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Preserving the environment in the Mediterranean

Report¹

Committee on the Environment, Agriculture and Local and Regional Affairs

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Summary

Despite various political initiatives at international level, the Mediterranean still faces very serious environmental problems which are the result of both climate change and factors such as intensive agriculture, overfishing, rampant coastal development, inadequate controls over waste and wastewater disposal and increased trade and shipping.

The member states of the Council of Europe and all countries of the Mediterranean Basin must improve, implement and enforce national and international environmental legislation, apply an integrated ecosystem-based approach in their policies and integrate it in all relevant sectors. This process requires strong political commitment, adequate funding, institutional capacity and transfer of technology and know-how.

In this respect, international co-operation based on more solidarity and political balance between the northern and the southern Mediterranean countries must be stepped up. The Council of Europe is urged to play an active part in this process, including increased co-operation at the parliamentary level with the Euro-Mediterranean Assembly and the Parliamentary Assembly of the Mediterranean.

1. 2011 - First part-session



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A. Draft resolution²

1. The Parliamentary Assembly regrets the fact that, despite various initiatives at international level, the Mediterranean still faces very serious environmental problems, which are the result both of climate change and of factors such as overfishing, rampant coastal development, inadequate controls over waste and wastewater disposal, the destruction of sensitive habitats and increased shipping.
2. Furthermore, while the region's rapid growth in recent decades has had positive effects on the local standard of living, this has, regrettably, largely been at the cost of its environmental balance.
3. According to some scientific studies, biodiversity is under increasing threat and some vulnerable species are already on the verge of extinction.
4. Climate change has affected water resources owing to increased evaporation and decreased rainfall. Water, therefore, is set to be a major political and economic issue, over which there are likely to be highly frequent conflicts in the Mediterranean region.
5. In this connection, the Assembly refers to its [Resolution 1197 \(1999\)](#) on peace, democratic stability and sustainable development in the Mediterranean and Black Sea Basins: the role of interparliamentary co-operation, [Recommendation 1630 \(2003\)](#) on erosion of the Mediterranean coastline: implications for tourism and [Resolution 1693 \(2009\)](#) on water: a strategic challenge for the Mediterranean Basin.
6. The Assembly also refers to the Convention on the Conservation of European Wildlife and Natural Habitats Bern Convention (ETS No. 104) ("the Bern Convention"), whose aim is to preserve wild plant and animal species and their natural habitats and promote European co-operation in this field, the Barcelona Convention of 1976 for the Protection of the Mediterranean Sea Against Pollution, which aims to reduce pollution in the Mediterranean region and protect and enhance the marine habitat in this area in order to contribute to its sustainable development, and the European and Mediterranean Major Hazards Agreement, which is a forum for co-operation between European and southern Mediterranean countries in the field of major natural and technological hazards.
7. The Assembly also highlights the existing international treaties, particularly the Mediterranean Action Plan, brokered by the United Nations Environment Programme, and the Mediterranean Environmental Technical Assistance Programme.
8. In this context, the Assembly welcomes the measures taken by some states to set up national action plans for the environment and encourages countries which have not yet done so to follow this example.
9. The Assembly welcomes the action taken in the sustainable development field by some southern Mediterranean countries, particularly Morocco, with a view to preserving fish stocks and the marine environment and developing renewable energy sources, and encourages all southern Mediterranean countries to take this kind of measure.
10. The Assembly welcomes the constructive co-operation with the Parliamentary Assembly of the Mediterranean on subjects of common interest such as environmental protection, disaster management and the role of local and regional authorities, and highlights the major role played by the Council of Europe in this connection in the Mediterranean region.
11. The Assembly notes and regrets that since its establishment in 2008 and owing to insufficient commitment on the part of the European Union, the Union for the Mediterranean, which brings together all the European Union member states and Mediterranean countries, has not yielded the expected results despite the various projects that were decided on.
12. The Assembly is disappointed at the low level of solidarity shown by the northern countries to the southern countries. This is especially regrettable in view of the fact that the northern countries have contributed to a large degree to the environmental deterioration in the southern countries, caused in particular by the intensification of tourism in the Mediterranean and intensive farming of the land around the Mediterranean for northern markets.
13. The Assembly also points out that there is a great deal of shipping activity in the Mediterranean and that most ships carry cargoes which can cause major environmental damage if they are lost.

