



Report
on the Seminar "Coastal Tourism in the Mediterranean:
Adapting to Climate Change"

Cagliari (Sardinia), Italy, 8-10 June 2009

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BACKGROUND

"Coastal Tourism in the Mediterranean: Adapting to Climate Change" is a seminar that was designed for decision-makers and tourism experts to proactively address the issue of climate change and tourism. Changes in climate, including increased temperature and incidents of extreme weather events such as heat waves, torrential rains or floods, as well as their consequences for changing ecosystem conditions, contributing to, for instance, forest fires or algae blooms, have affected many tourist destinations in the past and will affect tourism increasingly in the future. In the long term, coastal erosion and sea level rise may affect coastal tourism, calling for long-term planning solutions. Given that many coastal ecosystems and coastal destinations already face substantial human pressure, it is of great importance to integrate these expected changes in coastal planning.

The 3-day seminar addressed climate change adaptation and mitigation under the umbrella of Integrated Coastal Zone Management (ICZM), with the goal to provide information about the issues at stake, as well as principles and tools to deal with these. More specifically, this included an overview of how climate change has already affected and will affect tourism in the Mediterranean in the future, how tourist flows may change under climate change and emerging climate policy, and how destinations may work with these challenges by adopting proactive planning approaches, and an integration of these issues in coastal zone management.

The seminar was co-organized by the United Nations Environment Programme (UNEP), represented by its Division of Technology, Industry, and Economy, and the Priority Actions Programme Regional Activity Centre (PAP/RAC), jointly with the World Tourism Organisation (UNWTO). The seminar was sponsored by UNEP, the French Ministry of Ecology, Energy, Sustainable Development and Town and Country Planning, and UNWTO.

This seminar follows the recommendations of the International Taskforce on Sustainable Tourism Development that addresses climate change and coastal tourism development as critical issues to be tackled by governments. It also follows the recommendation of the Contracting Parties to the Barcelona Convention concerning the organisation of a regional training on carrying capacity assessment and strategic planning for tourism as a part of the ICZM process in Mediterranean coastal zones.

The seminar was held in the "Floris Thorel" palace in Cagliari, on 8-10 June 2009. The complete list of participants is given in Annex I, while the programme of the seminar is contained in Annex II.

Two more annexes are attached to this report: Annex III contains the list of power point presentations made during the seminar, which are available at PAP/RAC, and Annex IV gives an exhaustive list of references on the seminar subject, that the organisers recommend for reading.

DAY 1: THE NEED TO ADAPT TO CLIMATE CHANGE

The first day of the seminar was dedicated to the climate change and coastal tourism issues, with interventions by Mr. Ivica Trumbic (PAP/RAC), Ms. Helena Rey de Assis (UNEP/DTIE), Mr. Luigi Cabrini (UNWTO) and Mr. Stefan Gössling (UNEP/DTIE consultant).

1 Introduction

The Mediterranean is the world's most popular destination, attracting 31% of international tourist arrivals and accounting for 29% of receipts from international tourism. In 2008, the Mediterranean countries received 300 million international tourists, a number that is expected to reach 368 million by 2020. About half of the tourists in the Mediterranean visit coastal zones. Taking into account domestic tourism, coastal zones of Mediterranean countries were visited last year by an estimated 250 million international and domestic visitors. This number will increase substantially in line with the forecast outlined above: in the period 1990-2008 averaged annual growth was in the order of 3.6% per year in the Mediterranean.

As sun-sand-sea experiences dominate travel motives in the Mediterranean, favourable climatic conditions and unspoiled environmental resources are an important precondition for holidaymaking. In the future, climate change may have a wide range of negative consequences for tourism in the Mediterranean, including heat waves, spread of diseases, drought, the associated risk of fires, as well as sea level rise potentially leading to coastal erosion. These impacts may compound human pressures in the area as already observed because of urban development, fast population growth and tourism expansion; the latter often in ecologically sensitive areas.

Integrated Coastal Zone Management (ICZM) is of major importance in addressing these changes, and can provide a framework for management. Ideally, the "classic" ICZM framework, which considers for instance land use changes, conservation and preservation of coastal resources, in combination with the role of economic sectors such as fisheries and tourism, would also integrate climate change adaptation and mitigation as emerging management challenges of great importance. These and many other coastal issues are addressed in the Mediterranean Protocol on ICZM signed in 2008 by 14 Mediterranean countries as an innovative legal instrument that should support countries' efforts to tackle the important coastal challenges including climate change and its effects on coastal zones in general and on tourism industry in particular.

