water and 16 million people have no electricity.

The condition of women

The difference of rights and conditions between men and women is a fundamental aspect of sustainable development.

During the past 40 years there has been undoubted progress in the condition of women, thanks to education and birth control. Women have increasingly important roles in *economic activity*. Everywhere in the northern Mediterranean countries, as well as in Turkey and in Israel, there are more than 66 economically active women for every 100 economically active men compared with fewer than 40 in 1960. In the other Mediterranean countries, the proportion of women in the working population has tended to rise too. However, in the Maghreb and Mashrek countries, this percentage remains lower than in other regions of the world. As the number of people on the job market increases, women become more vulnerable to *unemployment*. The differences between the unemployment rates for men and women are often high: by more than 17 percentage points in Egypt in 2001; in the four EU-Med countries the gap (between 2 and 8 points in 2002–2003) has not stopped rising since 1980. For example, in Spain, in 1980, the unemployment rate for women was 2 points higher than for men; the gap reached 7.7 points in 2003. Women, on average, are also less well paid than men, despite some progress. In

France salary gaps between men and women were 25 per cent in 2001. The gap was 36 per cent in 1950, but at this rate women will need another century to find equality. Women are also the most vulnerable within the poor, especially single women.

As far as *education* is concerned, while there has long been no gap between the schooling of girls and boys in the north, large differences remain in most of the SEMC. Despite considerable progress, in 2001–2002 there was still a difference of 13 points between the percentages of girls and boys in primary education in Morocco, more than 8 points in Algeria and 6 points in Egypt. Concerning *literacy*, gaps between men and women can rapidly decrease: from 29 points in Syria in 1999 to no more than 8 points in 2002. In 2002 in Morocco only 38 per cent of female adults were illiterate compared with 61 per cent of the male adult population. Women still play a small role in *political institutions* in all Mediterranean countries. In the NMC, only 9–29 per cent of members of parliament are women (compared with an average of 25 per cent in the OECD countries and 35 per cent in northern Europe); in the SEMC only between 2 and 12 per cent are women; the east-Adriatic countries stand out with more than 15 per cent and Spain with 29 per cent.

Despite undeniable progress, the daily reality for a great number of women belonging to poor classes is still that they are very vulnerable; their rights are often restrained by a public opinion divided by unchanged old traditions or by the more or less radical views of religion. Reforms that would improve their status are found in legal texts that are sometimes ambiguous and slow to enter into force.

Some indicators of social changes

This brief overview of social changes shows real progress in terms of coverage of basic social needs and facilities, resulting from proactive public policies. This is confirmed by an analysis of the change in some millennium follow-up indicators (Box 6). However, many social differences persist between the Mediterranean countries and within countries.

Box 6 The Mediterranean Region and the Millennium Development Goals

The Millennium Development Goals were adopted in September 2000 by the 191 UN Member States. They set targets to 2015 compared with 1990 for improving standards of living. Analysing some of these indicators provides information about strong and weak points in the Mediterranean.

Poverty: There is much less extreme poverty (the percentage of the population living on less than \$1 a day) in the Mediterranean (from 0 to 3 per cent depending on the country) than in Asia (16 per cent) and sub-Saharan Africa (45 per cent), but

the percentages shoot up as soon as the \$2-a-day threshold is passed (44 per cent of the Egyptians, comparable with southeast Asia). Poverty fell in Tunisia and Turkey but rose in Egypt and Morocco, whereas several regions in Asia have already reached the target of reducing poverty by half between now and 2015.

Youth unemployment: The rate (14.6 per cent) is higher than the average in developed regions. It has risen so much since 1990 that it has now reached record levels in the SEMC (29 per cent on average in northern Africa compared with 16 and 17 per cent in Latin America and southeast Asia respectively).

Primary education and literacy: The net percentages of primary enrolment are good and not far from those in southeast Asia (91 per cent). The country farthest from the target (100 per cent by 2015) is Serbia-Montenegro (75 per cent). The literacy rate among young adults (15–24 years old), despite progress in all developing and transition countries, is still often less than in southeast Asia and Latin America. It is low in Morocco and Egypt, where only 70 young people in 100 are literate.

Gender equality and the empowerment of women: The region still suffers an appreciable lag. The percentage of women in salaried, non-agricultural employment in the SEMC is between 15 and 30 per cent, depending on the country, compared with 40–50 per cent in the countries of Europe, Latin America and southeast Asia. The ratio between the number of girls and boys enrolled in primary and secondary education shows that the differences have been reduced considerably in the SEMC since 1990, although in Turkey and Morocco significant disparities remain (ratios of 85 and 84 per cent respectively). Ratios for the other countries are greater than 92 per cent, and in 2000 Tunisia had already reached the 2015 target of equality.

Child mortality: Bosnia-Herzegovina, Serbia-Montenegro, Albania, Libya, Tunisia, Syria, Lebanon and the Palestinian Territories register child mortality rates between those of emerging regions and those of developed regions (between 15 and 28 per 1000). Rates in Turkey, Egypt, Algeria and Morocco, despite sharp falls, are still high and comparable with those in Asia and Latin America (between 28 and 39 per 1000). The countries that come closest to the target of reducing infant mortality by two-thirds by 2015 are Libya, Serbia-Montenegro, Tunisia and Egypt.

Maternal health: Maternal mortality rates in the Mediterranean countries have fallen considerably but remain high (more than 120 per 100,000 live births) in Maghreb, Lebanon and Syria, which is comparable to the Latin American and southeast Asian rates. The brake on progress for reaching the target of a 75 per cent reduction in maternal mortality by 2015 is due mainly to the lack of access to health services in rural areas and social support for unwanted pregnancies.

CO₂ emissions: Annual CO₂ emissions per capita in the Mediterranean were close to the world average in 1990 (4.8 tonnes per year compared with 4.3) but considerably greater by 2000 (5.4 tonnes compared with 4), which is a sign of development that is not husbanding natural resources. Emission levels vary markedly from one country to another, ranging in 2000 from 0.9 tonnes per capita in Albania to 10.9 in Libya. Libya, the EU Member States (including those that joined in 2004) and Israel are the largest emitters, while the Maghreb countries (excluding Libya) and Egypt emit relatively little (between 3.1 and 1.4 tonnes per capita). Average per capita emissions in the Mediterranean in 2000 were nearly half those in the EU-15 (5.4 tonnes per year compared with 9) and almost four times less than in the US (21 tonnes).

Access to drinking water: By 2000 the percentage of people with sustainable access to an improved water source was greater than 80 per cent in most Mediterranean countries. The overall situation is nearly on a par with that in southeast Asia and a little less good than that in Latin America. However Morocco and Syria clearly stand out by having wide disparities in access to drinking water between their urban (92–98 per cent) and rural areas (54–56 per cent). Rural access rates in 2000 in these countries remained greater than those of sub-Saharan Africa (45 per cent) but are much lower than the average in southeast Asia and Latin America (about 70 per cent). By 2000 only Egypt had reached the 2015 objective of halving the percentage of the population without access to drinking water.

Access to sanitation: The percentage of the population in 2000 with access to improved sanitation facilities (connection to a wastewater disposal system) was greater than 90 per cent for the countries with available data, except Morocco and Tunisia (68 and 84 per cent), which have nevertheless made progress since 1990 (58 and 76 per cent). These rates are markedly higher than in Latin America (75 per cent in 2002) and southeast Asia (61 per cent in 2002). Although access for urban dwellers in 2000 was nearly 100 per cent in all countries (except Morocco at 86 per cent), rural dwellers were at 44 per cent in Morocco, 62 per cent in Tunisia and 70 per cent in Turkey.

Official Development Assistance: ODA as a percentage of the Gross National Income (GNI) in 2003 was 0.41 per cent for France, 0.21 per cent for Greece, 0.17 per cent for Italy and 0.23 per cent for Spain (compared with 0.15 per cent for the United States). The rates tended to fall between 1990 and 2000 (0.6 per cent for France in 1990, 0.31 per cent for Italy and 0.21 per cent for the US). Although they tended to rise between 2000 and 2003, they still remained beneath the 0.7 per cent target of the Action Plan of the Johannesburg Summit and the Monterrey Conference. Total ODA contributed by the EU Member States and the US (the main donors to the SEMC) dropped a little if one compares the annual averages for 1991–1992 and 2001–2002 at constant 2001 prices and exchange rates, whereas ODA had increased perceptibly

between 1981–1982 and 1991–1992. Since 1990 the percentage of aid given by the US to the Mediterranean countries (the total net flow, in current dollars, of ODA and development aid) has tended to fall (from more than 40 per cent in 1990 to 15 per cent in 2002). In Euro-Mediterranean relationships the reverse trend is seen, with the percentage for the Mediterranean increasing from 8 per cent in 1990 to 13 per cent in 2001–2002.

Debt: Debt servicing as a percentage of exports of goods and services in the 1990s fell in Maghreb, Egypt and Syria but increased significantly in the eastern Adriatic countries, Turkey and Lebanon, where the rate in 2002 (51 per cent in Lebanon and 47 per cent in Turkey) was much higher than in Latin America, the region for which debt repayment as a percentage of trade is the highest (31 per cent in 2002). Servicing the debt in Morocco and Croatia (about one-quarter of their export income) is relatively costly compared with Tunisia or Egypt (10 and 13 per cent), which is comparable to East Asia (12 per cent).

Internet access: Progress since 1995 has been fairly strong. Half of the population in Monaco uses the Internet, with about 33 per cent in Slovenia, Italy, France, Malta and Israel and about 12–18 per cent in Lebanon, Greece, Spain and Croatia. Tunisia, Turkey and Serbia-Montenegro (between 5 and 7 per cent) have a comparable level to southeast Asia (4.6 per cent) but less than Latin America (8.2 per cent). Less than 3 per cent of the population in Albania, Algeria, Morocco, Bosnia-Herzegovina and Egypt uses the Internet.

Territorial disparities and concentration on coastal zones

The question of unsustainable development is also raised by the extreme disparities between territories within the Mediterranean countries. The wealth and populations of a country are concentrated more and more in limited areas such as *coastal areas* or large cities. This increases vulnerability to natural hazards. The earthquakes in the region of Izmit in Turkey, in 2001, highlighted how hazardous it can be to choose a way of development that concentrates more than 50 per cent of a country's economic activity in just a few areas. It accentuates the pressure on the most valuable natural resources (built-up coasts, loss of agricultural land and valuable natural habitats, pollution and degradation of ecosystems and coastal landscapes) and the difficulty of managing them. On the other hand, *rural areas*, with a reduction in population and economic activity, are faced by other types of development problems (poverty, difficult access to basic services, desertification, environmental degradation, forest fires, degradation of agrarian landscapes, etc.), but which have the same cause: the concentration of development in specific areas.

'*Coastal overdevelopment*' ('*littoralisation*' in French), the trend to concentrate activities and people along the coast, is a worldwide phenomenon that is particularly noticeable in the Mediterranean. The process was accentuated in the 20th century with: the building of infrastructures, mosquito control (Languedoc), improvement works in plains, drainage of wetlands (Marais pontins), industrial investment (refineries, petro-chemicals, cement, iron and steel industries) focused on a few coastal areas (Barcelona, Valence, Fos-Marseilles, Genoa, Tarente, Venice, Izmir Bay, coast of Alexandria, and ports in the Maghreb countries) and benefited for a long time from the full support of public authorities. And the tourism boom was solely concentrated on the seaside.

At the same time the hinterland, often mountainous, entered a crisis: the hardship of life in rural areas, which had been abandoned or had inadequate aid and was suffering competition to the advantage of more favoured regions, and the lack of dynamism in the rural economy reinforced the attraction of cities and coastal zones, whether well-founded or not.

All this has generated strong internal disparities within countries to the detriment of inland areas and a coastal overdevelopment that has affected the whole region and resulted in major changes across the catchment areas (Figure 15).

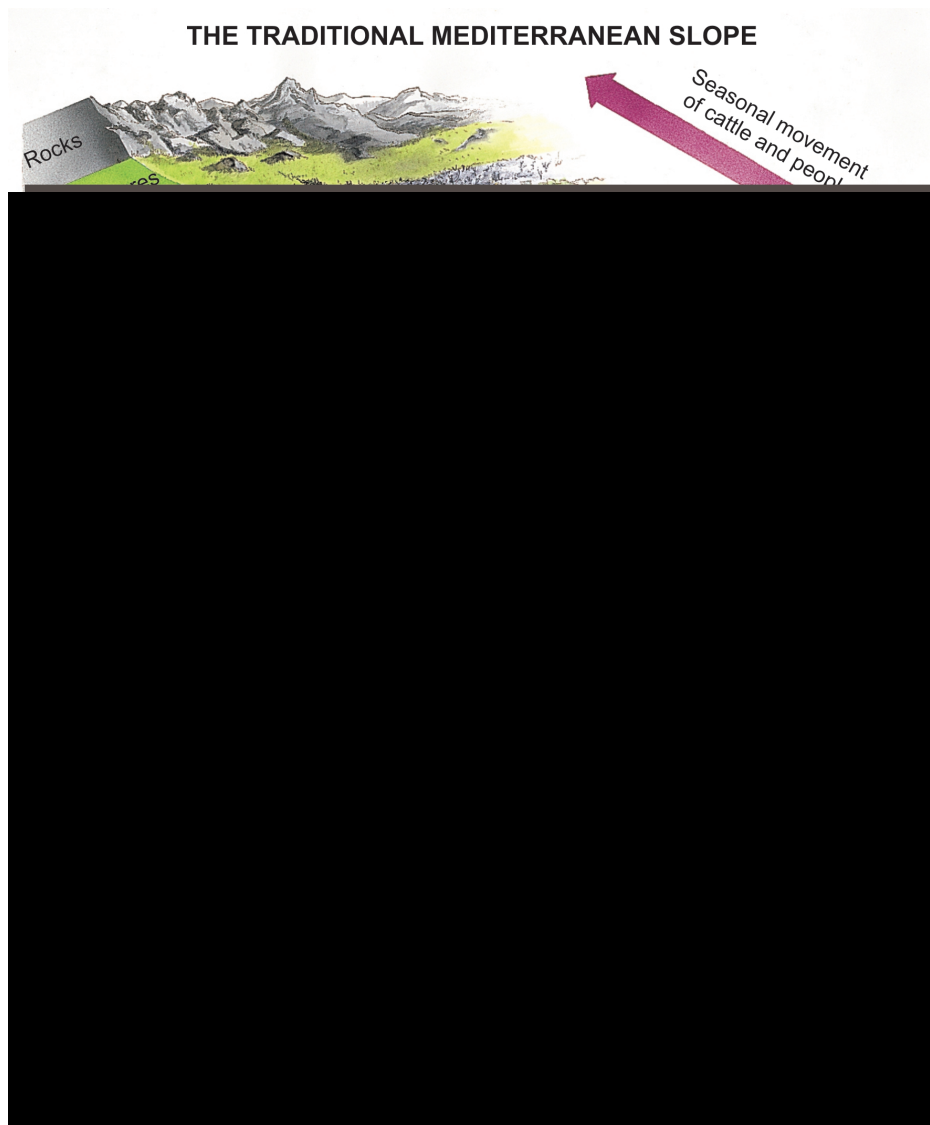
The magnitude of changes over the past century in the northwest of the basin are illustrated in Figure 16. The trend can be assessed at various levels. For example, the population density in the coastal regions is almost three times the average for the countries (see Statistical Annex). Nevertheless, the trend can best be seen very near the coast (a few km). It can also be seen roughly for the whole basin in Figure 17, where the lights of the main agglomerations exactly follow the coast. Part 2 will return to the impact of this phenomenon in terms of sustainable development, which is highly differentiated between the coastal zones and the hinterland.

The high cost of environmental degradation

The poverty that characterizes many rural and peri-urban areas of developing countries, coastal over-development and urbanization where they have been poorly controlled, and a resource-hungry pattern of economic development can together explain the extent of environmental degradation, in the north as well as in the south and east.

Assessment of the costs of environmental degradation provides an estimate of the value of environmental assets and services lost by excessive pressures. The availability of data is poor and assessments have to go through three complex phases: (i) identification of the main pressures on the environment; (ii) their link with

Figure 15 The coastal over-development



Source: *Plan Bleu*

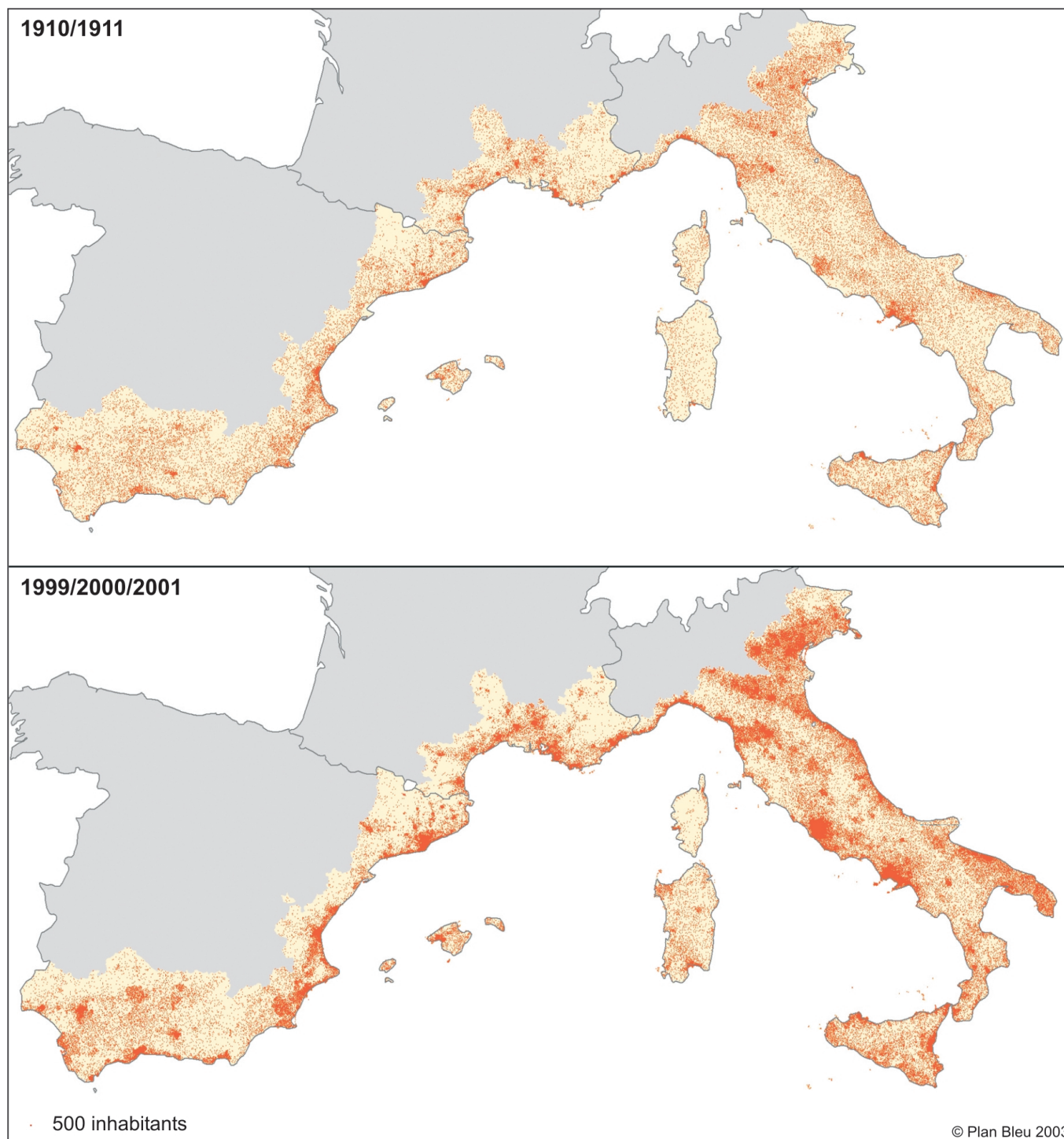
the impacts; and (iii) a monetary assessment of these impacts. This last step is particularly sensitive. The use of a natural asset (everything that can be obtained from it – forest timber, recreation, etc.), is relatively easy to value. However, this is not the same for the value of non-use, which is the value that an individual or a society attaches to the existence of the asset and the necessity of transmitting it to future generations (value of legacy or values of existence).

Despite all the limitations (methodological and ethical) of an *economic cost* assessment of degradation, an approximate calculation has been made in some Mediterranean countries (Table 2). For the major environmental variables (water, air, land, coastal zones, etc.)

it could reach 5 per cent of GDP in Algeria and 5.4 per cent in Egypt. Generally, these costs are paid for collectively. From a monetary point of view, the effects of the degradation of the living environment mainly affect poor people, who, deprived of fundamental rights such as access to healthy water, live in a bad or polluted environment.

The thematic chapters in Part 2 will show that other costs of degradation, which are also very high, can be assessed for the more developed countries of the northern shore, particularly those related to urban congestion and pollution, and increased vulnerability to risks (fires, floods, etc.).

Figure 16 Evolution of the population in the coastal zone cities of the Latin Arc, 1910/1911–1999/2000/2001 (according to the various censuses)



Source: INE, INSEE, ISTAT

Figure 17 The Mediterranean area by night



Source: NOAA (www.nqdc.noaa.gov)

Table 2 Average annual damage cost of environmental degradation in some Mediterranean countries (as a percentage of GDP)

	Algeria	Egypt	Lebanon	Morocco	Syria	Tunisia
	1999	1999	2000	2000	2001	1999
Air pollution	1	2.1	1.0	1.0	1.3	0.6
Lack of access to water supply and sanitation	0.8	1.0	1.1	1.2	0.9	0.6
Land degradation	1.2	1.2	0.6	0.4	1.0	0.5
Coastal zone degradation	0.6	0.3	0.7	0.5	0.1	0.3
Waste management	0.1	0.2	0.1	0.5	0.1	0.1
Subtotal	3.6	4.8	3.4	3.7	3.3	2.1
Global environment (CO ₂ emissions)	1.2	0.6	0.5	0.9	1.3	0.6
Total	4.8	5.4	3.9	4.6	4.6	2.7

Source: World Bank estimates, 2004

Section 2

Determining Factors of the Mediterranean Future

After this overview on the past trends and the most evident signs of unsustainable development, the future of the Mediterranean will be explored, with all its uncertainties and hazards, while assessing the capacity of the eco-region to confront these and adapt to them, or its particular vulnerability.

For exploring the future, a trend scenario is built. The 'baseline scenario' extrapolates the major trends and their possible effects to 2025, while taking account of some signs of growing change. It is a *realistic* scenario that does not pretend to predict the future (which is never predictable), but describes the frame within which the Mediterranean could evolve in the next 25 years if no deep change, or break, or surprise events, take place for changing the observed trends.¹⁵

As all scenarios do, the baseline scenario is founded on several assumptions. Assumptions need to be explicit, whether they be *general* (for example concerning population growth, or changes in the global economic context, or climate change) or more *sectoral* and *detailed* (on future energy demand, on growth in land and maritime transport, on tourism changes, etc.).