2. Draft resolution adopted unanimously by the committee on 17 September 2010.

14. In the light of the foregoing, the Assembly asks the member states and particularly Mediterranean non-member states to:
 - 14.1. implement strict policies designed to prevent and reduce environmental degradation in the Mediterranean;
 - 14.2. enhance national and international environmental legislation and ensure that it is implemented;
 - 14.3. take measures to promote the sustainable management of water resources;
 - 14.4. commit appropriate financial resources, build institutional capacity and promote technology and skills transfer in order to address the environmental problems of the Mediterranean Basin;
 - 14.5. take joint action at parliamentary level with the Parliamentary Assembly of the Mediterranean and the Euro-Mediterranean Parliamentary Assembly to preserve the Mediterranean environment more effectively;
 - 14.6. work in close co-operation with the Union for the Mediterranean to improve its performance in the environmental protection field and compensate for some states' lack of political commitment;
 - 14.7. introduce structural policies and, as far as possible, assist financially the Mediterranean towns and coastal regions in modernising their harbour installations and their waste water collection, treatment and recycling systems;
 - 14.8. step up inspections of the fishing industry and help rebuild depleted fish stocks;
 - 14.9. promote sustainable, healthy tourism respecting the natural heritage and, in this connection, promote the establishment of a system of taxes for the benefit of tourist countries;
 - 14.10. encourage increased and long-term use of renewable energy sources around the Mediterranean and support the efforts already being made by some countries to improve their energy efficiency;
 - 14.11. intensify co-operation and integration in the field of maritime surveillance so as to improve oil pollution control and apply the "polluter pays" principle;
 - 14.12. encourage transfrontier co-operation;
 - 14.13. adopt an integrated ecosystem-based approach for protection of the Mediterranean environment and combat pollution linked with urban development, agriculture and industry;
 - 14.14. take measures to improve the quality of biannual reports, particularly as regards comparisons between the Parties to the Barcelona Convention;
 - 14.15. sign and ratify, if they have not already done so, the international legal instruments relating to co-operation in the field of sustainable development in the Mediterranean Basin, some of which are referred to above;
 - 14.16. endeavour to put in place protected areas and support sustainable agriculture, in conformity with the spirit of the Bern Convention.
15. The Assembly also invites the Congress of Local and Regional Authorities to:
 - 15.1. support the local and regional authorities around the Mediterranean and the countries whose rivers flow into the Mediterranean in their efforts to manage the marine environment, in accordance with the principles of sustainable development, and to promote the Mediterranean system;
 - 15.2. ask local and regional authorities concerned to promote Agenda 21 activities;
 - 15.3. promote the signature of environmental agreements and twinning agreements between the local authorities concerned and make environmental impact assessments mandatory for all regional projects;
 - 15.4. initiate co-operation programmes to foster sustainable development at local and regional level, using existing platforms such as the Parliamentary Assembly of the Mediterranean.

B. Explanatory memorandum by Mr Falzon, rapporteur

1. Introduction

1. The Mediterranean, cradle of cultures and civilisations and the birthplace of the three monotheistic religions, was in the past and remains today a crossroads for cultural, human and economic exchanges and a bridge between civilisations and three continents. However, political stability in the Mediterranean, as well as the social and economic livelihood of its rapidly growing population, are highly dependent on its scarce natural resources and the viability of its extremely rich and diverse, but also extremely vulnerable, natural environment.

2. The aim of this report is to enrich the debate with concrete proposals to enhance political co-operation in the field of sustainable development. It takes account of previous work by the Parliamentary Assembly relating to the Mediterranean and resulting in the adoption of texts such as: [Resolution 1197 \(1999\)](#) on peace, democratic stability and sustainable development in the Mediterranean and Black Sea Basins: the role of interparliamentary co-operation; [Recommendation 1558 \(2002\)](#) on fisheries in Europe's semi-land-locked seas; [Recommendation 1630 \(2003\)](#) on erosion of the Mediterranean coastline: implications for tourism; [Resolution 1556 \(2007\)](#) on Euro-Mediterranean agricultural and rural policy; [Resolution 1693 \(2009\)](#) on water: a strategic challenge for the Mediterranean Basin; and [Resolution 1731 \(2010\)](#) and [Recommendation 1919 \(2010\)](#) on the Euro-Mediterranean region: call for a Council of Europe strategy.

3. Moreover, the report is complemented by the ongoing work in the Committee on the Environment, Agriculture and Local and Regional Affairs on climate change, biodiversity, progress in the implementation of the Bern Convention, water management, the energy sector, fisheries, agricultural reform, forestry, the prevention of natural disasters and the credibility of environmental assessments.

4. In global terms, 2010 was the International Year of Biodiversity and an important year to set the basis for a low carbon future by reaching consensus amongst the Parties to the United Nations Framework Convention on Climate Change. In the aftermath of a rather meagre outcome from the high level negotiations in Copenhagen (COP15) in December 2009, it will be crucial to achieve firm political and economic commitments in order to contain climate change within the projected 2°C increase and to remedy the effects of environmental degradation across our planet. The growing threats to fragile ecosystems such as those in the Mediterranean region are stark examples that ought to fuel political action.

