



Background information

Tourism threats in the Mediterranean

Mass tourism and the Mediterranean – the issue

The Mediterranean has been identified by WWF as one of the most important regions in the world for its outstanding biodiversity features. It is one of the cradles of civilisation with a rich natural and cultural heritage. The Mediterranean sea is the region with the highest percentage of endemic species – species living only in this part of the world – just after the tropical seas: 20% of all marine species can only be found in this basin. Very endangered species dwell in its waters: the monk seal, the loggerhead and the green turtle as well as several species of cetaceans.

Tourism is the largest industry in the world with impacts to match. Because tourism occurs in environmentally fragile areas rich in biodiversity, its impact on the environment is significant. Nowhere in the world is this more evident than the Mediterranean basin. In fact, large-scale mass tourism is one of the main forces behind the ecological loss and destruction in the region, particularly in coastal and marine areas that still maintain high natural value and are important to safeguard biodiversity. Through inappropriate practice and development, once pristine locations have been damaged, sometimes beyond repair.

Background on tourism in the Mediterranean

The Mediterranean region is the leading tourist destination. Tourism is mainly concentrated in the coastal areas which receive 30% of international tourist arrivals. The most widely used tourism development model used in the region is based on seaside summer holidays and the attainment of quantitative goals. Of the total 46,000 km of coastline, 25,000 km is urbanised and have already exceeded a critical limit.

International tourist arrivals (excluding domestic arrivals) in 1999 totalled 219.6 million (4.7% increase over 1998). Projections show that this figure could reach 350 million by 2020. 84% of the tourists in the Mediterranean come from Europe, mostly from northern and western countries. Germany is the largest market followed by the United Kingdom, France and Italy. Spain, France, Italy, and Greece receive almost 80% of Mediterranean tourism.

The Mediterranean receives 1/3 of the income of international tourism. Tourism receipts in 1999 totalled US\$ 131.8 billion. Over the last three years, 2/3 of the income returned to the hands of less than 10 tour operators from northern Europe.

Data sources: WTO – World Tourism Organisation

Mass tourism impacts in the Mediterranean

The Mediterranean is under threat due to the inappropriate practice and development associated with mass tourism. With current development models based on quantity, the projected growth of tourism development in the region will continue to damage landscapes, cause soil erosion, put pressure on endangered species, further strain available water resources, increase waste and pollution discharges into the sea and lead to cultural disruption.

Land and landscape

Construction related to tourism development (hotels, airports, roads, vacation homes) causes the greatest negative impact to the fragile coastal and marine ecosystems in the Mediterranean. Loss of biodiversity and landscape attractiveness already affects a number of tourist destinations throughout the region. The projected growth will continue to degrade these regions, as well as destroy what are now almost untouched areas.

Intensive tourism development on coastal fringes has already caused major damage to coastal ecosystems. For example, three-quarters of the sand dunes on the Mediterranean coastline from Spain to Sicily have disappeared mainly as a result of urbanisation linked to tourism development. In Italy over 43% of the coastline is completely urbanised mainly linked to tourism development, 28% is partially urbanised and less than 29% is still free of construction. In addition, there are only 6 stretches of coast over 20 km that have no construction and only 33 stretches between 10 and 20 km without construction.

Species

As a major cause of the loss of natural habitat, tourism has a very direct negative impact on biodiversity, directly affecting rare and endangered species. Over 500 plant species in the Mediterranean are threatened with extinction and are under intense pressure from tourism development in some overbuilt destinations. In Zakynthos (Greece), sea turtles have had their coastal nesting grounds disturbed and destroyed by tourism development and tourist behaviour.

Tourism's impact on the critically endangered Mediterranean monk seal has been particularly devastating. The biggest impact has been from the loss of its habitat. The monk seal needs suitable cave and beach habitats in order to breed successfully – areas that are exploited by the tourism industry. Already the impact of tourism has played a major role in the decline and extinction of Mediterranean monk seal populations in several key areas including France and Corsica, Spain and the Balearic islands, Croatia, Italy and Sardinia, and Tunisia. Without dramatic changes, the current tourism pressure will likely drive the species to extinction.

Freshwater

Freshwater concerns are reaching crisis levels in some Mediterranean countries as demand outstrips supply and desertification advances throughout the southern regions. During the summer months water supplies are exacerbated by tourist flows for use in hotels, swimming pools and golf courses. For example, an average Spanish city dweller uses approximately 250 litres of water per day, while the average tourist uses 440 litres. This number increases to 880 litres if the tourist uses accommodations with swimming pools and golf courses.