2 Coastal zone development, tourism & climate change

2.1 Coastal zone development challenges

Coastal zones are under intense pressure in the Mediterranean, including intensive human activities and fast population growth. Management is difficult because of the interdependence and interaction of physical, biological, social, cultural, and economic processes, and the sensitive environmental situation in coastal zones, with interdependent ecosystems. Many trends are visible that have a negative impact on coastal ecology, including housing and development, often as close as possible to the sea; incompatibilities in land use leading to increasing conflicts and pressure on ecosystems; legal conflicts related to access rights and conservation; the lack of a perception of long-term conservation as a desirable goal to preserve coastal resources; and the lack of an appropriate understanding of the value of ecological services, including, for instance, fisheries or tourism. While many of these impacts are visible along most of the coastal zone of the Mediterranean, some parts of the coastline are under greater pressure than others, as for instance shown for the parameter population density in Figure 1. Population growth has been 46% in the period 1980-2000, and population density in coastal zones is roughly twice as high as on national average.

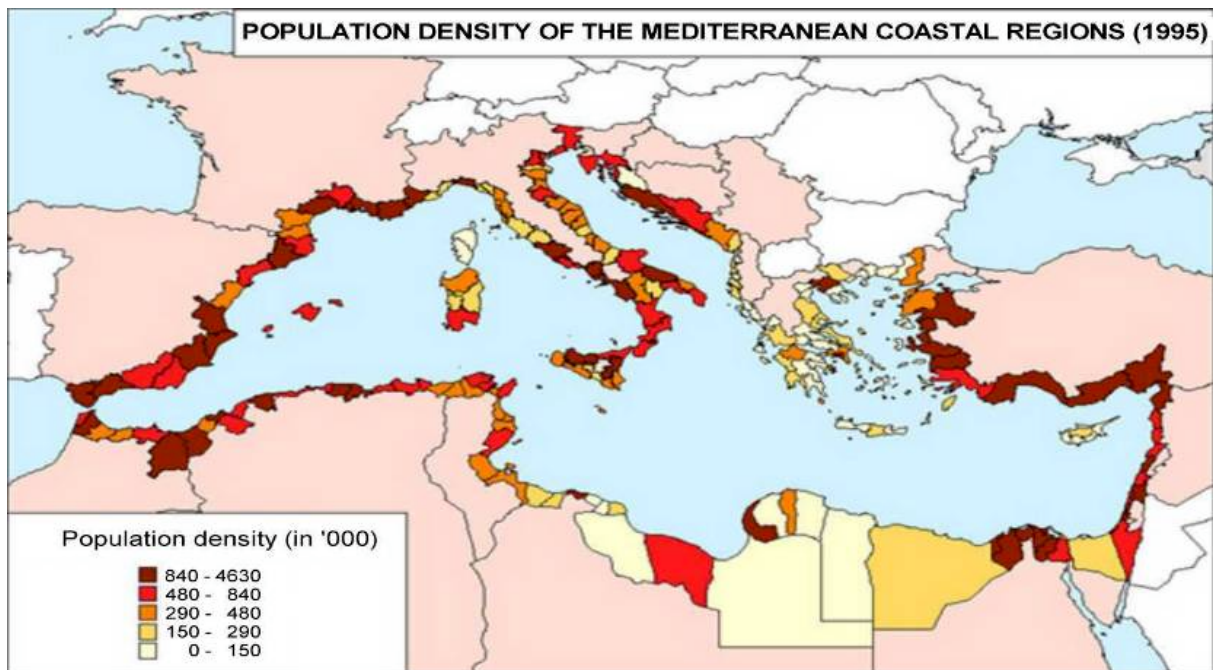


Figure 1: Population density in coastlines of the Mediterranean (1995)

2.2 Tourism

As outlined, the Mediterranean is the world's most important tourism region, with 31% of international arrivals being concentrated in this area (totaling almost 300 million; figure 2), and coastal zones facing the highest visitor pressure with an estimated 250 million tourists per year, including domestic tourism. Growth in international tourist arrivals the Mediterranean averaged 3.6% per year in the period 1990-2008, and reached in some countries values of up to 15.3% per year (Croatia, 1995-2008).