2. Vulnerability of the Mediterranean environment

2.1. Characteristics of the Mediterranean Basin

5. The Mediterranean, which is the largest semi-enclosed European sea, is characterised by a narrow continental shelf, a narrow coastal area and a small drainage basin, especially in the northern part. The Sicilian Channel separates two distinct basins, the western and the eastern, and acts as a geographical and hydrological frontier between them.

6. The Mediterranean Sea covers 2 500 000 km² with an average depth of 1 500 metres, the deepest point being over 5 000 metres in the part known as the Ionian Sea, between Greece and the "boot" of Italy. It is linked to the Atlantic Ocean (at the Strait of Gibraltar), the Red Sea and the Indian Ocean (by the Suez Canal) and the Black Sea (at the Dardanelles and the Sea of Marmara). The main subdivisions are the Adriatic, Aegean, Ionian, and Tyrrhenian seas.

7. The Mediterranean Sea is characterised by high temperatures (annual minimum of 12°C, reaching up to 25°C during the summer), which induces high metabolic rates. It is the most saline of Europe's seas. As evaporation exceeds precipitation and river run-off, the sea has a freshwater deficit of about 2 500 km³/year. The Mediterranean Sea has a microtidal regime with a tidal range of less than 50 cm, which reduces the potential for the dilution and dispersion of dissolved and particulate waste.

8. In terms of oligotrophy, it is poor in nutrients and has low primary production and low plankton biomass. Primary production in the open sea is considered to be limited in phosphorus, whereas it is limited in nitrogen in most of the world's oceans. Consequently, the water is particularly transparent and light can penetrate deep into the water column, allowing photosynthesis at a greater depth.

9. One of the features of the Mediterranean Sea is its rich biodiversity. The fauna and flora are among the richest in the world, particularly in the coastal areas. They are also highly diverse and there is a high proportion of endemic species (28%). The Mediterranean Sea is home to a vast range of marine life, including lush sea grass meadows, seamounts, and trenches that reach depths of 5 000 metres. It accounts for less than 1% of the world's oceans but is home to nearly 9% of all marine life, with more than 10 000 species identified so far. The diversity of mammals is particularly high along the coast of Africa and between France and Italy, in areas where cool water rises and brings vital nutrients to the surface.

2.2. Effects and forecasts of climate change in the Mediterranean

10. The Mediterranean region is known for its particularly mild climate, with uniform and moderate temperatures. Rainfall patterns are, however, more unpredictable with a high of 1 200 mm per year in Genoa (Italy) and a low of 100 mm per year in Djerba (Tunisia).

11. The available statistics show that temperatures have risen by nearly 2°C since 1970 in south-west Europe (Spain and the south of France). In North Africa, temperatures have also risen but there is a lack of comprehensive data to quantify the change. Rainfall has dropped by 20% in several southern European regions.

12. Scientists forecast an air temperature rise of between 2.2 and 5.1°C in southern Europe between the end of the 20th century and the end of the 21st century, in addition to a sharp decline in rainfall (up to 27%) and changes in precipitation patterns. Those changes would imply increased periods of drought and, potentially, a 35 cm rise in sea levels, according to the studies done by the Mediterranean Action Plan of the United Nations Environment Programme in 2009.

13. Climate change in the Mediterranean will affect water resources due to increased evaporation and decreased rainfall. Water is set to become a major economic and political issue in the Mediterranean region. Climate change will also have an impact on biodiversity as a result of the upward shift of certain species, the extinction of climate-sensitive species and the appearance of new species. Warming of deep sea waters, increased flooding of low-lying coastal lands and accelerated cliff and beach erosion will inevitably alter natural habitats. It will also have an impact on soil owing to accelerated desertification. Deforestation is also speeding up as a result of an increase in forest fires and a growing number of parasites.

14. Climate change will also have an impact on agriculture, fishing, tourism, public health, and coastal areas and infrastructure, with major repercussions in economic and political affairs.

3. Population growth, human activity and the environment

15. The Mediterranean coastline extends 46 000 km, running through 22 countries. The region is home to more than 400 million people in these 22 countries, 143 million of whom live on the coast. About another 175 million visit the region each year. It is estimated that the population of the Mediterranean countries will reach 520-570 million by 2030, so preserving the environment of the Mediterranean is essential for the well-being of all these people.

16. The Mediterranean Basin's geopolitical, cultural, religious, social and economic diversity is also a source of latent or outright political instability, tension and conflict, which often undermine co-operation and have an extremely harmful effect on the environment.

17. The Mediterranean is a region of major economic imbalances. According to development indicators, the average income per inhabitant (GDP per capita) in the southern and eastern Mediterranean countries is about 4.5 times lower than the average income in the seven European Union countries.³ The European Union Mediterranean countries account for more than 74% of the Mediterranean's GDP. Growth rates of GDP in the southern and eastern Mediterranean countries are much higher than those recorded for the European Union Mediterranean countries, but they are considered to be low in relation to the population as demographic growth remains very high.