This section formulates the general assumptions of the baseline scenario concerning five major determinants of the Mediterranean future: impacts of climate change, population, globalization and regional integration, taking the environment and sustainable development into account in national policy making, and the constraints that burden economic development in the southern and eastern Mediterranean countries. All the general assumptions are summarized at the end of Part 1 (Table 5 p63), and the detailed sectoral assumptions on water, energy, transport, urban areas, rural areas and coastal areas, will be formulated in the thematic chapters of Part 2.

Climate change and its possible impacts

One of the upheavals that could affect the Mediterranean area is climate change. An increasing body of observations is confirming the perception of a warming world and other climate changes linked to increased emissions of greenhouse gases (such as CO₂) from human activities (energy, transport, agriculture, etc.). The Intergovernmental Panel on Climate Change (IPCC)¹⁶ states that during the 20th century, average global surface temperature has increased by 0.6°C and average sea level by 1–2 mm per year, while CO₂ concentration increased by 31 per cent between the pre-industrial period and 2000. The 1990s were undoubtedly the warmest decade of the last millennium in the northern hemisphere. The IPCC extreme global scenarios project global warming ranging from 1.4°C to 5.8°C, by 2100, an increase in average annual rainfall ranging from 5 to 20 per cent and a rise in sea level of between 9cm and 88cm, with some regional differences.

There is still uncertainty about the size and the speed of this warming and even more about its impacts on the planet during the 21st century. One major and additional uncertainty concerns the repercussions of *global* warming for *regions* such as the Mediterranean. The marine currents (horizontal and thermohaline circulation) might be altered at the global level and could in turn influence local climate towards a cooling trend.

A recent study¹⁷ cautiously concluded that, according to some current models used by climate experts, a hypothetical average global warming of 1°C is projected to have the following effects in the *Mediterranean*:

- A *warming* ranging from 0.7 to 1.6°C, depending on the area. A warming has already been recorded in temperate Europe where annual temperatures have been increasing by 0.1 to 0.4°C per decade. Warming would be highest in the Mediterranean Basin with a rise in summer temperature twice that in northern Europe: harsh winters would disappear by 2080 and hot summers would be more and more frequent.
- *Changes in rainfall*: in winter and spring, an increase in rainfall in the north and a decrease in the south, all with a very wide uncertainty range, from –2 per cent to +26 per cent; in summer, a decrease in rainfall in the north and the south; in autumn, a reduction in rainfall in the west and an increase in the east and centre. A decrease in total rainfall has already been observed during the 20th century in some Mediterranean areas and in North Africa.
- An increase in the frequency, intensity and duration of *extreme meteorological events* (heatwaves, summer drought, winter floods and mudslides in the north of the basin).

Since action by the international community may not be able to reduce greenhouse gas emissions enough to reverse the strong trend, *the baseline scenario assumes that climate change will lead to an intensification of extreme climatic events and a warming of less than 1°C by 2025.*

The *multiple impacts* of such changes to 2025 mainly concern:

- The *sea* with possible initial changes in temperature, salinity, content of organic matter, CO₂, nitrates, phosphates, etc., which could in turn affect the thermohaline circulation (linked to differences in temperature and salinity between various layers of sea water). Changes in salinity and temperature have already been observed, but the modelling of water exchange in the Mediterranean with other seas and with the atmosphere is particularly complex. Scientists are very prudent when assessing the risk of a rise in the Mediterranean sea level on this time horizon. However, locally, the subsidence of the south of Europe linked to post ice-age tectonic changes (5cm of subsidence by 2080) and that in some deltas (Rhône, Nile) would aggravate a hypothetical rise in sea level.
- *Rainfall pattern*: in the south, there is a risk of an increase in the occurrence of droughts; irrigation water requirements are likely to increase. In the north, an increase in torrential rainfall in autumn and spring would increase the frequency of mudslides and floods.
- *Biodiversity and marine and terrestrial ecosystems* may be altered. The risk of extinction of vulnerable species in the Mediterranean is considered by several studies to

be serious. Increased perturbation of ecosystems is also projected, for example those due to forest fires, droughts, parasitic attacks, invasive species and storms.

Climate change calls for preventive, curative and adaptive responses, which will be analysed in Part 2. With the United Nations Framework Convention on Climate Change and the Kyoto Protocol, the international community has tried, but not yet successfully, to achieve a global preventative response to reduce gas emissions. On the time scale of this report (to 2025), this response may have little impact on climate change. Nevertheless, the mechanisms set up through this process (clean development mechanisms) to differentiate efforts between countries at various stages of development may well be applicable in the Mediterranean eco-region.

Towards north–south demographic convergence

Demography is an essential component of the baseline scenario. The growth of the permanent and tourist population, their poorly controlled concentration in cities and on coastal zones is projected to continue. This, together with the widespread change in living and consumption patterns, could increase the pressures on the Mediterranean environment and territories.

Reduced fertility

One of the main determining factors for the Mediterranean countries in the decades to come (and one of the surprises compared with the demographic projections by the United Nations and *Plan Bleu 89*) is the spectacular fall in fertility¹⁸ in the SEMC (Figures 18 and 19). Fertility in these countries had already fallen from 5–7 children per woman in the 1970s to 2–4 children per woman in 2000, a steady fall of 2–3 per cent per year for 30 years. This fall in fertility is continuing in the developed countries of the northern shore, and is below the population renewal threshold of 2.1 children per woman, with values among the lowest in the world in Italy (1.28 children per woman after a fall of 2.8 per cent per year between 1970 and 1990) and in Spain (1.27 children per woman, with a fall of 4 per cent per year between 1970 and 1990).

The education of girls, transformations of lifestyles that accompany urbanization, family planning policies, the use of contraceptive methods, changes in the role of religion in society, the generalization of the model of smaller families, the influence of television and migration on mentality, all help to explain the extent of the fall in fertility in the SEMC. In the north, these same

factors, accentuated by the rise in individualism and the weakening of family bonds, led to a spectacular drop in fertility, which in the long term could put national identities in jeopardy.

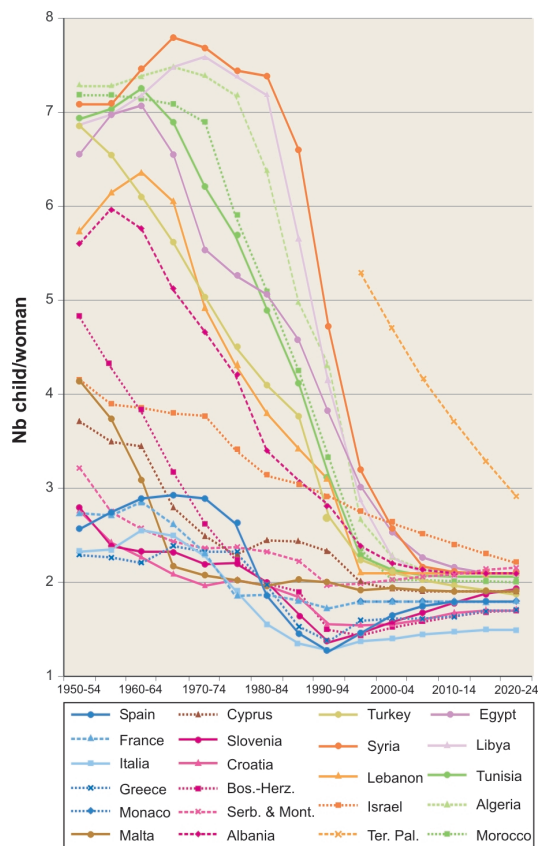
The baseline scenario assumes a continuation of this trend, with fertility rates around the Mediterranean converging, with a slight rise in the north.

This convergence is of vital importance for the future Mediterranean population because of its long-term effects: bringing closer together a model of society for both shores (size of households, way of life, etc.), re-balancing the active and inactive age brackets, and opportunities for exerting less pressure on the environment and the land.

By 2025, another 100 million inhabitants and 40 million households

If the demographic transition in the SEMC accelerates, with a fall in average population growth rate from 2.3 per cent in 1975–2000 to 1.3 per cent in 2000–2025), growth will nevertheless remain high until 2025 and beyond.

Figure 18 Fertility rate (per woman), N1, 1950–2025



Source: Attané and Courbage ; *Plan Bleu* 2001

Note: Convergence of north–south fertility rate: around two children per woman in most Mediterranean countries.

In the baseline scenario the population of the riparian countries is projected to be stable in the north and to increase by 40 per cent in the south and east. The Mediterranean countries will have 523 million inhabitants in 2025, 96 million more between 2000 and 2025, of which 31 million would be in the Mediterranean coastal regions. Most of this growth will be in the south and east where there will be 3.7 million more inhabitants each year between 2000 and 2025, in absolute terms almost as many as between 1970 and 2000. This population will remain concentrated on the coastal zones and in cities.

In the Mediterranean, as elsewhere, the family unit is undergoing major change. In practically all countries, the size of households is falling. On average, it fell from 4 people per household in 1985 to 3.7 in 2000 and could reach 3.3 by 2025 (Figure 20 and Statistical Annex). With urbanization and the reduction in fertility, relationships with children are changing and the role of women is evolving. Co-habitation of several generations, which is still frequent in the south and east, is gradually giving way to nuclear households or even one-parent households in the north. This decrease in household size is particularly strong in the NMC (northern Mediterranean countries) but also in Turkey (from 5.3 in 1985 to 4.2 in 2000 and projected to be only 3.3 in 2025), and Algeria (from 7 to 6.1 in 15 years, and to 4.9 in 2025). In 2025, the SEMC would have between 4 and 5 persons per household except in Libya (more than 7) and Israel (3.1), with, however, some internal differences between rural and urban areas.

In the baseline scenario, these trends towards smaller households size continue, with the average size possibly going down to 3.3 people in 2025.

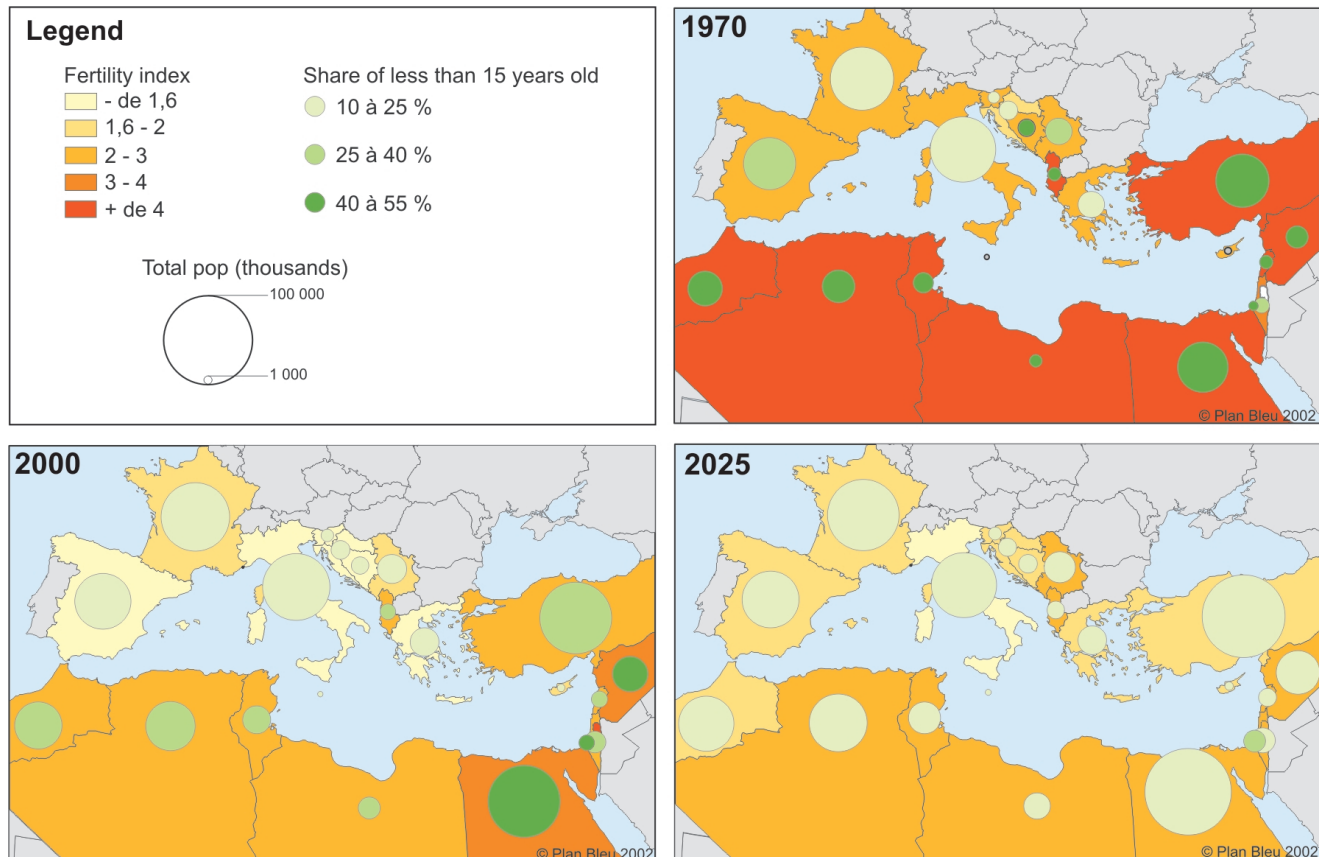
Ageing in the north; working-age population increasing by 3 million per year in the south and east

As fertility continued to fall and life expectancy to rise, it is the number of people aged 65 years or over that has increased the fastest in most Mediterranean countries since 1970. This ageing has been particularly noticeable in the north. Italy, for example, with fewer than 15 per cent of people aged under 15 and 18 per cent over 65 in 2000, is among the first countries in the world to be confronted with this new phenomenon (Figure 21 and Statistical Annex).

In the baseline scenario, ageing will be amplified in the north. People over 65 years of age currently represent 16 per cent of the total population; this could reach 22 per cent by 2025.

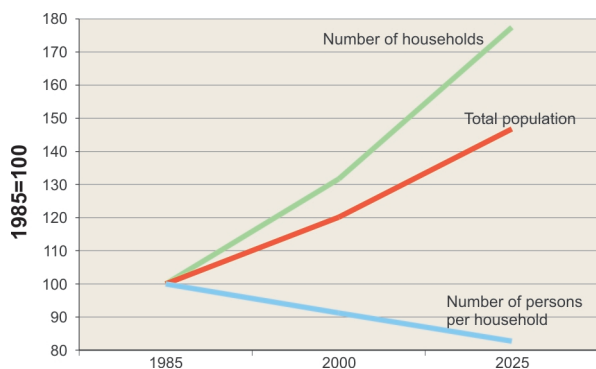
With the ageing population and the long-term widening of demographic deficit, the NMC are faced with new problems that could lead them to look again at their social ‘model’, particularly at pensions and the distribution of health costs. In France and Italy the number of active people per retired person will fall by

Figure 19 Convergence of demographic parameters



Source: Maps after an idea in *Méditerranée* no. 3.4, 2001; data from Attané and Courbage, *Plan Bleu* 2001.

Figure 20 Number and size of households, 1985–2025, all Mediterranean countries together (N1)



Source: UN-Habitat (2001) *Global Urban Observatory. Statistical Annexes to the Global Report on Human Settlements 2001* (www.unhabitat.org)

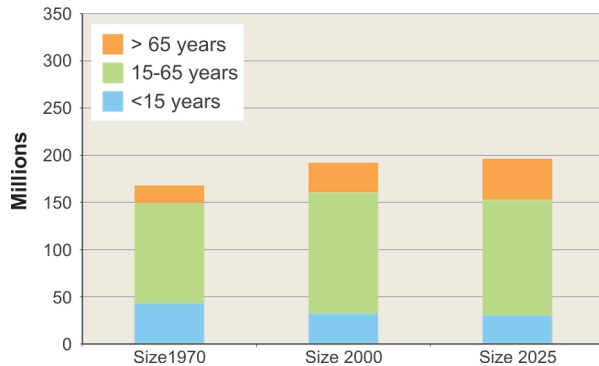
Note: Between 2000 and 2025, the number of households will grow faster (32 per cent) than the total population (20 per cent). This trend could be pursued in the future. There could be 40 million more households in the Mediterranean by 2025.

half in the next 50 years, which could put solidarity among generations at risk. Ageing will disrupt social and economic behaviour (economic growth, consumption, number and structure of households, savings, mobility, ageing of the workforce).

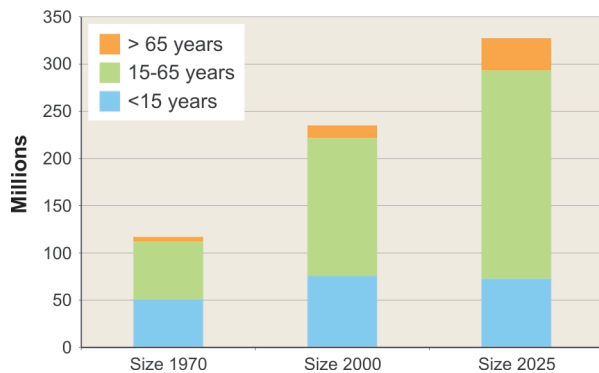
The SEMC are very different from the NMC having, still, a high proportion of people under the age of 15 (32 per cent in 2000 compared with 17 per cent in the north) but they are already at the start of an ageing process. The proportion of the population under 15 will probably continue to fall, to 22 per cent in 2025, while the number over 65 years will double, from 6 per cent of the total population in 2000 to more than 10 per cent in 2025. This could create a new opportunity for a rebalancing between the active and inactive (young and old) population. It would reduce the costs to the active population and result in a stabilization of the numbers to be educated. However, it presents a *major challenge for the SEMC in terms of employment*. The age distribution in 2000 brought a yearly average of 3.7 million into the working age bracket of the population (1.4 million in Turkey and Egypt). The demand for new jobs is therefore

Figure 21 Population age distribution, N1, 1970–2025

Northern shore countries



Southern and eastern countries



Source: *Plan Bleu*; Courbage and Attané, 2001

projected to increase before declining slowly after 2030. Between 2 and 4 million new entries into the labour market are expected per year in the SEMC. In total 55 million more net entries into the working age population are expected between 2005 and 2020 and 24 million more between 2020 and 2030 (Figure 22). Between 2000 and 2020 alone, if the activity rate¹⁹ and employment rate²⁰ remain unchanged, 34 million jobs would need to be created within 20 years.

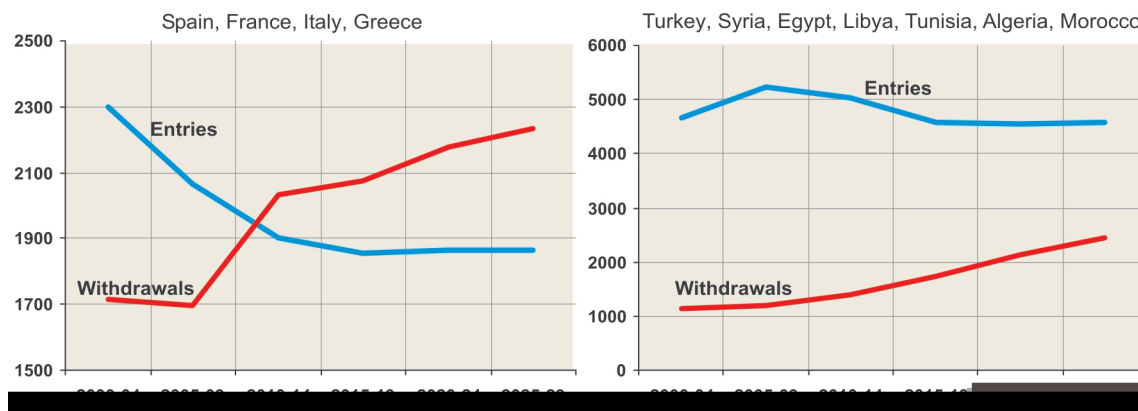
Conversely, by 2010, the NMC will have more people coming out the age bracket of the working population (2.3 million) than entering it (2.2 million). The deficit will be more than 300,000 from 2020–2024. Time differences will be seen, however, between countries: the Italian job market will be in deficit before 2010 while France will only lack active people after 2020.

Greater urban populations

To the phenomenon of population concentrations on the coast can be added that of urban development, which has been very rapid in the Mediterranean. During the last 30 years, most population growth has been in cities: of 143 million additional inhabitants in Mediterranean countries between 1970 and 2000, 84 per cent, or 120 million, were in towns.

In all Mediterranean countries together (N1), the urban population (living in towns of more than 10,000 inhabitants) increased from 153 million in 1970 to 273 million in 2000, an increase of 1.9 per cent per year, which represents a doubling in 30 years, or 4 million more town-dwellers per year. More than 80 per cent of this urban growth is in the south and east where urban growth has been 3.6 per cent per year on average since

Figure 22 Net entries and withdrawals of the 20–64 year-old bracket (in 1000 inhabitants)



Source: *Plan Bleu*; Courbage and Attané, 2001

Note: Entries: 1/5 of the 20–24 year olds.

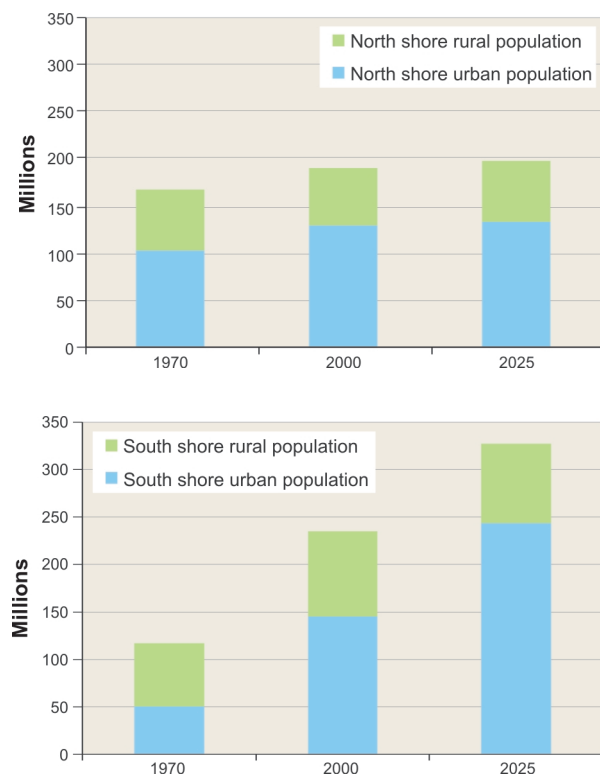
Withdrawals: 1/5 of the 60–64 year olds.

1970, and could go beyond 4 per cent per year in many countries (Libya, Syria, Turkey). The south and east Mediterranean is urbanizing more rapidly than the rest of the world (3.6 per cent per year compared with 2.5 per cent). Urbanization has been faster than *Plan Bleu 89* had projected; for example there were about 43 million urban-dwellers in Egypt and the same number in Turkey in 2000, which was far beyond the ranges of all the 1989 scenarios.