Periodic water shortages already exist in many regions and are likely to spread and increase. This not only is an environmental threat but poses many problems for the tourism industry itself as the shortages could lead to structural problems in the long term. Throughout the region, water use conflicts are spreading and worsening, particularly between rival coastal and country areas where competing interests vie for the limited resources.

Pollution and wastes

The Mediterranean Sea receives 10 billion tonnes of industrial and urban waste per year with little or no purification. The production of wastewater and solid waste in tourist areas often exceeds the carrying capacity of local infrastructures due the high seasonal demand. Pollution also negatively affects water quality in beach areas and drinking water supplies. The human health implications can be severe. The cause and effect for tourism is also great, as tourism contributes to all forms of pollution (water, waste and atmosphere) and is adversely affected by the impact of pollution on the natural resources they rely upon.

Social and cultural impacts

While tourism provides certain economic benefits to a region at least in the short term, it also causes disturbance to the local way of life as well as to social structures, and can adversely affect traditional practices that contribute to the conservation and sustainable use of biodiversity. It utilises the physical environment for profits that are mainly directed out of the country, creating adverse impacts on livelihoods and lack of benefit sharing with the local people who will bear tourism related costs to both the human and natural environment. Additional resource use conflicts occur between tourism and local populations as they compete for limited resources of water, sanitation, energy and land uses.

Measuring tourism growth and assessing trends: a new WWF analysis

Continued international concern over the management of coastal areas has lead to examine the potential use of remote sensing and GIS methods for regional environmental impact studies. The goal of this new WWF analysis is to gauge the current trend of tourism activity in the Mediterranean region and illustrate the impact of this activity in key areas important to biodiversity.

Methodology

Little data is available to monitor the expansion of tourism settlements and activity at a regional scale. The Blue Plan provided the last regional tourism data based on the number tourists during the peak summer season in 1995. It provides a baseline for this analysis. The WWF analysis (see maps) is an attempt to estimate tourism activity in the Mediterranean coastal regions in 2005. It uses multi-temporal satellite data, measuring light intensity during the winter and summer seasons. The ratio between these two values, representing the seasonal light difference, has been considered as an indicator of tourism activity.

The summer/winter light ratios were measured for the years 1993, 1995, 1998 and 2000. Based on data from these years, an analysis was conducted to project tourism activity for the year 2005, assuming that the same development trend would continue into the future. Three classes were chosen to illustrate the corresponding relative tourism activity: medium tourism activity, high tourism activity and very high tourism activity.

Results

Overall, the analysis shows increasing tourism activity throughout the Mediterranean region in 2005. Some areas will continue to experience very high tourism activity like the Côte d'Azur in France and the Costa Brava in Spain while others areas will stabilise or possibly even decrease as in the case of Balearic Islands and the northern Adriatic coast of Italy. Most other areas will undergo dramatic growth in the level of tourism activity during the ten year period. Growth in Eastern Mediterranean and North African countries is higher- often double- than in the traditional western Mediterranean destinations. Countries, such as Turkey, Croatia, Morocco, Tunisia and Greece, tend to present a far more dynamic growth patterns than the more mature destinations with tourism activity spreading along their coastlines.

Overlaying biological data from a previous WWF analysis identifying the most important coastal and marine areas for biodiversity resulted in a projection of tourism activity in the following key areas:

- Alboran Coast (Spain and Morocco)
- Liguro-Provençal coast (France, Italy, Monaco)
- Corso-Sardinian coast (France, Italy)
- Southern Tyrrhenian coast (Italy)
- Dalmatian coast (Croatia)
- Eastern Ionian coast and islands (Albania, Greece)
- Aegean Sea and Anatolian coast (Greece, Turkey)
- Cilician coast (Turkey) and Cyprus coast
- Gulf of Gabes (Tunisia)
- Algero-Tunisian coast (Algeria, Tunisia)

This projected tourism activity in the most ecologically important areas in the region will further degrade already developed areas and cause drastic transformations of the coastal and marine ecosystems in untouched areas. Furthermore, by 2020, approximately 350 million tourist arrivals will visit the Mediterranean, representing about 22% of all tourists world-wide. The ten Balkan countries are forecast to receive 79 million tourist in the year 2020 (4.6 % growth rate over period 1995-2020). The leading tourist destinations will be Greece, Turkey, and Croatia. Under the current tourism development patterns, these trends likely imply the degradation and even the outright destruction of most of the still valuable natural and cultural areas of the region.