18. Rapid population growth on the southern and eastern Mediterranean shores undermines sustainable economic development in those countries and paves the way for migratory pressures exerted by people seeking jobs and a better life elsewhere. In the 1950s two thirds of the population of the Mediterranean Basin lived on the northern shores, from Spain to Greece, and the remaining third on the eastern and southern shores, from Turkey to Morocco. As a result of diverging demographic trends between the northern and

3. Data from the World Bank, World Development Indicators (WDI).

southern shores, these two areas have reached equal levels. By the year 2025, the ratio is predicted to have been inverted – one third of the population will live in the European part of the Mediterranean and two thirds in the African and Asian parts, with a high percentage of young people, exacerbating further the unemployment problems and exerting migratory pressures. By 2025, trends indicate that 45% of the population will be under 15 years of age in the south and east, compared with only 24% in the north. The region's rapid population growth is also undermining its environmental balance, which is so essential for human well-being, and is therefore likely to further increase social and economic disparity.

19. Increasing population pressure is further exacerbated by tourism. Some 175 million tourists visit the Mediterranean each year and this number is expected to rise to 230-300 million per year in the next twenty years. Population growth, extensive urbanisation and industrialisation, growth in tourism, fishing and intensive agricultural practices are creating increasing pressures on natural resources (water, soil, marine and terrestrial ecosystems and their biodiversity). All kinds of human activities threaten the viability of the Mediterranean as an ecosystem and degrade the environment.

3.1. Agriculture

20. Traditional agricultural practices in the Mediterranean (such as dry farming) depend to a high degree on rainfall and are therefore highly reliant on natural resources. Cereals, vegetables and citrus fruits account for 85% of Mediterranean agricultural production. Conversely, productivity gains are highest in irrigated areas. These areas have grown twofold over forty years to exceed 26 million ha in 2005, in other words 20% of cultivated land. While total production has made spectacular progress over the past forty years, social, environmental and climate factors are compromising the sustainability of export-oriented intensive production models.

21. Trends in Mediterranean agricultural practices are evolving towards specialisation (monocultures) and intensive production based on the use of fertilisers and pesticides to maximise yields.

22. Most Mediterranean countries have been losing arable land for more than twenty years. In the case of Egypt for example, the positive balance (land gain) is the result of land reclaimed from the desert, which "masks" the loss of ancient arable land as a result of fast progressing urbanisation, desertification and salination.

3.2. Fishing

23. The abundance and distribution of fish and other living marine resources (shellfish, molluscs, sea-urchins and corals) vary widely depending on depth, but most biological production is concentrated on the continental shelf, which extends from the coast to a depth of 250 metres and is the preferred habitat of species with an economic and commercial value. The shelf, which is relatively narrow, limits the potential for fishing.

24. Fish stocks have declined to alarming levels and, according to the Food and Agriculture Organization of the United Nations, a large number of fisheries are under threat. This is mainly the result of reckless, virtually uncontrolled fishing, which is reflected in the ensuing 25% drop in landings due to a fall in regeneration and reproduction of certain species.

25. Aquaculture has also grown since the 1990s, particularly seawater fish farming for sea bass, sea bream, and "fattening up" of tuna, none of which was preceded by environmental impact studies.

3.3. Urban growth

26. The concentration of people on the coastline results in constructions of various types which alter the waterfront. As the coastline provides employment opportunities linked to industry, tourism and commerce, rural-urban and inter-urban migration creates substantial housing needs and results in the rapid growth of coastal cities and towns. In the countries on the shore of the Mediterranean, two out of three inhabitants now live in urban areas. In the southern and eastern Mediterranean countries, demographic growth is causing rapid urban growth, accounting today for over 150 million city dwellers. Moreover, urbanisation is often driven by a buoyant "informal" housing sector with poor access to water, sanitation and other basic urban services.

27. Sewage from coastal cities is one of the major pollution problems of the Mediterranean coast. Its influence on the marine coastal environment directly or indirectly affects human health, the stability of the marine ecosystem and the economy of coastal areas through its impact on tourism and fisheries. The sewage system is often only connected to parts of the urban population, with the result that untreated wastewater is discharged directly into the sea.

28. In many Mediterranean countries solid waste is disposed of at dumping sites with little or no sanitary treatment. These uncontrolled dumping sites are often located within the town limits or right on the waterfront. In many instances, no measures have been taken to control and treat leakages from the dumping sites which have been polluting groundwater and the coastal marine environment with organic pollutants and heavy metals.

29. Marine litter, which is found in the sea and on the coastline, comes mostly from coastal urban centres. This waste is generated by direct disposal of domestic waste, waste from tourist facilities, flows from landfill sites and rivers and waste from maritime traffic.