All the Mediterranean countries have registered a growth in *urbanization rates*. The average on the northern shore increased from 62 to 67 per cent between 1970 and 2000, and from 43 to 62 per cent in the SEMC. For all Mediterranean countries, urbanization increased on average from 54 to 64 per cent between 1970 and 2000.

This strong trend towards urbanization is projected to continue. Projections of urban population, obtained by extrapolating past trends country by country, show that the *total urban population* in the Mediterranean (273 million in 2000), could reach 378 million by 2025. Again, most of this growth will be in the SEMC where there will be an average of 3.9 million more urban-dwellers per year (2.08 per cent per year, above the annual average rate of total population growth in these countries).

Figure 23 Urban and rural populations in the Mediterranean countries, N1, 1970–2025



Source: *Plan Bleu*; Courbage and Attané, 2001

At this rate, there will be a total upheaval in lifestyles of people in the SEMC since, in only 50 years, what were essentially rural countries (with an average urbanization of 40 per cent in 1970) will become urban ones (74 per cent by 2025).

In *coastal regions*, the urbanization process ends in over-development. The urban population of coastal regions may increase by 33 million between 2000 and 2025, of which 30 million would be in the SEMC (see Statistical Annex).

To summarize, the determining population factors for the baseline scenario show a demographic transition that is accelerating in the south, slightly reducing the needs for education, but resulting in a high demand for employment. In absolute terms, population growth remains high and its impacts on the environment are likely to become more accentuated. The north is faced with an ageing phenomenon, and even a deficit in its working population. Concentration of population in cities and on the coasts is accentuated.

The Mediterranean between globalization and regional integration

The region's future is part of an international geo-political and economic context that, since *Plan Bleu 89*, has been profoundly changed by globalization and the creation of major regional centres. In this context, the Mediterranean's future is ever more linked to that of the European Union, which is gradually enlarging over the entire northern shore and developing cooperation with the south and east through increasingly intensive relationships.

Globalization and major regional economic poles

The worldwide geo-political context has been overturned with the end of the 'East–West' poles and the boom in globalization. Since the collapse of the USSR, the US is now without a major rival and has assumed a hegemonic role in the world. Its model of society – democratic functioning of institutions, respect of individual freedom, economic liberalism and a consumer society – is being disseminated all over the planet. There is a vast movement towards deregulation and *liberalization* aimed at strengthening the functioning of markets everywhere. The international financial organizations (World Bank, IMF) and trade organizations (WTO) disseminate the principles of a 'healthy economy',²¹ which have inspired the structural adjustment recommendations to transition and developing countries. In many cases, welfare states that have tried to find a way of reconciling socialism, planning and market liberalization, are being challenged. 'Healthy economy' principles are, however, difficult to apply and do not always meet with the expected success. They are being debated even in the

Bretton Woods institutions and pose problems for the pattern of development and, *a fortiori*, sustainable development.

These influences, combined with major *technological and scientific progress* in the fields of computer science, communication and telecommunication, have contributed to a process of globalization that is particularly active in financial markets. In globalizing economies, enterprises that compete with one another are no longer subject to fragmentation of markets and their strategies can become worldwide. The new trans-national corporations are adopting strategies that are adapted to the global functioning of finance, with less and less attention being paid to national contexts.

In the baseline scenario globalization continues with an increasing influence on the market economy and information technology. Global production and trade grows.

But with globalization we also see a *polarization* of the economy and greater competition between three major

poles, each of which is trying to expand its sphere of economic and geo-political influence: the Americas, Europe and Asia, bolstered by an emerging China.

The *European pole* (in the broad sense, including the Mediterranean) accounts for 28 per cent of world GDP and about 30 per cent of trade (Box 7). At the core of this pole, the European Union plays a structural and strategic role through trade in goods and services, circulation of capital and regulation policies (cohesion, solidarity and agriculture). Through its success, it is showing a possible way of positioning itself in globalization through a regional type of path.

Within this pole, the *Mediterranean* (all countries together) has witnessed a fall in its ranking in the world economy: about 13 per cent of world GDP and 14 per cent of external trade in goods and services (Table 3). The four EU-Med countries contribute the lion's share of this percentage since they account for 11–12 per cent of world GDP and trade, with the rest of the Mediterranean countries accounting for only 2 per cent.

Box 7 The Euro-Mediterranean pole in two world economy scenarios to 2050

In a first trend scenario, called '**Chronicle of a predicted decline**', the European pole loses economic weight to profit Asia, while the American pole retains its place. Such a decline would essentially be due to demographic change (a fall in fertility and restrictive migration policy in the EU) and to the absence of EU political will to co-develop with its southern and eastern shores. The EU enlargement to the east is not sufficient to guarantee parity with the US.

An alternative scenario, called '**Europe-Russia-Mediterranean**' is based on the assumption that the EU undertakes a voluntary integrated development policy (economic, tech-

nical and political) with the south and east of the Mediterranean and with Russia. In this scenario, the EU launches a technical cooperation programme in order to develop confidence and accelerate reforms in the southern and eastern Mediterranean economies, resulting in improvements in productivity. At the same time, the EU energizes its demography (increases its labour force) by a policy to increase the birth rate and a more open immigration policy towards its neighbours. In this scenario, the wider European pole achieves an increased weight in the world economy compared with NAFTA and the Asian pole. The world remains tri-polar.

Share of the three major poles in the world economy in 2000, and two scenarios for 2050 (in % of the world total)

	World GDP			World exports of goods			World imports of goods		
	2050			2050			2050		
	2000	Trend scenario	Alternative scenario	2000	Trend scenario	Alternative scenario	2000	Trend scenario	Alternative scenario
Europe-Russia-Mediterranean pole	28	20	32	30	24	47	29	25	48
American pole (NAFTA, MERCOSUR)	31	31	26	19	17	12	32	37	25
Asia-Pacific pole (China, Japan-South Korea, South-Asia, ASEAN countries)	35	45	39	41	51	29	32	35	21

Source: IFRI, 2002

Note: GDP values in US\$90 ppp.

Trade excluding internal trade in each pole.

Table 3 The Mediterranean share in the world's economy, 1980–2002

	1980	1990	2002
GDP	14.0%	13.5%	13.0%
Exports	15.2%	15.5%	14.0%
Imports	16.5%	16.5%	13.9%
World GDP (thousand million US\$ 1995)	19,400	26,400	35,300

Source: World Bank, 2004

Note: Some countries are not included in 1980 and/or 1990 (east-Adriatic Countries, Palestinian Territories, Lebanon).

In *geo-strategic* terms, greater rapprochement between the EU and the Mediterranean would make it possible to strengthen a 'Euro-Mediterranean' pole and give it a better ranking in the world's economy. This is what emerges from a recent prospective study,²² dealing with the EU's place and role in the world up to 2050; it highlights two major risks for the future of Europe in the 21st century: a widening gap (economic, technological, cultural and military) between Europe and the US, and instability related to disparities in development with its neighbouring regions. Both risks rely on the same observations of demographic variables and technological progress: the EU is showing a certain technological tardiness and is gradually entering demographic 'hibernation'. In contrast, the southern and eastern Mediterranean countries have a tremendous labour force but do not have the material and human resources to absorb foreign technology. From this position, two extreme scenarios are envisaged (Box 7).

The following paragraphs analyse the intensity of the links and the level of political integration between the Mediterranean shores, and define the assumptions of the baseline scenario concerning the strategic rapprochement of the EU with its southern- and eastern-shore neighbours. This will enable us to discern whether the future is of an EU that is drawing closer to its 'neighbours' or moving further away from them.

Intensifying exchange between Europe and the south and east of the Mediterranean

The intensity of the exchange of goods and people between the Mediterranean countries and the EU is increasing the interdependence of their respective destinies, which are already linked by geographical proximity and a joint natural heritage. It should encourage rapprochement between the shores. According to the baseline scenario, how might these relationships evolve?

An intense intermixing of peoples: Long-standing and persistent migration between the SEMC and the EU

The Mediterranean identity has been forged through age-old periods of migration and intermixing. More recently, the period between 1950 and 1970 saw considerable migratory flows towards Europe and the Gulf countries to meet the need for predominantly unskilled manual labour. This work force came from the Maghreb countries and Turkey, and from Mashrek and Egypt. Since 1973, when the EU closed its borders, the large projects of the 1980s in the Gulf countries came to an end, and the first Gulf War occurred, migratory flows have taken other forms: families coming together, refugee flows, political asylum seekers and illegal immigration.

Despite the difficulty in measuring migration flows with reliable statistics, it is estimated that 10 million foreigners, 5 million of whom are from other Mediterranean countries, are living in the Mediterranean countries. Foreign immigrants of Mediterranean origin accounted on average for 4 per cent of the total population in the Mediterranean countries, without counting people who have been naturalized, who are the descendants of immigrants, or who are illegal immigrants (Figure 24).

Historical links (colonization, political influence, language) are a deciding factor in the choice of emigrant destinations: Turks go mainly to Germany, the people of the Maghreb go to France, Albanians go to Italy or Greece and Egyptians go to Libya or the Gulf countries.

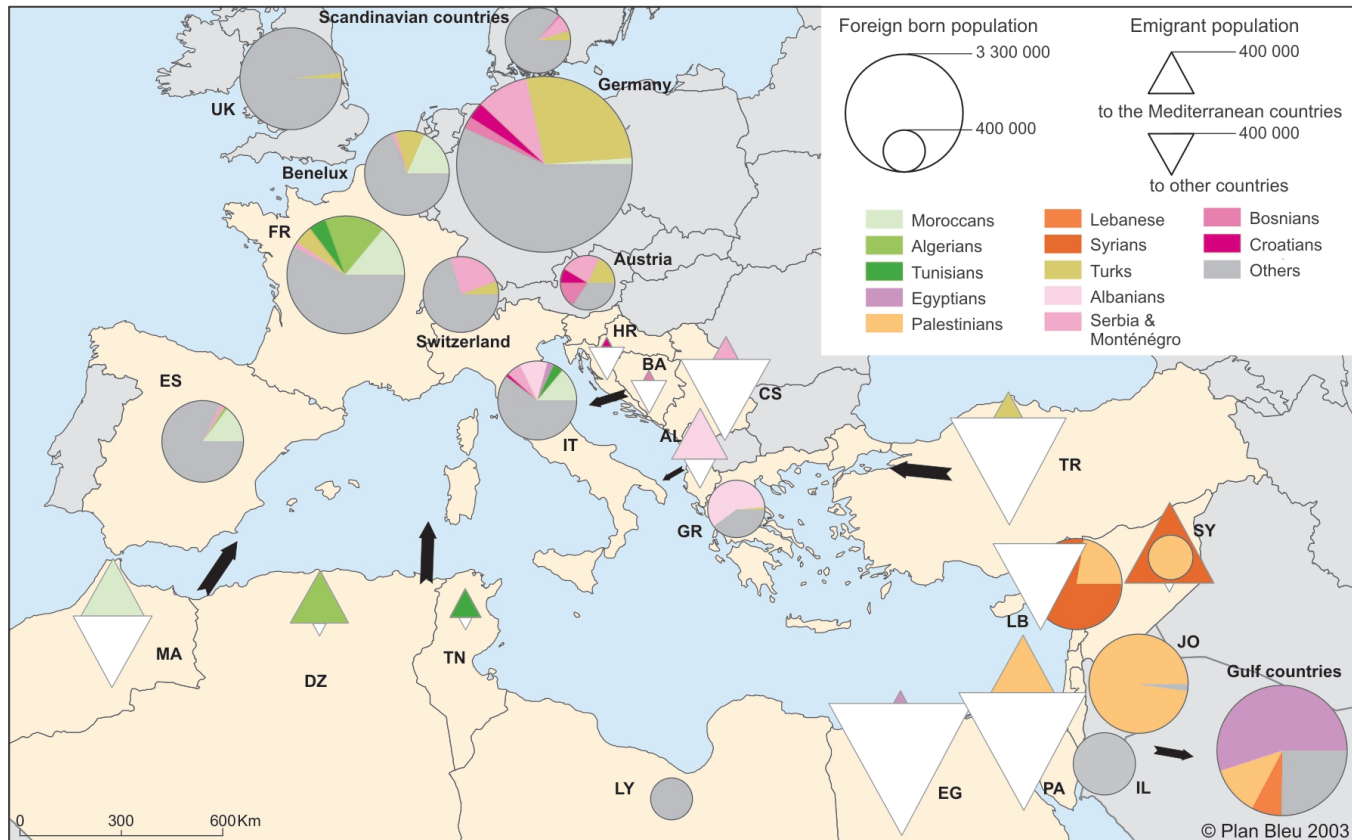
The 'fortress' EU strategy is faced by the difficulty of monitoring borders and coordinating the operations of the various countries. Illegal migratory flows continue to grow, maintaining criminal organizations that endanger the migrants' most basic human rights (Box 8).

Box 8 Illegal immigration to the EU

According to estimates, between 400,000 and 500,000 illegal immigrants enter the European Union each year where they have unofficial employment. Requests for official recognition help to measure the extent of this immigration: in France 300,000 requests were recorded in 1999; in Spain, 400,000 in 2000; in Italy, nearly 1 million between 1987 and 2000; in Greece 450,000 in 2000. Despite these various recognitions, there are between 3 and 4 million illegal migrants in the EU.

The Mediterranean Basin contains the main routes for clandestine immigration into western Europe. Highly lucrative illegal networks charge several thousand euros per transfer, often in dramatic conditions for the illegal migrants. The number of people interrogated per day on the southern coast of Spain and the Adriatic coast in Italy, and the number of victims found drowned in the Straits of Gibraltar, only reveal part of the true scale of this phenomenon.

Figure 24 Foreign and Mediterranean emigrant peoples



Source: Plan Bleu, 2003, compilation from Eurostat New Cronos (<http://epp.eurostat.cec.eu.int>)

Note: In the four EU-Med countries, foreigners of Mediterranean origin are between 3 and 7 per cent of the total population (7 per cent in Greece). If the naturalized populations or descendants of migrants are taken into account, the proportions are higher: in France, there are 1.3 million foreigners from the Mediterranean (2.2 per cent of the total population) but also 5.1 million descendants of Mediterranean migrants. Lebanon, a country of great diaspora, is home to 500,000 Syrians and 430,000 Palestinians. Libya has 410,000 foreigners, 7 per cent of its total population. During the past decade, Israel has welcomed and naturalized 900,000 foreigners (15 per cent of its total population) from the ex-Soviet Union and Ethiopia.

The baseline scenario assumes that the migratory policies of the EU countries remain very restrictive, although monitoring illegal immigration remains problematic. In future, migratory flows from all over the world (legal or otherwise), encouraged by globalization, are most unlikely to dry up. The propensity in the SEMC to emigrate could remain high because of the gap between the number of jobs created and the number of people entering the job market.

These past and future migratory flows are therefore expected to strengthen the economic, social and cultural interdependency between Mediterranean countries. Migrants provide manpower and income transfers between countries.

With migrants, there is also a transfer of knowledge and learning, often seen as a loss of human capital (brain-drain) when it is not followed by a return to the source country. Approximately 250,000 graduates have left the Maghreb since Independence; during the year 1996–1997, 1200 assistant professors and professors left Algeria, mainly for Canada, the US and Europe. About 7.5

per cent of graduates from Egypt live in OECD countries. From the macro-economic point of view, there is the question of ‘return on investment’ for the long years of study needed to train skilled labour, which then benefits other countries that can offer more attractive salaries.²³

Moreover, migrants can prove to be potential vectors of rapprochement and change in both their home and their adopted societies because their outlooks are enriched by different cultures. For example their influence on the rapid fall in fertility rates in Morocco has been demonstrated.²⁴ Migrant flows can also introduce new lifestyles and consumption patterns in their home countries.

By 2025, an additional 178 million international tourists

The intermixing of peoples and the interdependency between Mediterranean countries is also strengthened by the development of tourism, a key economic sector. The Mediterranean remains the first destination for

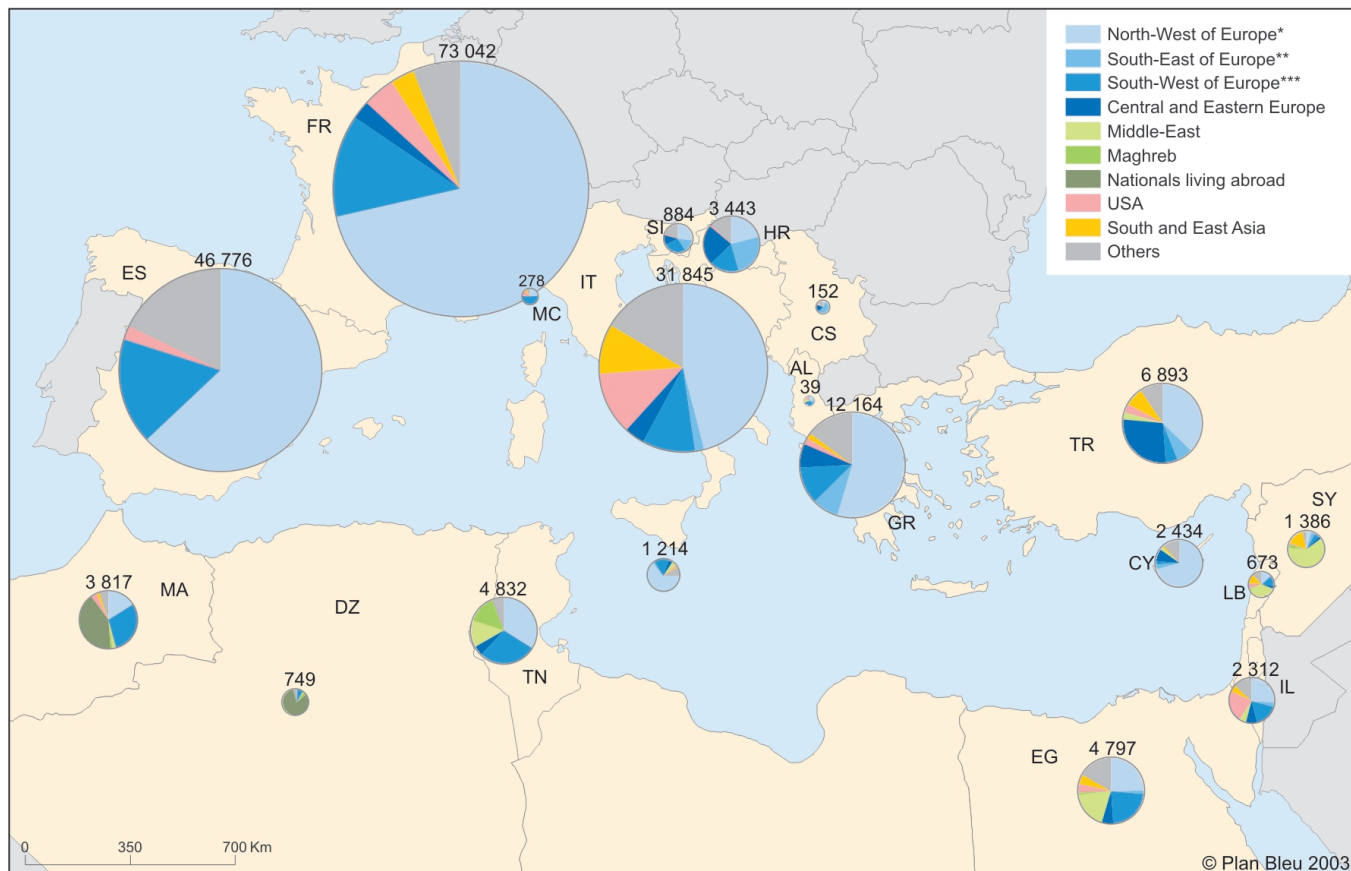
European tourists; 85 per cent of the 218 million international tourists visiting Mediterranean countries each year are Europeans. A vast majority of Europeans make up the clientele in the NMC, as well as in Turkey, Tunisia, Egypt, Morocco and Israel. A less-known fact is that tourism in Syria and Lebanon is mostly Arabic (60 per cent and 37 per cent respectively). Many Tunisians travel to Libya and many Saudis and Libyans vacation in Egypt. Also worth noting is the importance of holidays taken by nationals residing abroad, accounting for 40 per cent of visits to Morocco and 81 per cent to Algeria. Mediterranean tourism thus remains mostly a Euro-Mediterranean affair, which creates economic interdependence and a vector of additional cultural exchange.

The sector has seen strong growth for several decades. In the Mediterranean-rim countries (N1) international tourist arrivals increased 3.7-fold between 1970 (58 million visits) and 2000 (more than 218 million visitors). These values are at the upper end of the ranges of the *Plan Bleu* 89 scenarios.

So much so that international visits to the Mediterranean countries (N1) in the baseline scenario will be roughly 396 million visitors by 2025, or 178 million additional visitors compared with the year 2000 (see Statistical Annex). The emergence of central and eastern Europe as a source of tourists to the Mediterranean countries change tourist flows in the basin. Some of the factors that may influence the future changes are the hard-to-predict behaviour of an ageing northern European population (the main source of tourists), the outcome of the Middle East conflicts and the future of international terrorism.

According to the World Tourism Organization's projections to 2010 and 2020, extrapolated to 2025, international tourist flows towards the Mediterranean should increase. Annual growth could be greater than 10 per cent in Libya and between 5 and 10 per cent in Croatia, Bosnia-Herzegovina, Serbia-Montenegro, Albania, Slovenia, Turkey, Syria, Lebanon and Egypt. Three of the four EU-Med countries (France, Italy and Spain) will still accommodate 65 per cent of the

Figure 25 Number and origin of international tourists in the Mediterranean countries, 1999 (in thousands)



Source: World Tourism Organization, 2001

- * North-west Europe: Belgium, Germany, Netherlands, Sweden, Switzerland, United Kingdom.
- ** South-east Europe: Albania, Bosnia-Herzegovina, Croatia, Cyprus, Greece, Slovenia, Turkey and Serbia-Montenegro.
- *** South-west Europe: France, Italy, Malta, Monaco and Spain.

international tourists to the Mediterranean (more than 75 per cent in 2000). By 2025 Turkey would become the fourth most visited country in the Mediterranean with 34 million international tourist arrivals, and Egypt the fifth with 24 million.

In addition there are *domestic tourists*, the numbers of which will grow with the SEMC's changing demographics, extended life expectancy and rise in living standards. *Plan Bleu* has estimated the additional flows of domestic tourists between now and 2025 in the countries and coastal regions.²⁵

The baseline scenario thus projects a considerable development of tourism with its parade of economic, social and cultural exchanges. By 2025 the Mediterranean countries will accommodate an additional 273 million domestic and international tourists (a total of 637 million), of which an additional 136 million will be in the coastal regions (Figure 26 and Statistical Annex). The possible opportunities and effects of such growth will be analysed in Chapter 6 on coastal areas.