30. The uncontrolled growth of the Mediterranean's cities, combined with excessive land consumption, pressures on water resources, the pollution of aquifers, inefficient waste management and the degradation of cultural heritage sites, has a cumulative effect on the environment and public health. Strategic urban planning and investment in infrastructure will be a major challenge for the future.

3.4. Tourism

31. Tourism is a vital economic activity in all the Mediterranean countries. The region attracts 30% of the world's international tourists. Tourism creates employment and generates foreign currency and contributes largely to national economic development. However, the future development of this sector will depend on increased sustainability, more equitable distribution of the wealth it generates and strategic investment to minimise its environmental impact.

32. The seasonal and spatial concentration of tourist activities strongly enhances their impact on the environment, generating pressure on water resources and natural environments (through coastal construction), and increasing waste production. Tourism-related transport also has a major environmental impact, particularly as a result of the rapid increase in air travel (up to 40%) and road travel (52%). Rail and boat arrivals remain on an extremely modest scale. However, the development of maritime tourism is contributing to the pressure to construct ports and marinas, both of which take up large areas and pose threats to natural habitats, particularly in special nature conservation areas.

33. Sustainable tourism practices would include diversifying the types of tourism on offer through the year by developing ecotourism and cultural, urban and rural tourism to optimise the Mediterranean's tourist potential outside the summer season and minimise its impact on the environment.

34. It would be a good idea for a system of tourist taxes to be applied in all the Mediterranean countries as the income would be beneficial to all countries with tourist industries.

3.5. Shipping

35. The world's busiest shipping lanes are located in the Mediterranean. It is estimated that some 220 000 merchant ships of over 10 tonnes cross the Mediterranean every year, accounting for about one third of the world's commercial shipping. These ships often carry dangerous cargoes, which can cause major environmental damage if they are lost.

36. Most accidents leave an indelible mark on the environment. In addition, every year, some 370 million tonnes of oil are transported through the Mediterranean (about 20% of the world total) and accidental oil leaks are frequent, meaning that there is a permanent threat of a major oil spill in the Mediterranean. Although international conventions, particularly the International Convention for the Prevention of Pollution from Ships (MARPOL) include a ban on certain types of discharges at sea, the lack of port infrastructure to receive waste produced at sea is still a source of concern.

37. There is currently a need to step up co-operation and integration in the field of maritime surveillance to reduce the risks of oil pollution to a minimum.

38. For this purpose, the scope of criminal liability for offences that damage the environment has to be clearly established and heavy penalties should be imposed on polluters.

3.6. Manufacturing and international trade

39. Quantitative environmental improvements in manufacturing processes are being cancelled out by steep growth in production demands as a result of increasing levels of consumption and international trade. These trends accelerate flows of raw materials, energy and products and, in the Mediterranean area, this has led to increased trade movements. Such trends are expected to increase further with the progressive establishment of the Euro-Mediterranean Free Trade Area. One of the inevitable side effects of the corresponding growth in transport and trade flows will be increased consumption and depletion of resources.

3.7. Energy consumption

40. With 400 million people living in the Mediterranean Basin, the region accounts for 10.2% of the world's electricity consumption and 8.2% of its primary energy consumption. This primary energy consumption is overwhelmingly dominated by fossil fuels (80% against only 6% for renewable energies) and accounts for 8% of global greenhouse gas (GHG) emissions in 2006.

41. The Mediterranean region contains 5% of the world's oil and gas reserves. 98% of these are held by four countries on the Mediterranean's southern shore: Libya possesses the largest oil reserves with 5 400 Mt, while Algeria has 1 545 Mt and Egypt and Syria have a little less, with 524 Mt and 400 Mt respectively. At current production levels, the oil reserves are expected to last around thirty years and the gas around fifty years. These four countries have an infrastructure suited to the production of oil and gas and the export of these products, mainly to Europe.

42. Coal reserves, concentrated in Greece and Turkey, amount to around 9 billion tonnes for the region as a whole.

43. As to renewable energies, the Mediterranean has significant potential, particularly for solar and wind energy, which is underexploited. The share of renewable energy in the overall mix is still low, accounting for only 6% of the primary energy supply.

4. Initiatives at international level

44. Over the years, awareness of the environmental deterioration of the Mediterranean has grown steadily among the public, prompting them to call on politicians to take measures to secure the social and economic stability and sustainability of the region.

4.1. Political co-operation

45. The European Union began actively to devise a structured joint policy towards the Mediterranean region in the 1990s by launching the Euro-Mediterranean Partnership, also known as the "Barcelona Process" (abbreviated below as "MAP"). Its aim was to foster peace and stability in the region by establishing political dialogue based on respect for shared values such as democracy and the rule of law. The partnership focused on three areas of activity: political and security-related dialogue; economic and financial partnership and the gradual establishment of a free trade area; and a social, cultural and human partnership to foster mutual understanding and contacts between civil society organisations. In 2003, on the eve of its enlargement, the European Union developed a European Neighbourhood Policy including east European and Mediterranean countries.

46. Unfortunately, the results of the Barcelona Process and the Neighbourhood Policy have failed to live up to expectations. In 2008, during the French Presidency of the European Union, French President, Nicolas Sarkozy launched the initiative to set up a Union for the Mediterranean consisting of the 27 European Union member states and 16 partner countries from the southern and eastern Mediterranean, aiming to give fresh impetus to the Euro-Mediterranean partnership. The Union for the Mediterranean aims to preserve the achievements of the Barcelona Process while offering more balanced governance and public accountability, together with a commitment to carry out tangible regional and transnational projects. Six priority projects have been identified, including the depollution of the Mediterranean Sea, the creation of maritime and land highways, civil protection initiatives to combat natural and man-made disasters, the development of alternative energies through the adoption of a Mediterranean solar energy plan, funding support for small and medium-sized enterprises and the establishment of a Euro-Mediterranean University.

47. However, despite the ambitious nature of these projects, the Union for the Mediterranean project has still not produced any tangible results.

48. Much store is set by parliamentary diplomacy in the Mediterranean countries. The Parliamentary Assembly has worked with the Parliamentary Assembly of the Mediterranean since its establishment in 2006 on a whole series of Mediterranean projects of interest to both assemblies, such as environmental protection, disaster management and the role of local and regional authorities. Fifteen of the Council of Europe member states are also members of the Parliamentary Assembly of the Mediterranean.

49. Another parliamentary body which places emphasis on co-operation in the Mediterranean is the Euro-Mediterranean Parliamentary Assembly, which includes representatives of the 27 European Union member states. However, within this Assembly, the 16 eastern and southern states have only a third of the votes, whereas in the Parliamentary Assembly of the Mediterranean, which is made up solely of the states on the southern and northern shores of the Mediterranean, there is an equal balance between north and south.

50. Attention also needs to be drawn to the importance of international co-operation at local level, which can focus on specific details and has much more potential to yield practical results with rapid benefits for the environment. One example of this is the agreement between France, Italy and Monaco on the protection of the marine and coastal environment of a part of the Mediterranean signed in 1976 in Monaco.

4.2. The Barcelona Convention and its protocols

51. The Barcelona Convention for the Protection of the Mediterranean Sea was signed in Barcelona in February 1976 and came into force in 1978. It has since given rise to a series of protocols. In 1995, the Barcelona Convention was substantially revised to bring it in line with the principles of the Rio Declaration on Environment and Development and the United Nations Convention on the Law of the Sea. At the same time, most of the protocols underwent major changes. The Barcelona legal system now includes the following instruments:

- Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (“Barcelona Convention”) (in force since 2004);
- Protocol for the Prevention and Elimination of Pollution of the Mediterranean Sea by Dumping from Ships and Aircraft or Incineration at Sea (“Dumping Protocol”), amended in 1995 (amendments not yet in force);
- Protocol concerning Cooperation in Preventing Pollution from Ships and, in Cases of Emergency, Combating Pollution of the Mediterranean Sea (“Prevention and Emergency Protocol”) (in force since 2004);
- Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources and Activities (“LBS Protocol”) (in force since 2008);
- Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean (“SPA and Biodiversity Protocol”) (in force since 1999);
- Protocol for the Protection of the Mediterranean Sea against Pollution resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and its Subsoil (“Offshore Protocol”) (adopted in 1994, not yet in force);
- Protocol on the Prevention of Pollution of the Mediterranean Sea by Transboundary Movements of Hazardous Wastes and their Disposal (“Hazardous Wastes Protocol”) (in force since 2008);
- Protocol on Integrated Coastal Zone Management in the Mediterranean (“ICZM Protocol”) (adopted in 2008, not yet in force).

52. Most countries have ratified the Barcelona Convention, which is evidence of their willingness to move forward. Unfortunately, no practical action has been taken as yet and it is considered that the Convention has not achieved its goals.