The intensification of trade and financial exchanges

Trade in goods

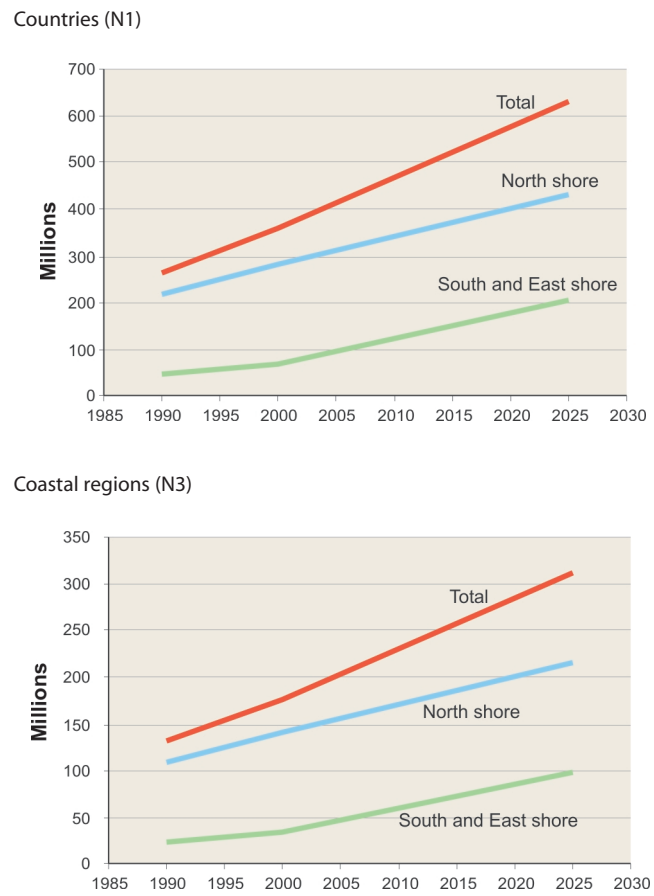
If the intermingling of peoples brings the destinies of the two shores of the Mediterranean closer together, their economies are also intertwined with a certain asymmetry in favour of the EU. In 2002 the EU was the leading trading partner of the SEMC, accounting for about 50 per cent of their total trade compared with 43 per cent in 1990.

The Maghreb countries are the most integrated into the European area with Tunisia at 75 per cent, Morocco at 64 per cent and Algeria at 62 per cent. In contrast, the SEMC have accounted for less than 8 per cent of the EU's trade since 1990 (Box 9). Trade between the SEMC and the EU is *polarized* between three SEMC (Egypt, Israel and Turkey, together having 55 per cent of the SEMC share) and four EU countries (France, Greece, Italy and Spain, with roughly half of total EU/SEMC trade). Generally, SEMC have a trade deficit (except Algeria, Libya and Syria, who are oil exporting countries), with the world as well as with the EU.

With the exception of Israel and Turkey, and to a lesser extent, Tunisia, which are diversifying their industrial fabric, and export manufactured articles with a high capital-intensive content to the EU (vehicles in Turkey and telecommunication devices in Israel), the SEMC are experiencing *traditional specialization*. They focus on producing and exporting labour-intensive industrial products such as clothing and shoes, and energy products (Algeria, Syria, Egypt). They import mainly machinery and transport goods and manufactured products.

The imbalance of trade is also seen in *weak intra-SEMC trade*; it accounts for barely 5 per cent of their total trade (3

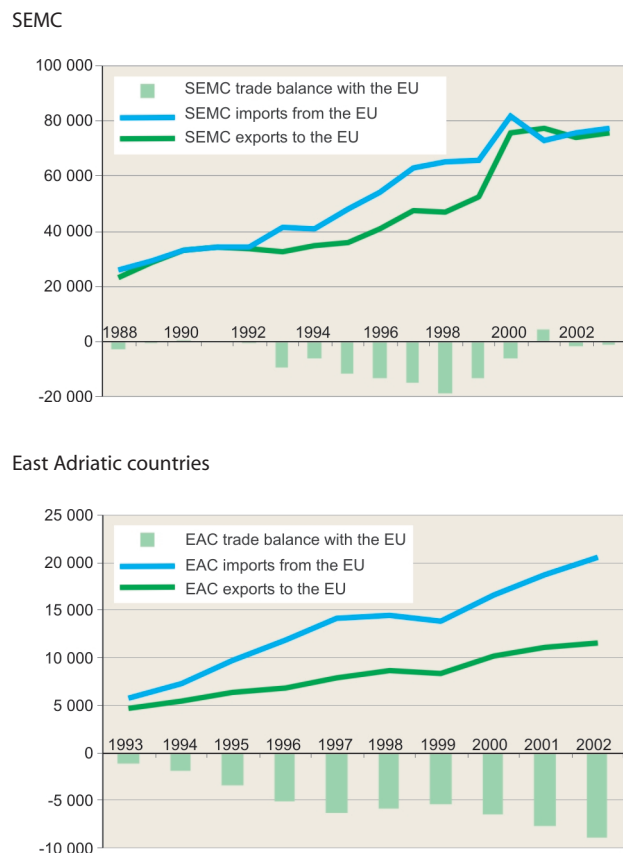
Figure 26 Tourist visits (domestic and international), N1, N3, trends and projections to 2025



Source: *Plan Bleu* estimates

per cent in 1990), even if it is increasing faster than trade with the EU (by 10 per cent per year on average), which may be evidence of the beginnings of some intra-SEMC specialization. Thus Turkey (accounting for nearly 40 per cent of intra-SEMC trade) imports raw materials and sends about three-quarters of its exports to the SEMC in the form of high value-added products (manufactured products, machines and transport materials).

The *eastern Adriatic countries* also enjoy growing but asymmetric trade with the EU. They are developing more than half (58 per cent) of their trade with the EU while they account for only 0.5 per cent of EU imports and 1.3 per cent of exports.²⁶ Association and stabilization agreements signed with the EU in 1999 grant these countries non-reciprocal preferential trade, allowing them to increase the EU's share of their exports between 1995 and 2002 from 57 to 60 per cent. All have trade deficits, especially with the EU (50–60 per cent of the total deficit).

Figure 27 SEMC and EAC trade in goods with the EU

Source: Eurostat (EU declared figures)

Trade in services

Although the value of trade in services in 2002 was lower than that of goods (about five times less for SEMC/EU trade), it has seen a higher rise since 1992. As with trade in goods, the EU is a major partner of the SEMC and exchanges between the two groups of countries have more than doubled in ten years. Almost all the SEMC and EAC record a surplus with the rest of the world and with the EU-15 (Israel being a notable exception).

With the prospect of a Euro-Mediterranean free trade zone (objective date: 2010), the baseline scenario is therefore one of increased trade in goods and services in the Mediterranean with increasing polarization between the EU and the SEMC and eastern Adriatic countries.

Exchange of capital:²⁷ Official development assistance, direct foreign investments

Over the last decade the non-EU Med countries received total *net capital flows* (official and private) of an average of US\$16.8 thousand million (\$1995) a year, an increase on the two previous decades (US\$11 thousand million). But their relative share in all international financing fell (10 per cent between 1991 and 2000, compared with 17 per

cent between 1971 and 1980) to the benefit of southeast Asia and South America. With reference to GDP, net capital flows have also fallen, accounting for 3 per cent of their GDP over the last decade (compared with 6 per cent in the previous decade, see Statistical Annex).

Of these capital flows, the net *official* flows (essentially Official Development Assistance), although decreasing in the total flows over the past 30 years, have remained predominant (57 per cent of total flows). They are mostly in the form of increasing contributions from the EU, in particular the European Commission and are highly polarized. Nearly 85 per cent of these contributions are still composed of bilateral funds. Between 1991 and 2000, some 60 per cent of the official contributions came from just five countries (the US 32 per cent, France 9 per cent, Germany 8 per cent, Italy and Japan 6 per cent each). More than 90 per cent of the net official American contribution focused on three countries (Egypt, Israel and Turkey). EU-sourced aid, with better geographical distribution, has recently been redirected towards the rebuilding of conflict zones (the eastern Adriatic countries and the Palestinian Territories) and the countries joining the EU in 2004 (Malta, Cyprus and Slovenia).

At the same time, the percentage of net *private* flows – basically foreign direct investments (FDI) and portfolio investments – in total contributions increased (from an average of 28 per cent between 1981 and 1990 to 43 per cent between 1991 and 2000). Excluding the four EU-Med countries, the Mediterranean is nevertheless characterized by a low capacity to attract FDI. It attracts barely 1.3 per cent of the world's total FDI and little more than 5 per cent of FDI destined for developing countries (Table 4).

Table 4 FDI in the Mediterranean countries (as a percentage of total world FDI)

	Average 1991–96 (%)	Average 1997–2002 (%)
Four EU-Med countries	14.2	10.2
Islands	0.1	0.1
EAC	0.2	0.3
SEMC	1.3	0.9
- of which Israel	0.3	0.3
Total of world FDI (million \$)	254,326	852,499

Source: UNCTAD, Report on Investment, 2003, participation in enterprise capital is considered as FDI

Note: In absolute value the total of FDI in the SEMC has certainly increased (from less than US\$3 thousand million in the early 1990s to nearly US\$9 thousand million in 2000), their share of world FDI remains low (0.9 per cent of the total, or the equivalent for 12 countries of the FDI received by Poland alone) and has fallen since 1990. The observed increase in portfolio investments, moreover, could dry up with the end of privatization programmes, except for Israel and Turkey.

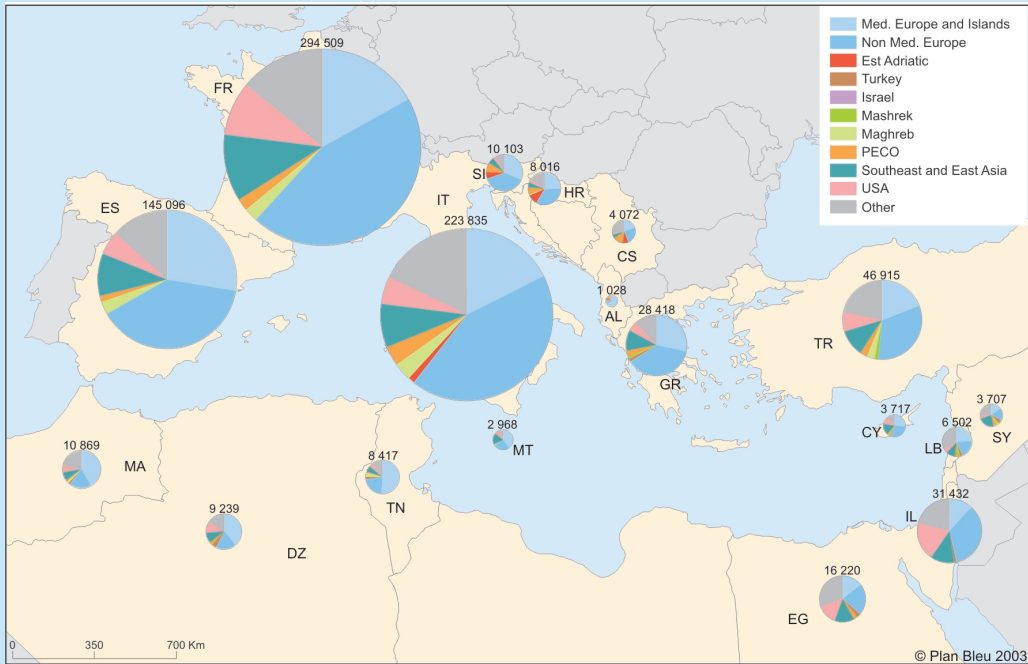
Box 9 Trade in Goods between Mediterranean countries, 1998–2000

Trade balance

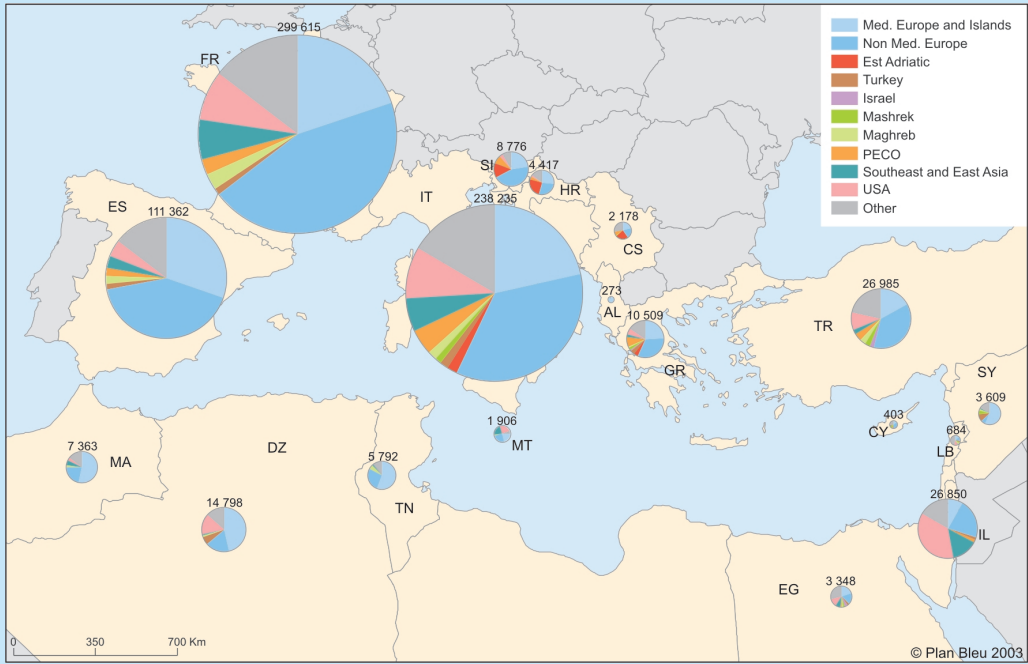
Food products	82
Drink and tobacco	-257
Non-food raw material	-411
Energy	23,893
Mineral fuel, etc	-240
Chemical products	-8060
Manufactured articles	-6949
Machinery and vehicles	-19,418
Various manufactured articles	8885

Note: In 2002, SEMC contributed 19 per cent of energy supplies to the EU (expressed in value).

Supplies in textiles/clothing make up about 15 per cent (mainly intermediate goods imports+clothing export). SEMC absorb 7 per cent of EU exports of vehicle sector and nearly 9 per cent of agricultural product sector.



Imports (1998–2000 in million US\$)



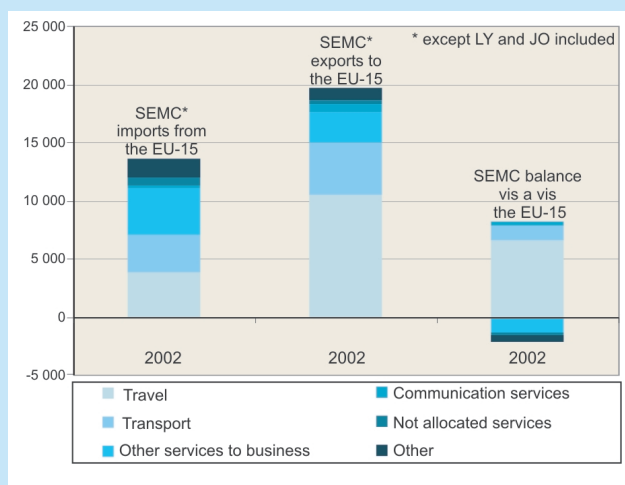
Exports (1998–2000 in million US\$)

Source: Eurostat – COMEXT

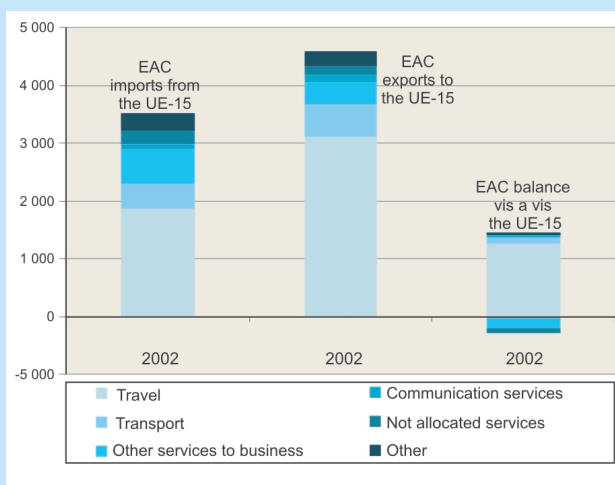
Box 10 Trade in services between the SEMC, the EAC and the European Union

As with the trade in goods, EU/SEMC trade in services concentrates on some of the 15-EU (the UK, France, Germany, and Italy, at 59% in 2002). The distribution between the Maghreb, the Mashrek, Turkey and Israel is relatively balanced (between 19 and 30% of total trade for each country). A great part of the SEMC and EAC surplus regarding the EU comes from 'travel' and 'transport' activities linked to tourism. But the SEMC are in deficit regarding services for enterprises and building trades as well as civil engineering. Among the SEMC, Israel is an exception since it is in overall deficit towards the EU and has a more diversified trade in services. The surplus recorded by Israel towards the EU, especially concerning the trade in services for enterprises, information technology and communication services, does not counterbalance its deficit regarding insurance services and travel and transport services (many Israeli tourists go to Europe).

SEMC Trade of services with the EU in million euros, in 2002

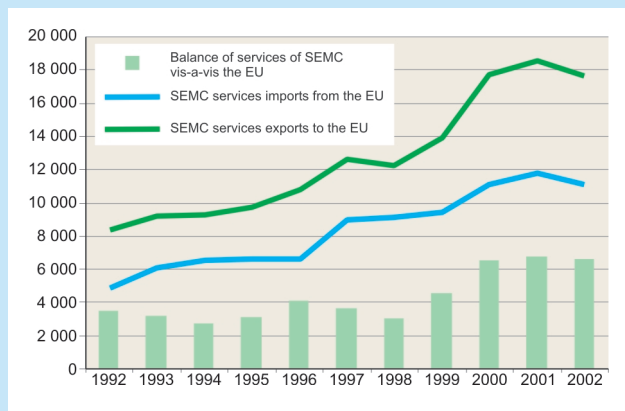


EAC Trade of services with the EU in million euros, in 2002



Note: LY not included, JO and IL included (this explains the difference observed between total imports and exports in 2002 compared with the previous graph).

SEMC Trade of services with the EU in million euros



Note: IL and LY not included, JO included.

Source: Eurostat (EU declared figures).

Highly polarized, FDI comes mainly from the EU (France and the UK) and the US, along historic links. Between 1991 and 2000, two countries, Israel (22 per cent) and Turkey (31 per cent), received more than half of the FDI received in the Mediterranean (the four EU-Med countries excluded). FDI per capita in Israel, Cyprus, Malta, Slovenia and Croatia is between 5 and 15 times greater than the Mediterranean average (see Statistical Annex).

The transfer of funds from emigrant Mediterranean workers represented more than US\$20 thousand million in 1999 with, at the top, Turkey, Egypt, Lebanon and Morocco, but also two former European emigration countries, Spain and Greece, for the development of which these funds played an essential role. As a fraction of GNP, these funds are very important for some countries such as Lebanon (16 per cent), Albania (10 per cent) and Morocco (6 per cent), Egypt and Tunisia (4 per cent) even if they are drying up with time. They represent a large share of total revenue *in foreign currency* for the SEMC (57 per cent for Albania, 31 per cent for Egypt, 24 per cent for Morocco, 16 per cent for Greece, 11 per cent for Syria, 10 per cent for Turkey, 9 per cent for Tunisia). The total of these transfers is often two to three times higher than the Official Development Assistance for the Maghreb and the Mashrek countries.

We are seeing an increase in capital flows from the EU to the SEMC and the eastern Adriatic countries, where the official flows play a major and growing role. Financial flows are still polarized by historical bilateral links between countries, although we are seeing a certain rising importance from the European Commission. Except for Turkey and Israel, the SEMC only marginally attract direct foreign investments. This trend defines the assumption of the baseline scenario.

Multi-speed regional integration and cooperation

Although trade in goods, services, capital and exchanges of people is increasing and indicates a certain rapprochement between the EU and the Mediterranean, what about the convergence of policies and regional integration on which the formation of a genuine pole of stability depends?

Already, in 1989, development of north–south and south–south cooperation was one of the basic assumptions of *Plan Bleu* scenarios.²⁸ Since then, some progress in regional cooperation has been shown by the progressive expansion of the EU on the Mediterranean's northern shore, the launch of the Euro-Mediterranean partnership, and regional cooperation on the environment and sustainable development. However, this cooperation is still insufficient in the context of the challenges that must be met by the SEMC.

In the north, EU enlargement is overtaking deeper sustainable development

More than just a single market, the *European Union* is a political project of historic reconciliation, affirmation of shared values and principles, and building one of the world's major poles of stability and prosperity. This project is being built on successive enlargement and deepening.

The *deepening dynamics* is gradually leading the Member States to transfer a growing part of their sovereignty to the Union (foreign trade, environment, currency), even if in terms of foreign policy and defence, the EU is still seeking a unified project. Economic integration goes hand in hand with financial support for agriculture and the regions whose development is lagging, in order to reduce the negative effects of liberalization, encourage the upgrading of infrastructures and thus strengthen the internal cohesion of the Union. Agricultural subsidies accounted for approximately 51 per cent of total EU operating expenditure in 2002, and structural operations (structural and cohesion funds) for around 27 per cent. Regulatory tools encourage convergence, for example European Directives that formulate sometimes very ambitious objectives for member and accession countries.