4.3. Ongoing work of the Council of Europe

53. The Council of Europe is the only international organisation which brings together all the stakeholders in the Mediterranean region. It has several existing mechanisms in the field of sustainable development which could be conducive to co-operation with southern and eastern Mediterranean countries, namely:

- the Convention on the Conservation of European Wildlife and Natural Habitats (ETS No. 104) (“the Bern Convention”), ratified by Morocco and Tunisia. Its aim is to support the conservation of wild flora and fauna and promote European co-operation in this area;

- the Pan-European Biological and Landscape Diversity Strategy, which was set up in 1995 following the Rio Earth Summit and the adoption of the United Nations Convention on Biological Diversity. It has been approved by 54 countries in western and eastern Europe and central Asia and complements the work carried out in connection with the Bern Convention. Its main aim is to frame a coherent response to the decline of biological and landscape diversity in Europe and to incorporate the conservation and sustainability of biodiversity into the activities of other sectors such as agriculture, forestry, fishing, industry, transport and tourism. Its activities could be broader still if they encompassed co-operation with Mediterranean countries;
- the European and Mediterranean Major Hazards Agreement, created in 1987, as a platform for co-operation between European and southern Mediterranean countries in the field of major natural and technological disasters. Its field of activities includes the knowledge of hazards, risk prevention, risk management, post-crisis analysis and rehabilitation. The agreement is “partial” because not all Council of Europe member states have acceded to it, but it is “open” to non-member countries, with the result that Algeria, Lebanon and Morocco are full members;
- the Council of Europe Conference of Ministers responsible for Spatial/Regional Planning.

54. At the level of the Parliamentary Assembly, the Committee on the Environment, Agriculture and Local and Regional Affairs plans to hold a conference as part of the follow-up to the 5th World Water Forum held in Istanbul in March 2009 to review practical action taken by states to secure and protect the right to access to water and to prepare the themes for the 6th World Water Forum, which will be held in Marseilles in 2012.

55. The Congress of Local and Regional Authorities of the Council of Europe has also been long committed to working with partners in the non-member states of the Mediterranean region to improve local democracy and good governance. It has helped the local authorities of several countries in the Maghreb and the Middle East to acquire more modern and more democratic structures, the first being Morocco, where it helped to set up a national association of local authorities. It recently set up a new working group of cities and provinces of the Euro-Mediterranean to strengthen local democracy in these countries and define Congress strategy in this region. In 2010, it began assisting the Moroccan authorities with the King of Morocco’s regionalisation initiative.

4.4. The Mediterranean Action Plan

56. The Mediterranean Action Plan (MAP) was signed in February 1975 to complement the Barcelona Convention. The main objectives of the MAP were to assist the Mediterranean countries to assess and control marine pollution, to formulate their national environmental policies, to improve the ability of governments to identify better options for alternative patterns of development, and to optimise the choices for the allocation of resources.

57. Although the initial focus of the MAP was on marine pollution control, experience has shown that socio-economic trends, combined with inadequate development planning and management are the root of most environmental problems. Consequently, the focus of MAP has gradually shifted to include integrated coastal zone planning and management, as the key tool through which solutions are being sought.

58. Phase II of the MAP has been approved and is now known as the Action Plan for the Protection of the Marine Environment and the Sustainable Development of the Coastal Areas of the Mediterranean. The following key priorities have been identified for the coming decade: to reduce pollution from land-based sources; to protect marine and coastal habitats and threatened species; to make maritime activities safer and more aware of the Mediterranean marine environment; to intensify integrated planning of coastal areas; to monitor the spread of invasive species; to limit and react rapidly to oil pollution; and to promote sustainable development in the Mediterranean region.

4.5. Mediterranean Environmental Technical Assistance Program

59. The Mediterranean Environmental Technical Assistance Program was created in 1990 as a partnership between Mediterranean countries and multilateral donors. To date it has attracted investments amounting to US\$ 1 billion, covering over 35 projects. The objectives of the program are to strengthen the institutional and legal structure of environmental management, to formulate environmental policies and to initiate environmental projects. Since 1990, the donor partnership within the program has expanded to include both the Global Environmental Facility and several European Union programmes (European Neighbourhood and

Partnership Instrument; Short and Medium-term Priority Environmental Action Programmes I, II and III; LIFE-Third countries; and the European Investment Bank Facility for Euro-Mediterranean Investments and Partnership).

4.6. National environmental action plans

60. National environmental action plans have been conducted in all north Mediterranean countries and in Egypt, Tunisia, and Jordan. They take account of each country's environmental and socio-economic concerns, policies and legislative frameworks, management and institutional capacity, and technical infrastructure. In the short term, funds from the annual national budget are earmarked for the activities carried out as part of these plans. Longer-term financial mechanisms are also identified, earmarked or developed by national environmental action plans, to ensure continuity. Efforts are made to involve the private sector at an early stage as a key partner in the development of the proposed activities.

4.7. State of the environment reporting

61. Under the co-ordination of the United Nations Environment Programme's Regional Activity Centre, the MAP prepares bi-annual reports on the environmental situation in the Mediterranean, outlining major trends in sustainable and/or unsustainable development. The aim of these reports is to provide a sound analytical basis for the regular meetings of the Parties to the Barcelona Convention. However, past reporting has highlighted a serious lack of comparable data throughout the different Mediterranean countries which are parties to the convention.