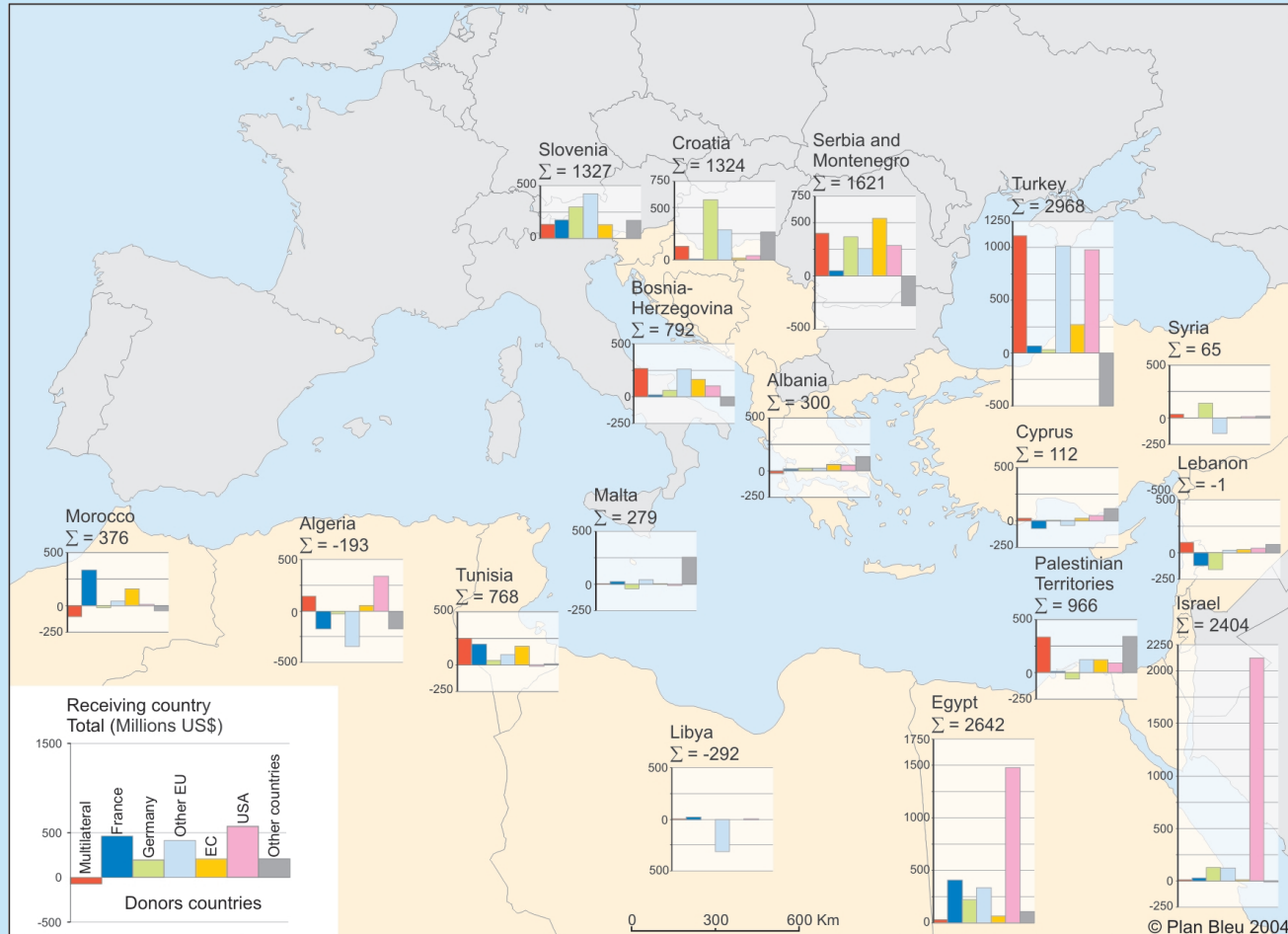
This tripod (single market, agriculture and structural policies, and European legislation) makes the EU a real example of an attempt to *reconcile free trade and sustainable development*. Despite this, certain trends show only small signs of greater sustainability (transport, agriculture, unemployment and poverty, the environment, internal regional imbalances). The EU Strategy for Sustainable Development adopted in Göteborg in 2001 reiterates the need to integrate the objective of sustainable development into all European policies and to evaluate their social and environmental effects.

Moreover, the integration model has to encompass a great diversity of situations and does not imply standardization. The principle of mutual recognition²⁹ promotes subsidiarity and shows that modern economic management can rely on common principles, while respecting a great variety of national cultures and strategies. The model is becoming more and more attractive to countries neighbouring the EU the northern shore of the Mediterranean. The latest wave of *enlargement* in 2004 brought in ten new countries, including Cyprus, Malta and Slovenia. Turkey, as well as the other eastern Adriatic countries (Croatia, Albania, Bosnia-Herzegovina, Serbia-Montenegro) are seeking entry into the EU in the longer term.

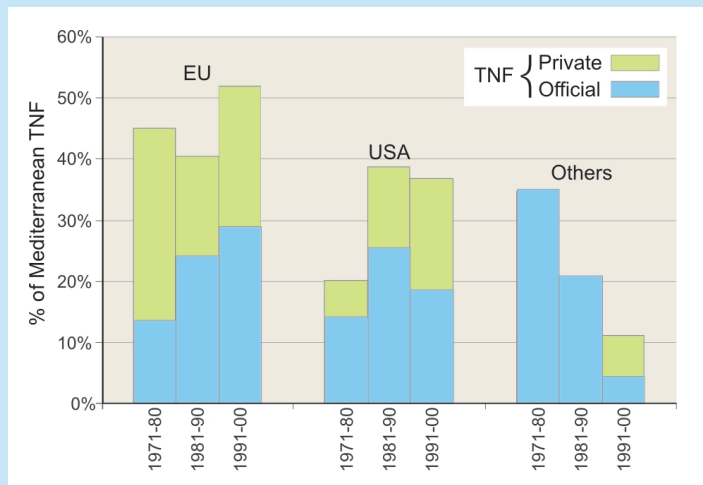
To join the EU, candidate countries, by accepting the 'Community *acquis*' (the body of common rights and obligations which binds all the Member States together within the EU), must fulfil the political, economic and institutional accession criteria. In return they benefit

Box 11 Origin and destination of capital flows to the Mediterranean

Total net flows received by country and source (2000–2002 average in US\$ million)



For example, Turkey received an annual average of US\$2968 million in 2000–2002, and registered a negative contribution of US\$500 million from 'Other countries'.



Source of capital destined to the Mediterranean (excl. the EU) – as a percentage of the net total contributions for the Mediterranean

Note: TNF: Total Net Flows.

EU includes Member States and the European Commission.

The funds come mostly from the EU and its Member States and the US. The EU share of these contributions is higher and increasing (with a large increase in official contributions). The US provides 36 per cent of the total (with an increase in private contributions).

Source: OECD Development Aid Committee (DAC)

from advantages of the single market and the EU's institutional and financial accompanying measures for compensating for the social, territorial and environmental effects of the reforms and help in upgrading their economies and infrastructures. During the transition periods, upgrading is facilitated by financial transfers.³⁰ This EU support has been decisive for the success of the European integration model, even if it has not always been enough to prevent a certain negative impact as in Greece and Spain (Box 12).

Box 12 Spain and Greece in the EU: A success story clouded by environmental impacts

The successful integration into the EU of Greece in 1981, and Spain and Portugal in 1986 (democratic stability, the relative convergence of their economies with the rest of the EU and the stopping of emigration) is most certainly due to the domestic reforms carried out by these countries but also, in large part, to the extent of the support from EU community funds.

In the agricultural sector, for example, integration led to important structural changes (specialization and reducing the working population and the number of farms) the social and environmental effects of which were reduced because of EU support (aid in upgrading facilities and infrastructures and reconversion to other activities).

Without this support and the environmental directives, just liberalizing trade would have had much higher social and environmental **costs** than those actually seen, even if some could not have been avoided.

Thanks to the agro-environmental programmes, **Greece's** joining the EU enabled the use of chemical fertilizers to remain fairly limited. On the other hand, there was a greater polarization of activities around the Athens urban area and increased tourist pressures on the most sensitive coasts.

Despite an active policy and European support, the pressures on the environment in **Spain** grew more rapidly than the economy: water consumption, the dumping of industrial waste and polluted water into the Mediterranean, gaseous emissions because of increased road traffic and deforestation related to the large expansion of tourism activities on the coasts. Modernization and agricultural specialization are leading to overexploitation of water resources, the growing use of chemical products and the pollution of water tables. Desertification has also increased since membership. Finally, in Spain, the richest country in the EU in terms of biodiversity, the development of its economic activities threatens that biodiversity.

Source: Plan Bleu, based on Kuik, O. J. and Oosterhuis, F. H. (2000) Free Trade and the Environment in the Euro-Mediterranean Context: Lessons Learned from Spain, Portugal, Greece and Poland. Paper prepared for the Mediterranean Commission on Sustainable Development. Plan Bleu, Sophia Antipolis

With EU enlargement, solidarity is being reoriented in favour of the less rich accession countries. In the coming

years, structural funds, one of the biggest items in the Community's budget, should gradually be redistributed to the regions of these new member countries and 'leave' the slowly developing regions of the four EU-Med. However, the structural funds for the new members will probably never reach the levels received by the four EU-Med countries in the past. In 2002 net financial transfers from the EU to Greece and Spain (as farm subsidies and structural support), were about 5–6 times higher than those for the ten new member countries (Figure 28, p47), and equivalent to about 1.2 per cent of Spanish and 2.3 per cent of Greek GDP.

At the same time, in view of their accession in the longer term, the EU has, since 2000, carried out a stabilization policy towards the other eastern Adriatic countries that aims to consolidate peace and ensure democracy and prosperity through 'stabilization and association agreements' and the CARDS programme.³¹

The EU enlargement process, as it spreads gradually over all the Mediterranean's northern shore, perhaps even to Turkey, currently seems to have carried the day over that of deepening. The speed of the expansion contrasts with the slowness of decision-making reforms for making the European project more democratic and popular, for strengthening the Union's budget, and for building a Community policy on external affairs and defence.

In the south and east, cooperation limited by conflicts

The regional integration model that is being built in the north has no equivalent in the southern- and eastern-rim countries. Despite several initiatives since 1945, cooperation between SEMC exists more on paper than in reality. The region is still characterized by continuing conflicts and a lack of structured cooperation. Although the League of Arab States plays an important consultative role between its member countries, regional development in the Near East and the Arab Maghreb Union is still being blocked by the difficulty of making the transition from a logic of rivalry (or conflict) to one of cooperation.

From the solely economic point of view, the low intensity of trade among the SEMC bears witness to their very weak integration with each another. Intra-SEMC trade accounts for less than 5 per cent of their external trade.

With only a few exceptions, few major regional projects or programmes (industry, transport or energy) have been implemented that could exploit economies of scale. Some initiatives have been launched for *liberalizing trade*. In addition to many bilateral agreements between the SEMC, several regional initiatives have been launched. The project of a Great Arab Free-Trade Zone agreed in 1997 by 17 signatory countries, eight of which are Mediterranean, includes dismantling of tariffs by 10

per cent per year over a ten-year period so as to stimulate inter-Arab trade. A free-trade zone of the Mediterranean Arab States (Jordan, Tunisia, Morocco and Egypt) has also been launched by the Agadir process. These initiatives are superimposed on the project of a Euro-Mediterranean Free-Trade Zone, initiated by the EU (presented below). Finally, a Middle East Partnership Initiative (MEPI) was proposed by the US in 2002. MEPI relies initially on bilateral agreements between the US and Middle East partners (three have been signed with Israel, Jordan and Morocco), which depend on satisfying political and economic criteria. They are supposed to evolve towards sub-regional accords, then to a free-trade area (MEFTA) by 2013. Financial support is planned for projects in three sectors (education, political and economic reform) but remains limited considering the area covered: from Morocco to Iran (US\$29 million in 2002 and US\$100 million in 2003).

All these 'variable geometry' initiatives do not make it possible to form a coherent and mutually supporting ensemble. We are still a very long way from the alternative scenarios of *Plan Bleu* 89. Without such cooperation, the southern and eastern countries remain divided. Their positions at the regional level and in international organizations such as the World Trade Organization (WTO) are often contradictory and are not based on any shared vision.

North-south cooperation: An ambitious Euro-Mediterranean partnership with limited means

North-south cooperation was for a long period dominated by bilateral approaches that still account for most Official Development Assistance in the SEMC and benefit from the often-remarkable know-how of powerful cooperation agencies, particularly in France, Germany, the US and Japan.

Box 13 The Euro-Mediterranean Partnership

Established in 1995 in Barcelona, the Euro-Mediterranean Partnership has three components:

- A political and security partnership to 'define a common area for peace and stability'.
- An economic and financial partnership for 'building an area of shared prosperity'; this aims to realize a Euro-Mediterranean free trade zone (EMFTZ) by 2010 with total suppression of tariffs on industrial products* from the EU to the partner countries (the EU having already removed tariffs on industrial products from its partners). The partnership has star-shaped bilateral association agreements between the EU and each Mediterranean partner, replacing the cooperation agreements made in the 1970s. By mid-2004, all partner countries, with the exception of Syria, had signed an association agreement.

- A partnership in the social, cultural and human sectors for developing human resources, encouraging inter-cultural understanding and exchanges between civil societies.

The EMP has two financial-aid instruments for partner countries to accompany the liberalization of their economies: a MEDA fund and European Investment Bank (EIB) loans.

The MEDA instrument, now in its second phase (MEDA II from 2000 to 2006), has an average annual budget of 764 million euros, an 11 per cent increase compared with MEDA I (1995–1999). The part of MEDA II devoted to regional projects accounts for 28 per cent of the total. Credit is mostly (70 per cent) meant for supporting economic transition and the private sector. Under MEDA II, funds for social aspects were reduced to 20 per cent while those for the environment increased to more than 9 per cent.

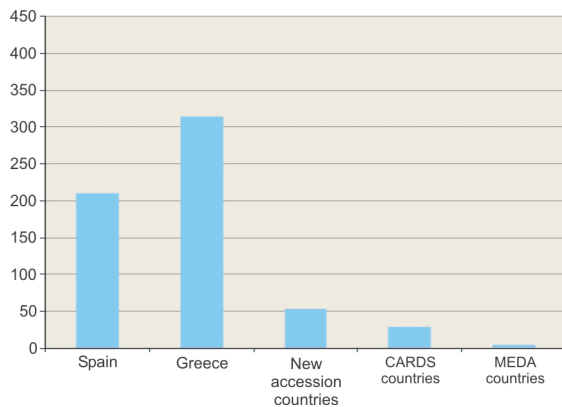
Loans from the EIB complete the financial set-up with an average of 880 million euros per year (1995–1999), increasing to 1.25 thousand million euros per year (2000–2003). The new Facility for Euro-Mediterranean Investment and Partnership (FEMIP) should make it possible to increase the EIB annual commitments to partner countries from 1.4 to 2 thousand million euros per year for 2002–2006. This facility is basically meant for the private sector and infrastructures. The financial programmes are mostly bilateral and cover four sectors: energy, water supply and sanitation, industries and transport/ storage.

* And a near status quo on agriculture and services, with agricultural products having to be renegotiated after 2010.

A basic stage of structuring regional integration began in 1995 with the launch of the Euro-Mediterranean Partnership (EMP). Strengthening a rapprochement process that has been readjusted on several occasions since the 1970s, the EMP brings the EU together with ten 'partners' from the southern and eastern countries.³² It aims simultaneously to re-equilibrate EU policies in a priority area that affects its security and create a counterweight to the big economic poles of Asia and North America. It provides some form of response to the 1994 US initiative of the North American Free Trade Agreement (NAFTA) signed between the US, Canada and Mexico. It is the first expression of a genuine regional policy between the EU and its partner countries, covering all their relations, and willing to use the economy for the benefit of more ambitious political, cultural and security objectives (Box 13).

Despite its progress and ambitions, the Partnership is still criticized for its implementation and resources. Although it has been slowed by the continuing conflict in the Near East, its lack of real *political impetus* is also criticized. Economic and security considerations predominate over political and cultural ones, while the partner countries have limited possibilities to influence the overall process.³³

Figure 28 Net amounts of the EU's main financial transfers in 2002 (euros per capita)



Source: *Plan Bleu* from available statistics

Note: Spain and Greece: net operating budget for 2002 per inhabitant. This includes the amounts received from the EU for agriculture, structural actions and internal policy minus contributions of the country to the EU budget.

Amounts from PHARE, ISPA and SAPARD programmes for AC 10 countries, amounts of the CARDS programme for Balkan countries and MEDA funds for Mediterranean countries: average for 2000–2006.

Another concern relates to the Partnership's *insufficient accompanying resources* in terms of both staff and funding (MEDA and EIB), which seem to be on too small a scale in view of the risks and costs of the reforms needed in the SEMC. Despite recent increases, MEDA credits, excluding loans from the EIB, amounted to only 5 euro per capita per year in 2002, or, as a comparison, one-sixth of what people in the eastern Adriatic countries received from the EU (30 euro per capita per year), one-tenth of what the people of the ten new member countries receive (53 euros per capita per year) and nearly 60 times less than what some four EU-Med countries receive for structural and agricultural aid (Figure 28). These figures reflect the different political and economic relationships that link the EU to its member countries, to accession countries, and to partner countries.

Some recent changes, such as the setting-up of a Parliamentary Assembly of the Euro-Mediterranean Partnership and the Euro-Mediterranean Foundation for dialogue between cultures, constitute a response to these criticisms. The Facility for Euro-Mediterranean Investment and Partnership (FEMIP), created within the EIB, could be transformed into a Euro-Mediterranean bank (Box 13).

The Partnership is also criticized for poor real political commitment from the SEMC other than for tariff removals (economic and environmental policies). More generally, the question of its global vision is raised: the

Partnership is being built brick by brick mainly in the form of star-shaped bilateral relations. Thus, when a country signs an association agreement with the EU, it commits to making a free-trade agreement simultaneously with all the other signatories within a maximum time frame of five years, but the mode of negotiation is on a country by country basis, and the development of south-south sub-regional cooperation is not favoured by MEDA funding (mostly bilateral). This is particularly the case in the current negotiations on agriculture, undertaken without a common view by the partners on the future of agriculture, especially of its multiple roles and possible contribution to sustainable development in the region.

To sum up, the *objectives of sustainable development* would not be sufficiently taken into account by the Partnership, even if several recent conferences have reiterated the primary objective (Box 14).

Box 14 The Euro-Mediterranean Partnership and sustainable development

Although the Barcelona Declaration giving rise to the EMP in 1995 explicitly aimed at 'reconciling economic development with protecting the environment and including environmental concerns in relevant aspects of economic policy', it has to be acknowledged that the environmental and social aspects of development are often eclipsed by the economic aspects.

The EMP has a priority programme for the **environment**, SMAP (Short and Medium Term Action Programme), defined in 1997 around five priorities: integrated water management, waste management, hot spots (pollution and biodiversity), integrated coastal area management and combating desertification.

But resources remain weak in view of the challenges. Between 1995 and 2000 the EMP funded environmental projects to the tune of 260 million euros, more than 86 per cent of which was in the form of interest rebates on EIB loans in the water and sanitation sectors. Between 2001 and 2002, 133 million euros supported projects in water and sanitation: 70 million euros of regional projects (SMAP II and Local Water Management) and 63 million euros of bilateral projects, mostly interest rebates on EIB loans. In all, between 1995 and 2002, nearly 393 million euros were invested in the environment (including water and sanitation) or 8 per cent of all commitments and an average of 49 million euros per year.

The EMP is not succeeding in truly influencing policies on the environment, urban and rural development and coastal zone management. Until recently, the other sectoral programmes of the EMP (energy, water, transport, the information society and industry), funding by the EIB and the Partnership's economic surveys have seldom included environmental and sustainability aspects despite the very strong interrelationship between the environment and development in the region.

Analysing the contents of the various **bilateral association**

agreements shows few references to protecting the environment. Some agreements mention a rapprochement with European environmental standards (Algeria and Tunisia) or refer to regional cooperation in environmental matters, but nothing is specified about the objectives and resources, for example, strengthening capabilities in environmental management or monitoring/assessing the social and environmental impacts of free trade.

The EMP, unlike NAFTA, does not have a multilateral legal framework or regional coordination mechanism for the environment, the equivalent of the North American Commission for Environmental Cooperation.

These observations suggest the need for **readjustment** of the EMP. The European Union Strategy For Sustainable Development, adopted in Göteborg in 2001, by affirming that the internal and external policies of the Union should support efforts made by non-EU countries to achieve sustainable development, expressed a desire for an evaluation of the impact of the agreements made with the Community and monitoring through indicators. The Conference of Euro-Mediterranean ministers of Foreign affairs (Valencia, 2002) reaffirmed sustainable development as the EMP's guiding principle; it requested a survey of the impact of the EMFTA in terms of sustainable development (launched in 2004) and demanded a strengthening of the technological and institutional capacities in the region in environmental and sustainable development matters. Finally the Conference of the Euro-Mediterranean ministers of the Environment (Athens, 2002), acknowledging the imperatives of integrating the environment into the EMP, requested the establishment of integration strategies for each sector. Greater synergy is also sought with other regional programmes such as the Mediterranean Action Plan. However, it is too early to know how these intentions will be implemented so as to integrate the different sustainable development dimensions into the EMP.

In future, Euro-Mediterranean relations should be part of the new '*European neighbourhood policy*', introduced in 2003, which opens up perspectives of strengthening economic and political integration for the near neighbours of a wider EU.³⁴ The objective is 'to work with the partners to reduce poverty and create an area of prosperity and shared values, based on free trade, increased economic integration, intensified political and cultural relations, strengthened cross-border cooperation and sharing responsibility for conflict prevention and resolution'. In the long term this means facilitating a move towards a framework where the EU and its neighbours will maintain relations that are 'comparable with the close political and economic ties that are currently characteristic of the European economic area'. This relates to increasing participation in the internal European market, continuing liberalization and integration with a view to extending the free circulation of

people, goods, services and capital. Although the new neighbourhood policy recalls that free trade cannot be considered as an end in itself, the question still remains as to how the implementation will make trade and sustainable development more compatible among countries with large gaps in development.

The implementation phase began in 2004–2005, through National Action Plans agreed with the countries that have already ratified the association agreements – Israel, Jordan, Morocco, Tunisia and the Palestinian Territories. These plans seek to integrate sustainable development principles, and their environmental sections put an emphasis on cooperation for better governance, legislation and implementation as well as stronger regional and global involvement. The process with similar plans will be extended to Egypt and Lebanon.

These new directions introduce the differentiation principle by virtue of which the offer of real advantages and preferential relations is subordinated to progress being made by neighbours with political (democracy, human rights), economic (macro-economic reforms, developing the private sector) and regulatory reforms (rapprochement of laws, protection of health and the environment). *Under these conditions, the EMP could well evolve towards a 'variable geometry' integration depending on the countries and their efforts.*

Mediterranean cooperation on the environment

Although the EU, through the EMP, has a major responsibility for searching for a reduction in the risks related to the liberalization of the SEMC economies and more generally for sustainable development in the region, other regional partners have also been working, sometimes for a long time, to promote economic development that 'respects the Mediterranean environment'.

In the first place, the *Mediterranean Action Plan* (MAP) has played an important role for over 25 years in regional cooperation on the environment with a heightened interest in sustainable development. Implemented in Barcelona in 1975 under the aegis of the UNEP (United Nations Environment Programme), MAP comes under the authority of the Contracting Parties of the 1976 *Barcelona Convention* for the Protection of the Mediterranean Sea against Pollution, covering the riparian states and the European Community (Box 15). Although its primary purpose was to protect the Mediterranean Sea through the progressive implementation of legal instruments, its brief was expanded in 1995 to the sustainable development of the Mediterranean and its coastal region. MAP has developed coastal management projects and, with GEF (Global Environment Facility) support, programmes for curbing pollution and protecting coastal and marine biodiversity. In 1996 it instituted the *Mediterranean Commission for Sustainable Development* (MCSD) and plans to propose a 'Mediterranean

anean strategy for sustainable development', to which this report is meant to contribute.

The Barcelona Convention, its protocols and MAP provide a legal framework and vital instruments in the service of intergovernmental cooperation on the environment and sustainable development in the Mediterranean. They constitute the only institutional framework that gathers all Mediterranean countries and the European Commission together at regular meetings between Mediterranean decision-makers.

Despite the efforts carried out by MAP to build a joint vision and draw up rules for all Mediterranean countries to protect and manage the Mediterranean region's environmental public goods in a sustainable way, there are disparities in the objectives, standards and resources of policies implemented in this field as big as those in the socio-economic sector. In the north of the basin effective *implementation* of the Barcelona Convention is powerfully strengthened through European laws (which are often more restrictive³⁵), through enforcement measures of a jurisdictional nature and also through the EU structural funds. In contrast, the southern and eastern countries face serious difficulties, particularly financial ones, in trying to tackle all issues related to protecting the marine environment. There is, therefore, a high risk of a widening 'fracture' between the shores as regards environmental regulations (maritime transport security, protection of marine biodiversity, combating land-based pollution) and diverting or displacing pollution to the south and the east.

Other regional initiatives also deserve a mention. In 1989 the World Bank, in conjunction with UNDP, the EIB and the European Commission, launched a Mediterranean Environment Technical Assistance Programme (METAP), which gave support to 15 of the region's countries for identifying projects, strengthening environmental management capabilities, formulating environmental policies and mobilizing funds for investment. However, the programme has suffered from only limited resources compared with its ambitions and needs.

The major international UN agencies are also involved but without distinguishing in their approaches the specificities of the Mediterranean eco-region, which is always fragmented into three 'regions' (Africa, Europe and Western Asia).

The presence of multiple *networks* and *actors* in eco-regional cooperation, too many to mention, bears witness to a sometimes very old awareness of the importance of collectively preserving such specific resources and eco-systems: *Silva Mediterranea* for the forest sector, the International Commission for the Scientific Exploration of the Mediterranean Sea (CIESM), the General Fisheries Commission for the Mediterranean (GFCM), ICAMAS (International Centre for Advanced Mediterranean Agronomic Studies) for agriculture, the

Box 15 The Barcelona system (Barcelona Convention, MAP, MCSD)

In 1976 the Mediterranean countries and the EEC adopted the Convention for the Protection of the Mediterranean Sea against Pollution, the 'Barcelona Convention', which entered into force in 1978.

Since then, six protocols have been adopted by the Mediterranean countries.

- 1 **Dumping** Protocol for the prevention and elimination of pollution in the Mediterranean Sea by dumping from ships and aircraft or incineration at sea (1976, amended in 1995).
- 2 **Prevention and Emergency** Protocol, for preventing pollution from ships and, in cases of emergency, combating pollution of the Mediterranean Sea (1976, re-examined in 2002).
- 3 **LBS** Protocol for the protection of the Mediterranean Sea against pollution from land-based sources (1980, amended in 1996).
- 4 **SPA and Biodiversity** Protocol concerning Specially Protected Areas and biological diversity in the Mediterranean (1995, replacing the 1982 SPA Protocol).
- 5 **Offshore** Protocol on sea protection against pollution resulting from exploration and exploitation of the continental shelf and the seabed and its subsoil (1994).
- 6 **Hazardous Wastes** Protocol, on preventing pollution of the Mediterranean Sea by trans-boundary movements of hazardous wastes and their disposal (1996).

The Barcelona Convention was amended in 1995, and became the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean, which entered into force in 2004. Its modified protocols are in the process of being ratified. By mid-2004, the new *SPA and Biodiversity* Protocol and the *Prevention and Emergency* Protocol had also entered into force.

The Mediterranean Action Plan (MAP) ensures the follow-up and implementation of the whole system. Including right from the start three constituents (legal, scientific and economic), it operates with a secretariat based in Athens and six centres located in various Mediterranean countries. The *Plan Bleu* Regional Activity Centre, the MAP systemic and prospective centre, acting as a Mediterranean environment and development observatory, is the author of the present report.

The Mediterranean Commission on Sustainable Development (MCSD), set up in 1996, is composed of representatives of the coastal countries and the European Commission, as well as co-opted representatives of environmental NGOs, local authorities and socio-economic actors. With support from MAP's Centres, in particular *Plan Bleu*, MCSD mobilizes specialists and officers, organizes forums and has already produced a number of strategic papers on water, tourism, the impact of the Euro-Mediterranean Free Trade Zone, urban management, etc. Within this same framework, a first set of 130 Mediterranean indicators for sustainable development was adopted in 1999.

Centre for Environment and Development for the Arab Region and Europe (CEDARE), the Medwet programme for the conservation of wetlands, and the Mediterranean programme of World Conservation Union. In parallel to the development of Mediterranean intergovernmental cooperation, many regional NGOs and Mediterranean networks with very uneven capabilities have been formed. They cover highly varying fields: water, forests, cities, natural hazards, energy, biodiversity and the protection of nature, the environment, coastal areas, academic networks, consular institutions and many others. The recent development of decentralized cooperation between regions and other local authorities is also the source of important dynamics for the region's future.

However, all these initiatives and networks have only limited resources compared with the challenges to be met.

What assumptions for regional construction?

At the end of this analysis, although interactions seem to be increasing in the Mediterranean, the political building of a regional pole remains embryonic. Nothing can guarantee that the rapprochement of objectives announced by the EU in its new neighbourhood policies will be accompanied by enough resources to help the SEMC meet their challenges; there is a high risk that the EU will give short-term priority to the success of its enlargement. In the Mediterranean, it seems that political solidarity wins out over geographical solidarity. The Mediterranean region remains more a communications buzzword than a political reality.

The baseline scenario assumes that all the northern shore countries are gradually integrated into the EU and experience a strengthening of democracy, as well as a certain convergence of socio-economic and environmental standards. They form a unified, pacified and modernized whole where cohesion is restored despite the upheavals caused by liberalization. However, the production and consumption patterns follow those of the rest of the EU and often remain not very sustainable. Lacking concomitant political deepening, this dynamic of enlargement is accompanied by a certain weakening of the European project that is essentially reduced to a single market with common values and rules.

Despite awareness that its fate is linked to that of the south and east, the EU hardly manages to play the historic role that would be justified by the importance of its interdependencies (economic, social and environmental) and its well understood interests. South-south cooperation and eco-regional cooperation remain insufficient, limited by continuing conflicts; despite its progress, Euro-Mediterranean integration continues with variable geometry and few resources, at least in the initial period (to 2015) during which most resources are mobilized for the new member countries.

The Mediterranean then finds itself in danger of an accentuated fracture between a northern shore where development towards the single market is accompanied by powerful political, financial and

regulatory commitments, vital for strengthening cohesion and sustainable development, and a southern and eastern shore where economic liberalization is continuing without an equivalent level of support and political commitment.

This baseline scenario intentionally excludes other more pessimistic assumptions, such as an extension of conflicts or a decline in the European project that would reduce the chances of Mediterranean regional integration.

A deficit of governance in the face of environment/development challenges

If the future of the Mediterranean comes within an international and regional framework, it also depends especially on the way in which national policies and actors perceive the objective of sustainable development and, in particular, on their ability to integrate the environment into development. As long ago as 1989, the *Plan Bleu* scenarios showed that protecting the Mediterranean could not be accomplished by actions carried out on the sea and the coastal regions alone, but that it depended largely on national policies on development, the environment and regional planning. The sustainable development scenarios were then typified not only by strengthened regional cooperation but also by a different approach to environmental problems at the whole country level: internalizing the costs of protection, taking account of the environment in decision-making mechanisms, reducing centralization, implementing better coordination and associating the public with decision-making and management.³⁶

Since 1992 the United Nations Conference on the Environment and Development (UNCED) has added international political impetus to environment/development issues by approving Agenda 21 and the Rio Declaration. By returning people to the heart of sustainable development concerns, the Rio Declaration stresses the rights of each individual to access to environment-related information, to taking part in the decision-making process and to access to legal and administrative actions. Governments are invited to work out nationwide laws relating to responsibility for pollution and other damage to the environment, to promote the internalization of costs for protecting the environment, and to use economic instruments (based on the polluter-pays principle). Many international and European conferences have since highlighted the large practical difficulties in achieving this. They advocate the passing of more targeted objectives, centred on priorities. The 2002 Johannesburg summit, while recalling the importance of 'good governance' in the process, offered a targeted statement based on three priorities: (i) the eradication of poverty; (ii) adapting

consumption and production patterns; and (iii) protecting and sustainably managing the stock of natural resources.

In the Mediterranean, despite considerable efforts to strengthen environmental administrations and legislation, it has been extremely difficult to prevent environmental degradation by means of effective upstream action on the development process.

The recent expansion in environmental policies

Over the last two decades, the Mediterranean countries, like many others, have mainly strengthened environmental policies and institutions as a sector in its own right, without really finding complementary intervention mechanisms upstream of consumption and production activities or other economic and social policies. While physical and land planning policies registered a certain decline, unprecedented efforts have been devoted to structuring this new sector of state intervention, the protection of the environment. In the four EU-Med countries, impetus from the European Union has been decisive, as has that from the major cooperation programmes (World Bank, MAP) in the other Mediterranean countries.

Environmental administrations and agencies

Being a recent area for public intervention, environmental policies have run up against two problems: the definition of their field of application and their institutional position and the types of action to be taken by the administrations in charge of implementation. The cross-sectoral nature of the environment, the management of which interacts with the activities of many ministries, makes the question of its integration into conventional policies and administrations especially tricky.

Environmental policies have generally been structured around three major *fields of competence*: (i) pollution prevention and control; (ii) the protection of nature; and (iii) the preservation of renewable natural resources, with notable differences from country to country. Generally speaking, the missions and modes of action of administrations in charge of the environment cover technical coordination, impetus, laws and regulations, and sometimes research.

The *institutional positioning* of administrations in charge of the environment that have appeared in the Mediterranean countries is generally typified by a certain instability. Such administrations have often been created within other older ministries and then experienced frequent changes of supervisory ministries.

Despite this instability, central environmental administrations have been set up in all the riparian countries

in the form of a ministry, a 'sub'-ministry or an independent agency. In recent years the linking between the Environment and Spatial Planning in several countries (Italy, Greece, Slovenia, Croatia, Bosnia-Herzegovina, Algeria and Morocco) has represented a significant development in the search for consistency. Elsewhere, environmental policies come from an independent ministry (Spain, France, Malta, Albania, Turkey, Lebanon, Israel and Egypt) or coexist with agriculture (Cyprus and, more recently, Tunisia) or other sectoral authorities (Syria and Libya).

Institutional uncertainties contribute to a certain *weakness* in environment-related administrations, which is accompanied by a weakness of human and financial resources with budgets amounting in general to less than 0.1 per cent of government budgets,³⁷ and, above all, weak inter-ministerial power. In the Mediterranean countries of the EU, environmental matters have benefited over the past few years from increased attention, which has been partly expressed by an increase in staff and budgets of the lead ministries. In the countries joining the EU in 2004, progress has been made in reinforcing capabilities in implementing the 'Community *acquis*'.

In addition to the central environmental administrations, *technical agencies* have often been set up to support and implement environmental policies and allow them more autonomy (particularly financial autonomy), flexibility and a greater capacity for mobilizing various stakeholders. This applies to generalist agencies in Italy, Egypt and Tunisia or analogous agencies that existed in other countries (for example Albania and Algeria), transformed later into ministerial divisions (Box 16).

To inadequacies in financial and staffing levels can be added the critical weakness of authorities in administrative policing matters. More generally, in the Mediterranean as elsewhere, the critical factor is the *low priority given to environmental issues* by governments through their inter-ministerial coordinating body, since many environmental issues derive from more powerful sectoral policies such as public works, transport, agriculture and industry, on which environmental administrations have only limited influence.

Policies focused on regulating the environment

Most efforts in this new environmental protection sector have focused on regulations.

At the *international* world and regional level, the 1980s saw a veritable outburst of *environmental law* with nearly 300 documents, treaties or conventions. A first wave of regulations focused on protecting the major components of the environment: the sea, continental waters, the atmosphere and biological diversity, a second dealt more with the control of polluting substances, and a third, in the 1990s, with standards that were aimed

Box 16 Agencies for environmental protection

In **Egypt**, the Egyptian Environmental Affairs Agency (EEAA) was established in 1982. Until 1990, EEAA evolved slowly with little impact on the development of environmental policy, and little presence in the public arena as a result of limited staffing and resources, and having no regulatory authority. The mandates of the EEAA which also include the recommendation of financial mechanisms for encouraging the different partners to undertake environmental protection activities, were extended in 1994 to authority for regulating air pollution and controlling hazardous waste management and discharges into maritime water. At the regional level, five Regional Branch Offices represent EEAA and address urgent issues.

In **Tunisia** the National Agency for the Protection of the Environment (ANPE), established in 1988, is in charge of monitoring the state of the environment and pollution control. It carries out environment impact assessments of new agricultural, commercial and industrial projects, analyses the documents submitted for approval prior to investments with a polluting potential, and controls polluting establishments.

In **Italy** the National Agency for the Protection of the Environment (ANPA) was established in 1994 to serve as a scientific auxiliary to the Ministry of the Environment by dealing with the functions of pollution prevention and reduction previously handled by local health units. Its initial activities (monitoring the state of the environment, preventing and treating pollution, natural and technological risks and working out integrated strategies) have been gradually expanded to *ex ante* economic analysis of environmental projects, the promotion of clean technologies and sustainable urban development. Becoming an agency for protecting the environment and technical services (APAT), its jurisdiction has recently been extended to hydro-geological risks, the preservation of water resources, and soil protection. APAT is part of a federal system of 19 regional agencies (ARPA) and two provincial environmental agencies. With nearly 6000 agents, the ARPAs are becoming the main environmental inspection body; they do not operate as a regional section of APAT but are under the direct leadership of regional authorities.

More **specialized** national agencies have sometimes been entrusted with protecting a specific environment (the *Conservatoire du littoral* in France, Tunisia's Agency for the protection and planning of coastal zones, etc.) or the management of water resources. In terms of protecting nature, national parks in most countries and regional natural reserves have often been created by Ministries of Agriculture and/or Forests. Other agencies operate under the shared supervision of several ministries. Examples include: in France, the Agency for the Environment and Energy Management (ADEME), ONF (National Forestry Office) and the National Agency for Radioactive Waste Management (ANDRA), and in Italy the National Agency for New Technologies, Energy and the Environment (ENEA) and the Central Institute for Scientific and Technological Research as applied to the sea (ICRAM).

increasingly often at human activities themselves. The new rules did not, however, supplant the previous legislative developments; the three kinds of regulations coexist and advance simultaneously. Integrated protection of the environment is the most recent phase in this development. In order to be more effective, it no longer simply aims at protecting the main environments or combating the potentially noxious effects of specific substances but at all human activities that might have unfavourable impacts on the environment as a whole.³⁸

Environment-related texts have existed in the *countries*, sometimes for a long time, on matters such as forest management and the protection of natural sites or water resources. But those relating to pollution control, and especially those setting up an overall framework for protecting the environment, have generally been lacking. They have, however, proliferated over the past 15 years, but little effort has been made to codify them with a view to harmonizing the many national legislative documents.

For EU members and the accession countries, some 200 legislative documents on the environment, including more than 140 directives, contribute to harmonizing environmental policies and legislation around three principles: the precautionary and preventive action principle, the principle of prioritizing corrective action at the source of damage to the environment, and the polluter-pays principle. Although the application of community law varies markedly from one country to another, this has enabled enormous progress to be made, for example on water quality and waste treatment. At the beginning of 2004, before integrating into the EU, the 10 accession countries had already transposed an average of about 90 per cent of the Community *acquis*, mainly the directives on air quality and waste management, and strengthened their administrative capabilities for implementation.

Above and beyond the arsenal of specific laws for each environmental milieu or sector (water, soils, biodiversity, waste, etc.) in each Mediterranean country, it is worth noting the adoption of *framework laws for environmental protection* that include the major legal principles for protecting the environment such as the precautionary principle and the polluter-pays principle. These framework laws less frequently affirm the existence of general pollution violations (Box 17).

Box 17 Framework laws for protecting the environment

Greece was one of the first countries in the world to refer to the environment in its 1975 Constitution; in 1986 it passed a framework law on environmental protection that affirms the polluter-pays principle and provides for levying taxes on waste and charges for water consumption. In **France**, although the legal regime for protecting the environment is very old, it was

only in 1995, with the Barnier law, that the precautionary and polluter-pays principles were formally adopted; in 2004, a constitutional law with a Charter for the environment was adopted, which includes the precautionary principle. A long effort to harmonize the many laws and decrees finally resulted in the publication of the Environmental Code in 2000. In **Spain and Italy** the development of environmental policies relies on legislation and planning developed by the national and, largely, regional authorities. At the national level, the main efforts are devoted to transposing European legislation into national law and ratifying international conventions; the legal framework, however, remains extremely fragmented with the lack of a comprehensive underlying law on the environment.

In **Slovenia**, the Environmental Protection Act of 1993 was the first comprehensive collection of aims, principles and rules of environmental management since the country's independence. It is based on Agenda 21, environment-related EU directives and Slovene experience with environmental management. In **Croatia**, the Law on Environmental Protection was adopted in 1994. This 'umbrella law' sets out the rights and responsibilities of actors in the environmental sector, stipulates who is responsible for pollution and who has to clean it up and defines environmental inspections. In **Albania**, the law setting a comprehensive framework for Environmental Protection was adopted by the Parliament in 2002.

In **Turkey** the 1983 law on the environment includes the polluter-pays principle and sets out a regime of objective liability. Its provisions make impact studies mandatory, ban certain polluting operations and the disposal of dangerous chemical substances and waste by making them punishable with penalties, provide incentives for less pollution, and create a fund for the environment.

In **Lebanon** the draft National Code for the Environment was put before parliament in 1999 but has not yet been promulgated. In **Egypt**, Law 4/1994 for the Environment enlarged the EEAA mandate and provided an array of implementation instruments including regulatory standards, inspection, enforcement, the review of environmental impact assessments and the implementation of economic instruments.

In **Algeria** a new environmental protection law was passed in 2003, based on the principles emerging from the Rio Summit (prevention and precaution, polluter-pays, integration and participation) and lays down the foundations of integrated pollution control. **Morocco** passed an umbrella law in 2003 for protecting the environment; it includes the polluter-pays principle while adding that of the user-pays, legislates on polluting facilities, institutes an environmental protection fund, and defines a regime of civil liability for actions harmful to the environment.

Sources: UNECE *Environmental Performance Reviews*, Slovenia 1997, Croatia 1999, Albania 2002. OECD *Environmental Performance Reviews*, Turkey 1999. Algeria. *Journal officiel* no 43 of 20 July 2003. Morocco. *Bulletin officiel* no 5118 of 19 June 2003

Efforts in planning and environmental assessment

In addition to these entirely legislative efforts, which are always under development, most Mediterranean countries have developed *national plans for environmental protection*: indicative, multi-annual planning aimed at facilitating the allocation of funds.

Italy, with its three-year plans in 1989 and 1994, France, with its ten-year plan in 1990, and Greece, with its five-year plan from 1994 to 1999, have tried to set objectives for environmental policies according to observed performance or counter-performance. Then the European community's policies in environmental planning and regulation gained greater importance. The European Union is on its sixth environment action programme for the 2002–2012 period. Spanish and Italian regions continue to deal with environmental planning.

In the southern and eastern Mediterranean countries the preparation of plans for protecting the environment has often benefited from technical and financial support from the World Bank, UNDP and sometimes German bilateral cooperation. Technical support in the eastern Adriatic countries has also come from the European Programme of Pre-Accession Aid for Central and Eastern Europe (PHARE). National Environmental Action Plans (NEAP) have been developed in Slovenia (1997), Albania (1994, updated in 2002), Croatia (2002), Turkey (ten-year NEAP in 1998), Syria (1998–2007 NEAP), Egypt (first NEAP in 1992, a new one for 2002–2017), Algeria (2001–2011 ten-year plan) and Morocco (1995 strategy with targets up to 2005 and 2020).

While they sometimes refer to sustainable development, these plans are basically 'green' with highly variable scope and objectives. They do not always enable a clear-cut determination of priorities or a re-orientation of other sectoral policies to reduce their pressures on the environment.

Moreover, in order to improve *knowledge on the state of the environment* and sometimes evaluate the implementation of 'green plans', considerable efforts have been made to implement monitoring and evaluation systems. The creation of the European Environmental Agency in 1993 led European countries to reinforce their national capacities for producing environmental information and give themselves specialized institutions (IFEN in France, APAT in Italy) that have since been widely recognized. In the SEMC, the setting-up of environmental observatories began in 1994 in Morocco (ONEM), when the first assessments by the World Bank of the annual costs of environmental degradation showed that these costs accounted for 8 per cent of the country's GDP and it was judged necessary to develop information for helping policymakers to reorient the pattern of development. Tunisia then set up its national observatory (OTEDD), while other bordering countries gradually implemented

similar facilities. These bodies met together at several Mediterranean workshops organized by *Plan Bleu* in order to share experiences, particularly in the field of indicators for sustainable development. In short, while several Mediterranean countries first turned critical attention to their environment and policies at the 1992 Rio summit, today nearly all regularly publish *Reports on the State of the Environment*. However, the monitoring/evaluation facilities in several SEMC remain fragile, and still depend on the expertise of external or international consultants.

A certain powerlessness in the face of pressures on the environment

Efforts for implementing environmental policies have therefore been considerable, but implementation has experienced and continues to experience formidable problems: many international agreements, community directives, national laws and environmental action plans often remain unimplemented. The so-called *implementation gap* includes highly variable realities, anything from a certain disjointedness in a few countries to a real gulf in others, and always all kinds of serious delays in implementation.

There are many signs of these failures, beginning with the continuing degradation described in a number of reports on the environment published by individual countries, OECD, UNECE, NGOs and the EEA, as well as the present report, which questions the *effectiveness* of environmental policies and calls for more integration into economic and sectoral policies.

In the EU *countries*, the growth of disputes about the environment bears witness to this difficulty of implementation. It simultaneously shows a positive trend to mobilize citizens to protect the environment and the importance of recourse to tribunals for controlling and monitoring environmental policies (Box 18).

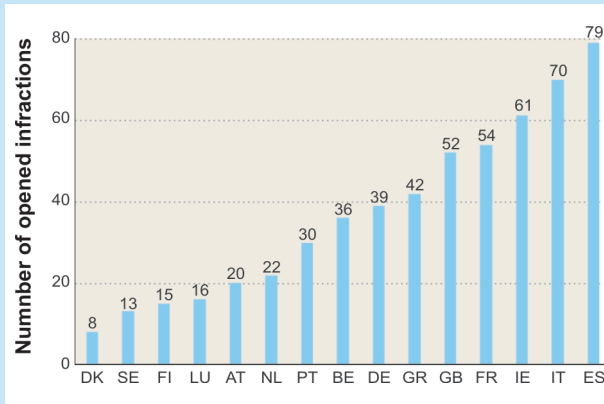
In the *other Mediterranean countries*, similar failures can be mentioned, with the aggravating factor of a chronic weakness of environmental administrative staff (especially the regional services in the big countries), an often lesser awareness of ecological issues and more limited possibilities of using tribunals. A few examples of pollution prevention and control will show these implementation problems.