5. Pressures on resources and the natural environment

5.1. Water shortages

62. In the Mediterranean, 180 million inhabitants have access to less than 1 000 square metres of water per year (per capita) and 80 million people are facing water shortages, having to cope with less than 500 square metres per year (per capita). Water demand has doubled over the past fifty years (280 km³ per year in 2007), mainly due to agriculture (64%). However, losses, leaks and water waste are thought to account for 40% of total water consumption, particularly in the farming sector.

63. Although countries are beginning to deploy efforts to limit and reduce these losses, pressure on water resources remains high, particularly in Egypt, Malta, Syria, Libya and Israel. To satisfy growing domestic demand, countries are increasingly overusing part of their non-renewable resources (16 km³ per year).

64. Water shortages are now resulting in greater efforts in the water management sphere to reduce water losses and the use of non-conventional supply methods such as the re-use of waste water, desalination and other technical innovations to increase water resources' potential for use.

5.2. Marine ecosystems

65. The Mediterranean is a biodiversity hot spot, which is home to 9% of known marine species. A total of 19% of them are threatened both locally and worldwide. The emblematic Mediterranean monk seal is classified as a species facing serious risk of extinction. This is also the case with some cartilaginous fish and shark species. Some 63% of the fish and 60% of the mammals listed in the Protocol concerning Specially Protected Areas and Biological Diversity have endangered status as a result of factors such as increasing pressure from human activity (particularly construction work), the disappearance of lagoons and grassbeds, coastal erosion, over-exploitation of marine resources through fishing and the introduction of invasive species.

5.3. Natural terrestrial ecosystems

66. The Mediterranean's natural terrestrial ecosystems are made up of forests and pastoral areas. The traditional use of wood and grazing lands – which is a historical feature of the local and regional economies – is gradually disappearing in the northern Mediterranean, but is still crucial in the south. These areas are now more widely recognised as public assets, since they protect soil and water resources, help to combat erosion and desertification, act as carbon sinks by absorbing greenhouse gases and help to preserve the biodiversity of fauna and flora.

67. However, forests and pastures are exposed to increasing risks of devastating fires. The frequency of fires is increasing in the northern Mediterranean (600 000 ha in 2007). In the southern and eastern Mediterranean, it remains limited but flare-ups are becoming more common (61 000 ha in the south and 80 000 ha in the east Mediterranean in 2007). Fire hazards are compounded by the decline in grazing, overgrown vegetation and an increase in the length and severity of dry periods induced by climate change.

5.4. Coastal areas

68. Its coastal areas are the Mediterranean's most appealing asset and the showcase of a long-standing natural, cultural and economic heritage. The Mediterranean coastline is approximately 46 000 km long, with nearly 19 000 km of island coastline. Some 54% is rocky and 46% sedimentary, and its features include important and fragile ecosystems such as beaches, dunes, reefs, lagoons, swamps, estuaries and deltas.

69. These areas are under increasing pressure from land-based pollution, urban development, fishing, aquaculture, tourism, extraction of raw materials, sea pollution and marine biological invasions. More than 40% of the coastal land in the Mediterranean has been built on as a result of rapid population growth and linear urban and infrastructure sprawl along the coast. Any further construction and changes to coastal ecosystems would be detrimental to future coastal resilience.

6. Conclusions

70. Today there seems to be little solidarity from the north to the south, even though the north is responsible for a good many of the projects that have had an environmental impact on the south such as the intensification of tourism in the Mediterranean or the intensive farming of the land around the Mediterranean for the benefit of northern markets.

71. One of the current priorities for environmental management in the Mediterranean must be to improve national and international environmental legislation. As well as actually implementing and enforcing existing legislation, there is an urgent need to apply an integrated ecosystem-based approach for protection of the Mediterranean environment, to deal with the pollution caused by urban development, agriculture and industrial activities, to combat unsustainable exploitation of fisheries and aquacultures in order to relieve the pressure on coastal areas, to adopt more sustainable transport strategies, to reduce energy consumption and to develop renewable energy resources. This process requires strong political commitment, adequate funding, institutional capacity and the transfer of technology and know-how.

72. Fifteen Council of Europe member states are among the 22 countries directly concerned by the issue of protecting the environment in the Mediterranean. Although they do not have any formal status in the Barcelona Process, the Council of Europe and its Parliamentary Assembly have made consistent bilateral efforts to establish partnerships and practical co-operation with southern and eastern Mediterranean countries.

73. In a wider political context, peace and stability in the Mediterranean region can only be secured in the long term on the basis of democracy, human rights and the rule of law, as has been demonstrated in the process of European integration in central and eastern Europe. The Council of Europe has, therefore, decided to offer its expertise to the Mediterranean region, which is a most challenging geopolitical region when it comes to the actual application of the Council of Europe's principles and values.