In the *eastern Adriatic countries*, environmental laws and regulations have been passed at a rapid pace since 1990, leading to delays in adopting the required application documents and considerable delays in implementation.³⁹ For example *Albania* included the principle of sustainable development in its new Constitution of 1998, but the environment is not yet considered to be a priority because of the difficult economic and financial situation. Only in few cases have the environmental permit procedures been enforced, mainly for new

Box 18 Disputes over applying Community environmental law

The number of complaints sent to the European Commission more than tripled between 1996 and 2000 in the environment sector. The environment alone accounts for more than a third of infractions for non-compliance with community law.

Environment-related infractions opened by EU Member States



Source: European Commission, situation as of 4 November, 2003

By the end of 2003, of the more than 500 infractions dealing with environment being considered, Spain and Italy headed the list of countries with infractions, followed closely by France and Greece. This may result from non-communication to the Commission of implementation measures being taken by a Member State, non-conformity of national legislation to European directives, or a poor implementation of directives.

Infractions of community law give rise to procedures that vary from a notice-to-comply to referring the case to the European Court of Justice, which can impose penalties on the Member State involved, calculated according to the duration and seriousness of the infraction. Generally, dissuasive judgements have been handed down, for example, against Spain in 1998 and 2003 for poor implementation of the directive on the quality of swimming water; against France in 2001 for the same reason and in 2002 for non-compliance with the directive on water pollution by nitrates from agricultural sources; against Italy in 2001 for the lack of action and monitoring programmes as set out in the nitrates directive and in 2002 for non-compliance with waste management (Sicily and Basilicata); against Greece in 2002 for a lack of substantial measures for protecting the *Caretta caretta* turtle on Zante Island, and for the insufficient transposition of the directive on integrated pollution prevention and control.

Source: European Commission. *Examen de la politique de l'environnement 2003*. COM(2003) 745 final/2; European Commission. *XXème Rapport sur le contrôle de l'application du droit communautaire*. COM(2003)669

facilities and state-owned industries that are being privatized.⁴⁰

In *Israel*, the Ministry of the Environment supervises all land-based sources of marine pollution within the framework of an inter-ministerial permit committee. When a permit is granted, it is strictly regulated; courts may impose fines or even imprison the offender. Marine and Coastal Environment Division inspectors ensure law enforcement. Nevertheless, in 2001 it was reported that it would take two to three years to regulate all industrial emissions to the marine environment.⁴¹

In *Egypt*, environmental permitting is used for the discharge of effluents. The EEAA performs multimedia inspections as part of an 'environmental register' for all discharges, while other inspection bodies implement medium-specific or issue-specific laws; multiple inspections therefore place an unnecessary burden on the inspected facilities. To partially overcome these problems, several governors have gathered together all the entities concerned with the inspection of large facilities. Inspections are carried out following public complaints, and periodically according to current legislation. However, because of the huge number of facilities to be inspected, the frequency of inspections is insufficient, qualified inspection personnel at the national level is limited, and there is a high rate of non-compliance with environmental legislation.⁴²

In *Algeria* the general inspections of the environment and the recently organised *wilaya* inspections are in charge of impact assessments, granting permits, making inventories of polluting facilities (more than 50,000), recovering the tax on polluting activities, inspecting treatment plants, and consulting with local governments and industries. On the practical level, technical prescriptions concerning emissions into the air by fixed facilities, wastewater treatment and the conditions for discharging industrial wastewater have remained somewhat unclear for 20 years. Despite this lack of clarity in the legislative framework (at least until the 2003 framework law), some 6700 annual inspections are carried out, sometimes leading to sanctions for non-compliance (about 2000 notices to comply, 400 temporary closures and 66 cases taken before the courts). On the incentive side, existing facilities can benefit from financial aid through the National Fund for the Environment.⁴³

The weakness of the administrations in charge of the environment (lack of human and financial resources devoted to implementation and monitoring, lack of power and credibility with other sectoral administrations) is often cited among the explanatory *factors for difficulties* encountered in all riparian countries. The complexity of environmental legislation and the difficulty in funding the high costs of implementation also contributes. But in addition to the question of

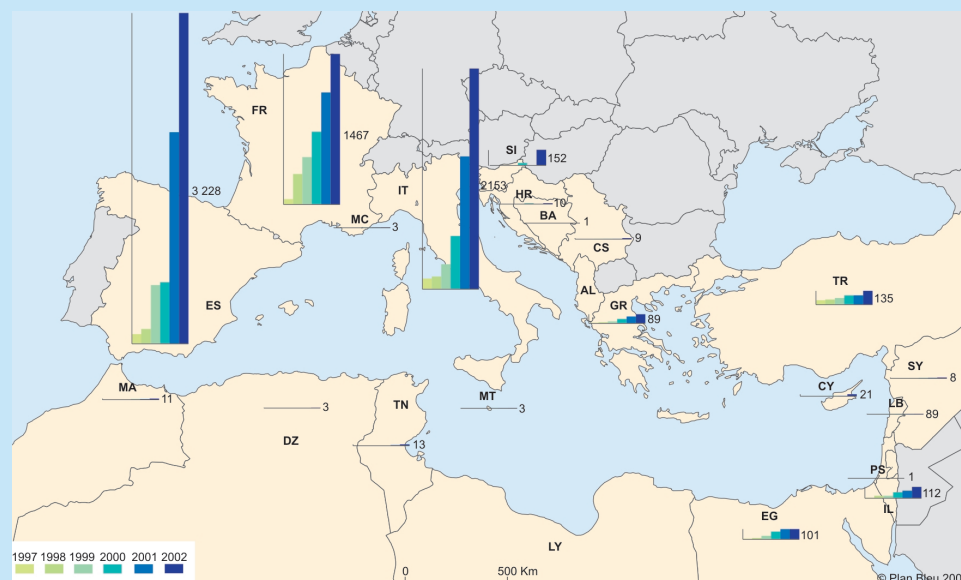
insufficient resources for implementation (however real), five factors are likely to influence this lack of effectiveness of environmental policies:

- 1 Their logic of action, generally characterized by a **top-down approach** where a state authority defines the problem to be dealt with and entrusts its being carried out to administrations with no clear identification of the main actors at the source of the damage (qualitative and quantitative) of the various milieus. Despite the flowering of ecologically sensitive associations almost everywhere, the environment still seems to be a state affair in almost all Mediterranean countries. Regional and local authorities are hardly involved, except in decentralized countries such as Spain and Italy and, to a lesser degree, France.
- 2 The basically **curative approach** of environmental policies which, because of their often emergency nature, emphasize the treatment of symptoms and deal with repairing *end-of-the-pipe* degradation rather than attacking the root causes of the problems. Despite the passing of *ex ante* procedures for assessing impacts, the logic of prevention does not seem to count for much compared with the logic of cure. In the SEMC the generalization of impact studies is not accompanied by risk management or in-depth changes on the way the involved actors act (private and public industrialists, small and medium companies, farmers, not to mention the informal sector).
- 3 The **complex mix of instruments** needed for implementation. Priority is given to the regulatory command-and-control approach and the search for compliance with procedures, whereas it is increasingly agreed that legislation by itself cannot improve the environment. The question is seldom asked in the SEMC as to how to combine the various instruments for attaining *quality* environmental objectives at the lowest administrative, human and financial cost. As a complement to the required regulatory instruments, economic instruments (water pricing, taxes on pollution, subsidies for clean technologies, etc.) have not been noticeably developed. In the EU-Med countries, at the same time as the regulatory instruments, there has been an increased use of incentive mechanisms (income tax, tax and other charge rebates, a reduction of harmful subsidies to the environment, etc.), voluntary initiatives and the promotion of eco- technologies. However, evaluation of the Fifth European Environment Programme (1994–2000) showed that despite the incentives that had been implemented (EMAS management and environmental audit system,

Box 19 Company commitment to sustainable development

Companies play a decisive role in the resource-production-consumption process, and some of them have for the past ten years and sometimes longer changed their behaviour and discipline regarding the environment (annual reports, notations, changes in processes, etc.). Sustainable development leads them to recognize their local and global responsibilities. More than 330 companies have joined the Global Compact initiative of the UN Secretariat, which aims at promoting civic responsibility for human rights, labour standards and the environment. However, a whole set of companies and, especially, the small and medium-sized enterprises are on the fringe of this movement. Some companies still, for example, abandon polluted sites, and others look after the image for the sake of their brand's good name without concrete action. But there is certainly more recognition, within companies and sometimes their staff, of the importance of environmental labels and standards (EMAS, ISO 14001).

In the Mediterranean, some 7380 companies, still mostly on the northern shore, conform to exercises of the ISO 14001 type, sometimes in groups as part of professional branches (work with UNEP in 2002–2003) or with encouragement from chambers of commerce.

ISO-14001 certified companies as of 15/10/2003

Source: ISO survey of ISO 9000 and ISO 14001 certificates

ecological labels, environmental agreements, etc.), the objectives of the programme were not reached, and the targeted activity sectors (transport, energy and agriculture) did not manage to consider environmental concerns as their own.⁴⁴

- 4 The **unresolved issue of integrating the environment and development**. Despite the cross-sectoral nature of environmental issues, there may be a trend towards sectorizing environmental policies as the lead administration gets stronger and acquires more autonomy. This sectorization is expressed by an increase of necessary plans dealing with various issues (dangerous waste, contaminated soils, wastewater treatment, etc.), but these plans do not lead to a reduction in pressures upstream. This explains the need for effective inter-ministerial mobilization mechanisms to counter possible conflicts of interest (economic development/environmental protection), and to ensure that the environment permeates the administrative culture of economically oriented ministries and sectoral policies. The recent implementation of National Commissions for Sustainable Development and analogous inter-ministerial agencies in most

Mediterranean countries does not yet seem to have succeeded in changing the way in which economic, social and environmental development objectives are defined to make them compatible. When national 'sustainable development' strategies are developed, they do not get beyond the formulation stage or remain focused on repairing environmental damage.

- 5 Finally, **concerns about spatial solidarity** seem to be weakened today in a number of countries despite the considerable efforts of the European Union's cohesion policies and the relative power of land-planning administrations in the SEMC. In this era of globalization and the search for economic competitiveness, sectoral policies and approaches are being increasingly preferred. It would be extremely worrying if the regional development approaches were also devoted to strengthening competitive poles rather than working for the reduction of regional imbalances, with the concomitant risk of weakening integrated environmental and physical planning approaches that require cross-sectoral teams able to create a 'bridge' between administrations.

All these findings on progress and failures of environmental policies in the Mediterranean countries differ little from those in other countries and regions. Perhaps this is a sign of a certain 'globalization' of environmental policies and approaches and, at the same time, of little account being taken of specific eco-region features in the national policies of the riparian countries. An indicator of this is the absence of a clearly defined policy for the protection of the Mediterranean coastal zones in several riparian countries (see Chapter 6).

Ultimately, the issue of effective governance of development that is respectful of the environment remains. Undeniable progress has been recorded in reducing pollution from point sources such as the big polluting industries of the northern shore. But the growing importance of non-localized pollution (agriculture, transport, energy, urban growth patterns), irreversible degradation, withdrawals of non-renewable or non-substitutable natural capital, and increased territorial imbalances because of coastal overdevelopment and urban development, raise even more difficult problems that call for an examination of the lifestyles and consumption patterns of entire societies (Part 2 of this report) and much more significant efforts in policy integration and the accountability of all those involved.

This analysis leads to the following assumptions for the 'environmental governance' determinant of the baseline scenario:

- *Faced with the growing rise in economic and short-term interests, environmental policies remain polarized around curative and catch-up actions while land planning and territorial cohesion get weaker in national policy agendas.*
- *Despite a broader mobilization of regional/local authorities and civil societies, the environment essentially remains a matter for the state in most countries.*
- *Given the political weakness of environmental administrations, integrating environmental concerns into the economic and sectoral policies remains difficult. The legitimacy of these administrations for taking care of broad sustainable development issues is in doubt.*
- *Environmental governance, although strengthened, proves increasingly impotent in the face of growing pressures on the environment and sustainable development challenges, which also include social issues.*

The SEMC faced with multiple development challenges

Although, as we have seen, all Mediterranean countries are finding it difficult to implement governance for the environment and sustainable development, the SEMC are faced with the additional challenge of ensuring strong economic and social development to meet the

needs of a growing population. This means pursuing major reforms to overcome certain handicaps and take advantage of the opportunities of globalization rather than weather the risks. Will they manage to carry these reforms out? This is the determinant of the baseline scenario analysed here.

Economic and financial handicaps limit the room for manoeuvre

The SEMC have stabilized their large macro-economic balances during the past two decades. But economics are still fragile, which may cast a shadow over future growth and limit room for manoeuvre. This fragility can be seen by analysing some macro-economic, budgetary and fiscal indicators and the balances of external accounts.

Financial resources earmarked for investment in the SEMC are relatively low. Investment, which accounted for 24 per cent of GDP in 1988 (excluding Libya, Lebanon, Israel and Palestinian Territories) amounted to just 21 per cent of GDP in 2002 (excluding Israel and Libya) because of the low per capita incomes and weakness of *foreign investments* (only 1 per cent of world FDI was directed towards the SEMC in 1997–2002, the end of privatization programmes).

Despite major progress resulting from the stabilization of public financing, *budget deficits* in some countries remain large. After deducting donations from abroad, deficits returned to below 5 per cent of GDP in most of SEMC at the end of the 1990s, from more than 15 per cent of GDP in Egypt and more than 30 per cent of GDP in Israel over the 1980–1985 period.⁴⁵ But in Lebanon and Turkey, and to a lesser extent in Israel and Morocco, the deficit remains particularly high. Reducing the public deficit has often been at the expense of slowing down public expenditure (especially in Egypt, and Syria).

The budget deficit is projected to increase, under the combined effects of increases in expenditure (or the impossibility of decreases) and falls in income.

- *Expenditures* may increase in the medium term because of population growth. After the efforts made over the past two decades, there is already a resumption of public expenditure in Morocco and Egypt, with a maximum in Turkey (nearly an 18 per cent increase between 1995 and 1999). Reducing investment expenses could endanger what is already weak economic growth. A drop in current expenditure seems improbable because of the level of unemployment and public debt.⁴⁶
- *Income* may fall with the dismantling of import duties and, in the longer term, with the fall in non-fiscal income (revenues from public enterprises) following disengagement of the state. This income carries considerable weight in total government tax revenue.

On average, import duties account for 17 per cent of public receipts in the SEMC (averaged over recent years): between 16 and 27 per cent in the Maghreb countries and between 11 and 45 per cent in the Mashrek countries (less than 0.06 per cent in the four EU-Med). According to an IMF study,⁴⁷ the lowering of import duties in the SEMC as part of EMFTA could in the short and medium term mean a drop in budgetary income of 1 to 4 per cent of GDP, depending on the country. Only Israel and Turkey are free of this risk since import duty accounts respectively for only 0.4 per cent and 2.9 per cent of government income. Government income arising from public companies represents an important proportion of State revenue (more than 15 per cent in Tunisia, Egypt and Syria). Finally, income from privatization is a one-off so cannot be repeated.

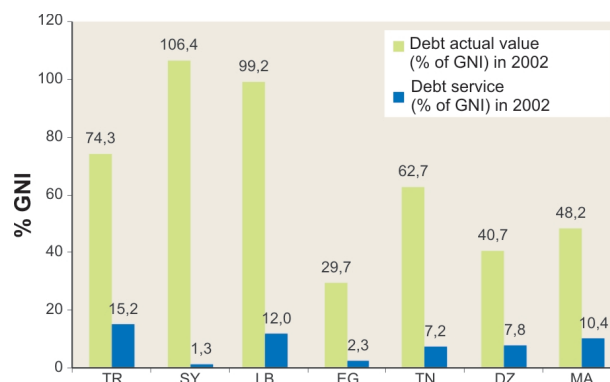
Tax revenue as a percentage of GDP is often relatively low in the SEMC (except in Israel and Algeria where oil tax systems exaggerate the figures). It varied between a minimum of 14 per cent in Lebanon and a maximum of 26 per cent in Tunisia in 1999 (it reached about 40 per cent in Italy and France at the end of the 1990s). The fiscal context of the SEMC is also characterized by a relatively *low* proportion of *direct taxation*, varying between 1994 and 1998 between 3 per cent of GDP in Lebanon and 10 per cent in Tunisia, with two exceptions: Algeria (20 per cent) and Israel (21 per cent). In three of the four EU-Med countries (Spain, France and Italy), this figure varies between 20 and 30 per cent.

Debt (public and private) leads to a net outflow of money. The present value of the external debt related to Gross National Income (GNI) can exceed 60 per cent in some countries. Consequently debt service expressed in relation to the GNI has continued to increase since 1985 and is not tending to decrease in most of the Mediterranean countries except Morocco and Egypt. In 2002, debt service accounted for about 10 per cent of SEMC GNI (from 2.3 per cent in Egypt to 15.2 per cent in Turkey). This is a relatively high figure compared with countries with intermediate income (6.8 per cent in 2002) and even in comparison with Latin America (8.5 per cent). In absolute terms, debt service in the SEMC reached almost US\$40 thousand million in 2002: the equivalent of more than twice the net total flows (public and private, US\$13.3 thousand million) that they received in 1991–2000 (see Figure 29).

The SEMC regularly record a *trade deficit* (with the exception of hydrocarbon-exporting countries). This is partly explained by the fact that their exports are dominated by low value-added goods, subjecting them to a deterioration of exchange terms, which has affected oil as well as agriculture products. This deterioration could lead to increased environmental degradation

Figure 29 Debt and debt service

Present value of debt and debt service, 2001



Source: World Bank, 2004

Total Debt service 2002 (current million \$)

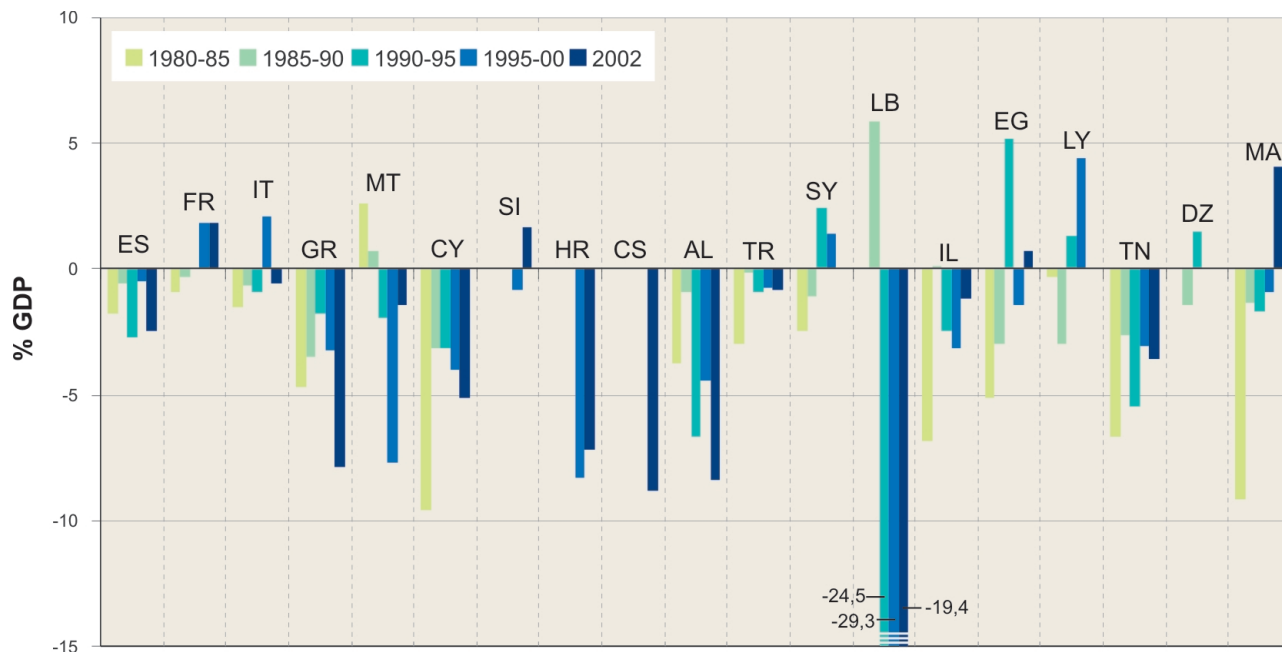
Turkey	27,604
Syria	258
Lebanon	2188
Egypt	2066
Tunisia	1438
Algeria	4166
Morocco	3691

Source: World Bank, 2004

since countries that are highly dependent on natural resources might seek to counterbalance decreases in relative export rates through increases in export volumes.

Mainly as a result of trade deficits, (excepting Syria, Algeria and Libya), most of the SEMC record a *deficit in their current accounts* (Figure 30). Although this is sometimes relatively weaker than in the EU-Med countries, its financing mode is vulnerable. Actually, the SEMC balance their current deficits mainly through receipts linked to the trade in services (mainly tourist-related income⁴⁸) and through transfers⁴⁹ (essentially from emigrants). However, these receipts are highly volatile since they fluctuate significantly according to the economic and political situation. Terrorist attacks and armed conflicts have major repercussions on tourist activity.

Figure 30 Current account balance (as % of GDP)



Source: World Bank, 2004

The exposure of the SEMC economies is also linked to their weak diversification and their high dependence in relation to:

- The European economy, which exposes them to any unfavourable turn of events by affecting their growth and in consequence their government income. According to FEMISE, for a 3 per cent decrease in European growth, the expected decrease in GDP in SEMC through the evolution of trade could reach 3.3 per cent in Algeria, 6.2 per cent in Tunisia and 1.2 per cent in Turkey. If a decrease of 3 per cent should occur in the US, its potential repercussions on GDP would be a reduction of 1.5 per cent in Algeria, 1.3 per cent in Israel, 0.9 per cent in Tunisia and 0.4 per cent in Turkey.
- Natural resources and climate hazards. In Morocco the major droughts (1994, 1996 and 1999) explain to a great degree the economic recession of the past few years and the difficulties in balancing the state budget. In Syria, Tunisia and Algeria climate hazards engender wide fluctuations in agricultural production, a still important sector of the economy and employment.
- Fluctuations in world prices. Economic growth in Algeria is closely linked to the world price of oil, a sector that on its own ensures 62 per cent of the country's fiscal income.

All of these structural weaknesses (debt, tax system, weak diversification, deterioration in terms of trade, volatile receipts) reduce the room for manoeuvre for investing in physical and human capital, which is indispensable for the potential of future SEMC development.⁵⁰ Some signs show that falling behind other competing regions could become more marked. The level of gross formation of fixed capital in the SEMC is close to the world average, but much lower than that in the southeast Asian countries. Their educational system, although recording much quantitative progress, is still typified by a low ability to adapt to socio-economic needs and produces few students in advanced studies. Their expenditure in the field of research and development, for the countries that publish data, has a hard time reaching 0.6 per cent of GDP (compared with more than 1 per cent in the Eastern Adriatic countries and 2.1 per cent on average worldwide). The weakness of their efforts in terms of innovation is confirmed by other indicators such as the number of patents accorded to residents or the number of engineers and scientists in R&D per 1000 people. Their telecommunications network and access to new communication and information technologies (NCIT) show a certain tardiness. Turkey and Egypt thus devoted less than 4 per cent of their GDP in 2001 to expenditure on NCIT compared with more than 7 per cent in Israel and 9 per cent in France. The SEMC (excluding Israel) account for 53 per cent of the Med-

iterranean population but only 8 per cent of people with Internet access.

The free-trade gamble: Succeeding with reforms

Free trade for the SEMC

Given these structural weaknesses, successfully opening-up the SEMC economies (which is accelerating with the increase in free-trade agreements in the Mediterranean) comes with the gamble that the required reforms needed in the countries to capture all the advantages of trade opening will be achieved.

Those countries that know how to benefit from the stimulation created by liberalizing to accelerate reforms aimed at adapting actors' behaviour to the market economy can expect a *positive effect* on their economies (the attractiveness of FDIs, the chance to import less expensive technology and input, etc.). If, moreover, they use liberalization as an opportunity to set up a genuine governance for the environment and sustainable development, the effects could be beneficial at the economic, social and environmental level. On the other hand, for the countries that delay in carrying out these reforms, setting up a Euro-Mediterranean free-trade zone, combined with EU enlargement to take in countries that are potential competitors for the SEMC, could mean more socio-economic and environmental risks than opportunities.

From a *socio-economic* point of view, these risks could take the form of a worsening of trade deficit in relation to the EU, a fall in the GDP growth and a sensitive loss of customs income, with important repercussions in terms of *unemployment*, particularly in the less competitive industrial sectors.⁵¹ A simulation carried out in Morocco, on the basis of a general equilibrium model, has shown that the cancellation of customs duties for products from the EU, without corrective measures, would result in an estimated fall in the job market of 2.3 per cent for unskilled labour, 1.1 per cent for skilled labour and 3.2 per cent for executives.⁵² Similarly, when Greece and Spain joined the EU, the freeing up of trade was expressed by agricultural specialization and restructuring that led to high country-to-city migration and a rise in unemployment, which were partially compensated by massive European and domestic subsidies.

Without energetic measures for increasing productivity, improving production techniques and differentiating their products, the SEMC risk losing *competitiveness* for their main export products. Competition for those products will continue to get stronger with emerging Asian countries and new EU Member States that benefit from the EU's financial solidarity for upgrading infrastructures. Two sectors are particularly exposed: textiles and agriculture (Box 20).

Increased *intra-SEMC competition* may also occur in order to seize the EU market, with the risk of an increased concentration of trade flows from and to the EU at the expense of developing south-south trade.

In the short term, dismantling SEMC customs duties will have a significant effect on *macro-economic balances* (for example a reduction in states' budgetary income and increased imports), which risks influencing the balance of the already negative current account. This situation might persist if, as some studies have shown, free trade means a short-term loss of growth. The most advanced countries in terms of tax reforms will be the least affected by this effect.

The 'winning' countries in the medium term will be those able to optimize the *effects of free trade* on their environment. These effects are many and barely studied, although equivalent experiences such as NAFTA's and, even more, the inclusion of Spain, Greece and Portugal in the EU, showed ambiguous impacts on the environment. In these countries, the negative impact was reduced as a result of their joining the EU (Box 12). The few available studies⁵³ lead to the following conclusions:

- In industry, free trade could have a positive *'technical'* effect on the environment in the SEMC by facilitating access to clean technologies (FDI, lower prices), which are major paths to progress in reducing sources of polluting industrial emissions. This effect must, however, be relativized by the small levels of FDIs that are the main engines for modernization. It could also be cancelled by the *'dimension'* effect of free trade related to increased activities: the increase of hot spots in the coastal zones, and the increase in energy consumption and transport; this is particularly important since environmental regulations are difficult to impose, especially on small and medium-sized companies, which are in the majority as they do not have the capability to absorb the costs, and are exposed to increased competition. The *'structural'* effect⁵⁴ of free trade (specialization in polluting sectors such as textiles, energy production, refining and petrochemicals), combined with strong growth in domestic demand for basic products (cement, steel, metal and chemical products, paper and cardboard), could also be harmful for the environment. Experts are sceptical about the real effect of 'environmental dumping' on possible decisions about relocating polluting industries to the SEMC. However, it is possible that some countries make an attractiveness strategy of it by overestimating its drawing power and underestimating its direct and indirect negative effects on the environment.
- In the agricultural sector, the possible free trade in agricultural products might have some positive effects on the environment by facilitating compliance by

Box 20 Key sectors of increasingly exposed SEMC economies

The ten new EU member countries of 2004 could prove to be redoubtable competitors for the SEMC in strategic sectors such as agriculture, textiles, clothing, small-scale engineering and tourism. These countries have accumulated many advantages compared with the SEMC. Further advanced in their reforms towards the implementation of a stable macro-economic framework, they are also better integrated into the European industrial and market systems. For a long time now they have benefited from the pan-European system of rules of origin and cumulation.* Their economies are more open (5.2 per cent protection level** compared with 17.5 per cent in the SEMC) and more diversified. They attract more direct foreign investment (more than US\$120 thousand million over the past 10 years, or a quarter of their GDP). Further along in their demographic transition, their unemployment rates are also lower as is the average annual growth of their job applications (0.3 per cent compared with 2.8 per cent per year in the SEMC). And finally, with their EU membership and the 'Community *acquis*', they benefit from EU financial support for upgrading their infrastructures and their companies that is much higher than that of the SEMC (Figure 28), thus introducing a new comparative advantage in their favour.

In the SEMC two sectors are particularly exposed: textiles and agriculture.

Lacking increased productivity, the combined effects of EU enlargement and the application of association agreements may well have a negative effect on the entire industrial sector, including the **textiles/clothing sector**. Added to this are the

effects of dismantling the Multifibre Arrangement (WTO), which will end the preferential regime granted until 2005 by the EU to textile-clothing imports from the SEMC (quotas) and expose them to stiff competition from the ten new member countries and the Asian nations. However, this sector accounts for millions of jobs in the SEMC and exports up to 70 per cent to the EU. Thus, in Morocco's clothing industry (the country's leading exporter with 95 per cent going to the EU), the combined effects of the Morocco–EU association agreement and the dismantling of the Multifibre Arrangement may provoke a fall, on annual average, of 5.5 per cent in the sector's production and 5 per cent in exports, whereas imports may increase by 4.8 per cent.

As far as **agriculture** is concerned, currently excluded from association agreements, the risks may be even greater given the productivity differences between the ten new members and the SEMC, an average factor of 3 and up to 20 for some Mediterranean countries (see Chapter 5).

Source: FEMISE, 2003 ; *Plan Bleu*/ESCWA, 2003

Note:

* They set the eligibility conditions for a product at a preferential tariff with the possibility of cumulating the preference granted by the countries associated in preferential trade agreements. This system includes the EU and the ten new members and became accessible to the Mediterranean partner countries in their association agreements of 2003.

** The simple average of the customs duties calculated on the basis of the rate for the most recent year.

certain products (pesticides) with environmental standards. On the other hand, there are considerable risks of degradation of landscapes, related to impoverishment, overexploitation of resources and rural–urban migration, with growing and poorly controlled problems of coastal overdevelopment and urban development. Specialization in the production of fruit and vegetables could increase pressures on water resources and pollution, as has been seen in some regions of southern Europe (Box 12).

- Free trade, and the specialization that goes with it, could also promote a large increase in transport (passenger and freight traffic) and the automobile fleet, larger than the increase in incomes. It could contribute to spreading consumption styles (hypermarkets on the edges of cities, proliferation of packaging) that are especially costly at the environmental level in countries already mostly under-equipped with services and infrastructures (waste treatment, public transport). The environmental and social costs of this boom (gaseous emissions, noise, congestion, accidents, uncontrolled dumping, etc.) are likely to grow considerably in the SEMC between now and 2025.

These risks will be analysed up to 2025 in the second part of this report.

The scale of reforms

The countries most likely to profit from free-trade opportunities will therefore be those that, first, can rapidly compensate for the tax deficits and finance the strategic expenses vital for strengthening their competitiveness (human, physical and environmental capital⁵⁵), without worsening their public deficit: those that can find room for manoeuvre while attracting additional international funds (FDI, ODA) through adequate institutional adjustments or tax systems (broadening the tax base).⁵⁶ Second, and more generally, the free-trade opportunities will be seized by countries engaging in deep-running reforms so that economic and social agents, companies, administrations and households evolve towards new forms of *behaviour* that are adapted to a market economy.

SEMC *companies* have made considerable structural adjustments to strengthen the enterprise spirit and carry out technological modernization by diversifying their strategies, rebuilding their industries and, more generally speaking, shifting from 'rent' strategies to

'productive' ones. *Public administrations* have a central role to play in creating institutional frameworks that favour such evolution, by ensuring healthy macro-economic management, implementing an incentive framework for the stimulation of investments and modernization of production systems: policies for supporting the entrepreneurial spirit, decentralization, streamlining authorization procedures, transparency and administrative efficiency, and fiscal reforms. Public expenditures on infrastructures, education and technological development are also important. To improve the *business climate*, laws against unfair business practices, the misuse of company assets, and their effective application, may result in significant progress, as would transparency in public decision-making (public market legislation, funding for political parties) and the fight against corruption. In 2002 all the SEMC had a 'Corruption Perceptions Index'⁵⁷ under 5, which means a major probability of corruption against which only some countries have implemented measures (awareness raising campaigns). The creation of specialized jurisdictions (administrative and commercial courts) and, more generally, the independence of the legal branch in relation to the executive, are indispensable conditions for fighting against corruption.

All these reforms pertain to the more global question of '*governance*', understood as the mechanisms, processes and institutions by which citizens articulate their interests, exercise their legal rights, fulfil their obligations and settle their differences. In this regard many SEMC are still faced with an enormous task in order to promote the process of democratic governance in the service of human development (Box 21).

Box 21 Democratic governance for human development in the Arab countries

The first UNDP regional report on human development in 22 Arab countries (from the Gulf to the Maghreb countries), prepared by a prestigious panel of Arab intellectuals, shows the progress made over the past three decades by the region's countries in several human development fields (life expectancy, infant mortality, literacy, etc.). At the same time, it highlights the remaining task of making the rigidity of the political systems of the region more flexible and promoting democratic governance for present and future generations.

Three key aspects of governance are analysed through a set of composite indicators, then crossed with the human development indicator (HDI): (i) the processes by which governments are chosen, monitored and replaced, (ii) the ability of governments to formulate and implement policies, and (iii) compliance with laws by citizens and states. Despite some encouraging steps for the 1990–2000 period, the group of Arab countries appears to be far behind the other regions of the world. A wide range of principles for reforming Arab

country systems of governance is recommended so that they might attain higher levels of human development. The major reforms deal with the twin pillars of governance: a competent state and an active civil society.

Concerning the state institutions, the reforms aim at improving:

- political representation through free and regular elections (truly representative and fully accountable governance);
- the efficiency of public administrative services, the equity and efficiency of tax systems and the rationalization of public expenditure;
- respect for the law by reforming legal institutions so as to make them independent and impartial.

The called-for reforms also relate to free speech and freedom of association, as well as three critical fields: strengthening local governance institutions, particularly in the big countries; rendering civil society organizations dynamic; and promoting free and responsible media.

Although the situations and priorities unique to each country will most certainly condition the choices for appropriate action, the report stresses the complexity and difficulty of the institutional and governance reforms, which cannot be carried out simply by changing laws and rules, without strong and sustained commitment by leaders and the free consent of the people.

Source: UNDP, *Arab Human Development Report*, 2002 and 2003

In short, the SEMC have launched major and costly deep reforms for instilling the conditions of 'good governance' on which the success of free trade will depend. Far from being completed, these reforms are inseparable from more general, deep-running changes in governance for sustainable development. The ongoing efforts may be compromised by a lack of political will but also by very restricted room for manoeuvre (for example domestic resistance related to the political and social costs of the reforms; deficits in the current account limiting investment; increased competition from emerging, more dynamic and richer regions in human capital). Without outside support, faced with the magnitude of the efforts to be made, the ability of many SEMC to generate increased, long-term productivity and at the same time absorb their social and environmental consequences may prove insufficient.

The baseline scenario assumes that the reforms aimed at adapting to the market economy and deriving advantage from trade liberalization will continue, with very large variations from one country to another and a risk of marginalizing countries that have delayed the most in implementing the reforms. Moreover, most of the efforts only focus on economic 'upgrading' with environmental and social concerns being secondary.

Summary of the baseline scenario assumptions

The preceding sections have made it possible to formulate the assumptions that typify the baseline scenario in its main lines to 2025 (climate, population, geo-economy, governance). These general assumptions are summarized in Table 5.

They are completed here by the *economic growth assumptions* established by *Plan Bleu* for the major groups of Mediterranean countries to 2025 (see also Statistical Annex).

Although in the baseline scenario (weak north–south and south–south regional integration), the EU loses its

economic and strategic weight in the world by missing the historic opportunity of drawing much closer to its neighbours, it could nevertheless benefit from strong global growth (the emergence of China, the impetus of new technologies and the information economy). The assumption is that the economies of the EU (and the EU-Med countries) will grow at an average of around 2 or 2.5 per cent per year between 2000 and 2025. Boosted by European and global growth, growth in the other Mediterranean countries will also accelerate but not quickly enough to catch up with the standards of living in the EU countries. A genuine economic restart in the SEMC will still be restrained by low investment and the relative unattractiveness of the region in terms of FDI, related to many factors (persistent conflicts, slow

Table 5 Assumptions for the baseline scenario (2025)

Determinant	Assumed changes
Climate change	<p>Global warming less than 1°C by 2025</p> <p>Accelerated occurrence of extreme natural phenomena (droughts, floods)</p>
Population	<p>Decrease and rapid convergence in fertility rates</p> <p>Slowdown in population growth but still an additional 96 million in the region by 2025:</p> <ul style="list-style-type: none"> ● 3.7 million more inhabitants per year in the SEMC ● 31 million more in coastal zones by 2025 ● 40 million more households by 2025, with decreases in household size. <p>Ageing accelerating in the North</p> <p>South and east have 3 million net more people of working age per year</p> <p>Spread of poor eco-efficient consumption patterns</p> <p>105 million more urban dwellers by 2025, of which 33 million will be in the coastal regions</p> <p>Rural population stability</p>
Globalization and trade	<p>Persistence, but lowering, of more or less open conflicts</p> <p>Boom in the market economy, spread of the technological paradigm and the information society</p> <p>Strong world growth (driven by the Asian pole)</p> <p>Relative drop of the Euro-Mediterranean pole: ageing in the north, poor development in the south</p> <p>Intensification of trade between the EU and the SEMC:</p> <ul style="list-style-type: none"> ● evolution towards free trade, with progressive steps in the agriculture sector ● persistence of clandestine immigration to the EU ● tourism in 2025: <ul style="list-style-type: none"> – at country level: 178 million more international tourist arrivals – at coastal region level: 136 million more tourist (international and national) arrivals ● growth in Euro-Mediterranean trade ● increase in capital flows from the EU to the SEMC
Regional cooperation and integration	<p>Northern shore more and more integrated into the EU</p> <p>Weakness of Euro-Mediterranean integration that varies between countries</p> <p>Limited cooperation between SEMC</p> <p>Regional Euro-Mediterranean cooperation on the environment with limited resources</p>
Environmental governance	<p>Environmental policies remaining more reactive and curative than preventive</p> <p>Environment largely remaining a matter for states</p> <p>Poor integration of the environment into development</p> <p>Weakened land planning and regional development policies in national political agendas</p> <p>Environmental governance remaining impotent in the face of sustainable development challenges</p>
Reforms within SEMC	<p>Uneven continuation of socio-economic reforms in the SEMC, with limited room for manoeuvre and focused mainly on economic upgrading</p>

reform, poor north–south and south–south cooperation, and competition with emerging countries). Within this assumption, Israel and the Palestinian Territories may well be in decline because of the persistence of conflict there, and would drag the Mashrek region down. In contrast, Turkey and the Maghreb countries will see an increase in average annual growth. *The result would be an average GDP growth of 2.7 per cent per year for the entire Mediterranean for the period 2000–2025, compared with 2.5 per cent between 1985 and 2000.*

Without claiming these to be predictions (a scenario is never predictive), these assumptions are useful for setting the ‘prospective framework’ for the various analyses in Part 2 of the report, where detailed assumptions on pressures on the environment into the future (waste production, pollutant emissions, traffic, water consumption, etc.) will be formulated.

Notes

- 1 Nomenclature of Territorial Units for Statistics (NUTS).
- 2 Attané and Courbage, 2001.
- 3 IUCN, 2003.
- 4 Myers, 2000.
- 5 WCED, 1987.
- 6 For detailed analysis on the economic and social aspects of development in the Mediterranean, it will be useful to refer to the numerous reports published by other institutions (UNDP, World Bank, ESCWA, European Commission, and the Femise and EuroMesco networks of the Euro-Mediterranean partnership).
- 7 *Plan Bleu* estimates from World Bank data (World Bank, 2004) for countries for which figures are available.
- 8 World Bank, 2003.
- 9 To facilitate comparison from one year to the other, the Mediterranean will include here the same number of countries. This made it necessary to exclude countries not existing in 1970 and 1980 (mainly the Eastern Adriatic countries) or those which had no data for the same years (Lebanon, Libya, Palestinian Territories). These countries only represented 2 per cent of the Mediterranean GDP in 2001.
- 10 A notion introduced by UNIDO, *Report on industrial development 2002/2003*.
- 11 Menegaldo, Palméro and Roux, 2003.
- 12 AFSSE, 2004.
- 13 On average Mediterranean countries, except the EAC; UNDP, 2000.
- 14 UNDP, *Human Development Report*, 2000.
- 15 At the time of the preparation of this report, available global scenarios did not foresee a considerable increase in energy or agricultural raw material prices. Therefore the Blue Plan baseline scenario, which is founded on heavy trends observed over the past 20–30 years, has not integrated the important rise in oil prices that have occurred since 2003.
- 16 IPCC. *Climate change 2001, the scientific basis*.
- 17 Medias, *Plan Bleu*, 2001.
- 18 The average number of children that a woman would bear if she were to live to the end of her child-bearing years and bear children at each age in accordance with prevailing age-specific fertility rates.
- 19 Ratio: active population/population of an age to work.
- 20 Ratio: number of jobs/active population.
- 21 An economy that has macro-economic equilibrium (stability of prices, public budgetary equilibrium, interest rates that are instrumental for anti-inflation policies), a minimum-sized public sector, and liberalized foreign trade and capital flows.
- 22 IFRI. *Le commerce mondial au XXI^e siècle*, 2002. Collective study by the Institut français des relations internationales (IFRI), the Euro-Mediterranean Network of Economic Institutes (FEMISE) and other institutions.
- 23 See especially the fierce competition from Canada, Australia, Japan and the UK to direct the flow of specialists in new technologies to their countries, also the US which ‘sucks up all the world’s grey matter’.
- 24 H. Regnault. *Intégration euro-méditerranéenne et stratégies économiques*. L’Harmattan, 2003.
- 25 Based on a set of assumptions on economic growth, the rate of departure on holiday and the distribution of tourists in Mediterranean coastal regions.
- 26 Croatia on its own accounts for 50% of external trade for these countries.
- 27 Analysed here from the DAC/OECD database which covers the capital flows to the Mediterranean countries excluding the EU-Mediterranean countries. It breaks down Total Net flows (TNF) into Official and Private Flows.
- 28 In particular in sectors such as agriculture, energy, tourism, and land and environmental management, but also expertise and education.
- 29 The principle of mutual recognition ensures the free circulation of goods and services without it being necessary to fully harmonize the national legislations of the various Member States.
- 30 Pre-accession funds, and then structural funds for the most vulnerable regions or sectors.
- 31 The CARDS (Community Assistance for Reconstruction, Development and Stabilization) is allocating 4.5 thousand million euros in aid from 2000 to 2006.
- 32 Turkey, Israel, the Palestinian Territories, Syria, Lebanon, Egypt, Jordan, Tunisia, Algeria, Morocco. Two countries, Cyprus and Malta, have since joined the EU in 2004.
- 33 Pasty, 2000.
- 34 Those concerned among the SEMC: Algeria, Egypt, Israel, Lebanon, Libya, Morocco, the Palestinian Territories, Syria and Tunisia, as well as Jordan, Ukraine, Moldova, Belarus and Russia.
- 35 With the Erika I and II package of measures in the field of maritime safety, the gill nets banning or also the Directives on Urban Waste Water treatment.
- 36 Grenon and Batisse (1989, pp269 and 260).
- 37 A more significant indicator is that of countries’ overall expenditure for environmental protection, but national accountancy systems are not homogeneous, and data required to inform this measure are lacking.
- 38 Kiss A. Cinq années de droit international de l’environnement (1996–2000) in *Revue juridique de l’environnement*, no. 4, 2001.
- 39 UNECE, 2003.
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- 45 Data from European Commission, GD ECFIN. Examen de la situation économique des partenaires Méditerranéens de l’UE, Occasional paper, March 2004.
- 46 Moreover, interest payments have recorded a spectacular growth during the three last decades, and become equally as important as, or even more important than, government capital expenditures in several countries (Israel, Turkey, Lebanon, Egypt), thus cancelling part of the decrease in some expenditures.
- 47 Abed, 1998.
- 48 And the transport of goods in Egypt (Suez).
- 49 Emigrants but also American transfers to Israel and Egypt (between 3% and 4% of GDP) for geo-strategic reasons.
- 50 With the exception of Israel.
- 51 FEMISE, 2003; M. Hbchir, Y. Decreux, M. Fouquin, 2003 and *Plan Bleu*, 2000.
- 52 B. Hamdouch and M. Chater, FEMISE, 2001.

- 53 PNUE/PAM/Plan Bleu, 2002.
- 54 When trade is liberalized, countries specialize in sectors where they have a competitive edge. If one of them is lax in its environmental policy, specialization will normally increase the activities that are less regulated than in other countries and create additional problems.
- 55 Infrastructures, training, upgrading the production fabric, better organization, research and technology.
- 56 In this regard, some countries such as Morocco, Tunisia and Turkey have already introduced partial tax reforms in contrast to others such as Syria and Lebanon.
- 57 This index, developed by Transparency International, refers to the perception of the degree of corruption in the opinion of businessmen, academics and risk analysts; 10 signifies a high level of honesty and 0 a high level of corruption.

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