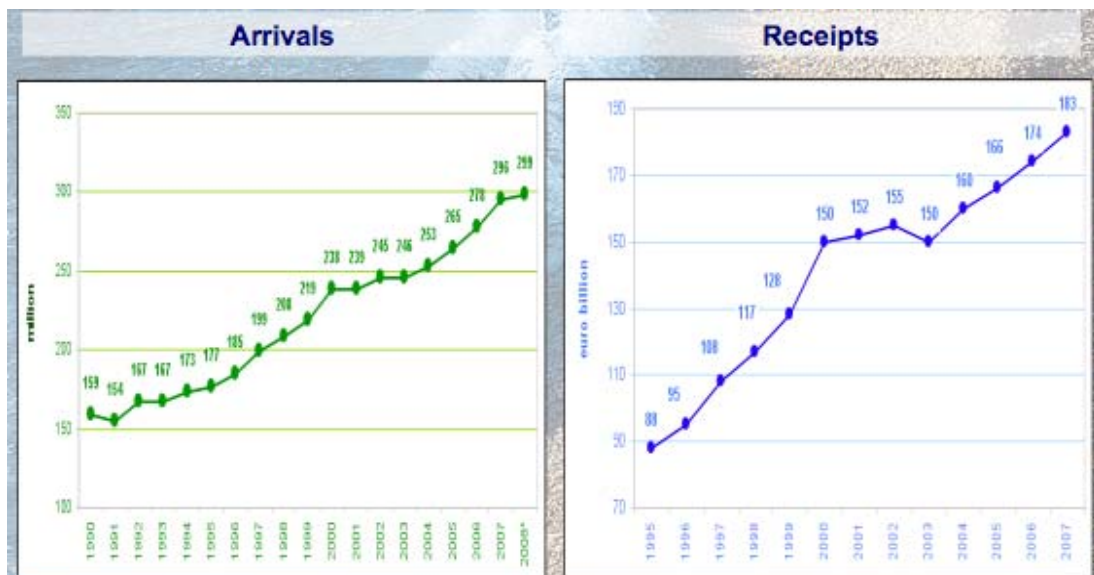


Figure 2: International tourist arrivals and receipts in the Mediterranean
Source: (UNWTO, 2009)

As figure 2 shows, international tourist arrivals has been increasing constantly in the Mediterranean, as have receipts. An interesting finding is here that the ratio of arrivals to receipts is developing positively, as the Mediterranean's share of international arrivals is declining (from 36.4% in 1990 to 32.2% in 2008),

while the region's share of international receipts has slightly increased from 28.9% in 1990 to 29.3% in 2007. This reflects a situation where growth in arrivals in the Mediterranean is considerable (3.6% per year long term average), but lower than international arrivals (around 4.1% long term average). Nevertheless, the region has managed to achieve an increase in visitor spending that is above the globally observed average.

Despite these positive developments in terms of arrivals and revenues, tourism is confronting a major global crisis because of the current economic situation, and, in the Mediterranean because of environmental pressures on coastlines. Tourism growth and tourist pressure thus need to be managed both in space (pressure on certain areas) and time (seasonality). Clearly, more sustainable tourism practices are increasingly considered in national tourism policies and strategies, and new initiatives and knowledge have been developed, but this will not be sufficient to make tourism sustainable given the rapid growth in arrivals and new challenges such as climate change.

2.3 Climate change

The warming trend throughout Europe is well established at +0.90°C for the period 1901 to 2005. The recent period 1979-2005 shows a trend considerably higher than the mean trend at +0.41°C per decade. These trends are less pronounced in the Mediterranean, where temperatures are also increasing more in winter than in summer. However, under high emission scenarios, North Africa may experience temperature increases of up to 9°C in summer in the post 2070s period (IPCC, 2007). Yearly precipitation trends are negative in the eastern Mediterranean, and water stress is projected to increase all around the Mediterranean. The following paragraphs contain excerpts from the IPCC (2007) report on Impacts, Adaptation & Vulnerability, chapter 9 (Africa) and 12 (Europe). It is to be noted that there are far fewer studies for North Africa, and uncertainty regarding the future climate conditions of this part of the Mediterranean is consequently greater.

Among the trends with very high confidence are winter floods, which are likely to increase in maritime regions of Europe, where coastal flooding related to increasing storminess and sea-level rise is likely to threaten up to 1.6 million additional people annually. On the other hand, warmer, drier conditions, especially in summer, will lead to more frequent droughts, as well as to a longer fire season and increased fire risk, particularly in the European part of the Mediterranean. Without adaptive measures, health risks due to more frequent heatwaves, particularly in central and southern Europe, and greater exposure to vector- and food-borne diseases are anticipated to increase. Climate scenarios indicate significant warming, greater in winter in the North and in summer in southern and central Europe. Mean annual precipitation is projected to decrease in the South. Crop productivity is likely to decrease along the Mediterranean. Forests are projected to retreat in the South of Europe, and tree mortality is likely to accelerate. Water stress will increase around the Mediterranean basin. In southern Europe, the percentage area under high water stress is likely to increase from 19% today to 35% by the 2070s. The most affected region is southern Europe, where summer flows may be reduced by up to 80%. The hydropower potential around the Mediterranean is expected to decline by 50% by the 2070s.

Among the trends with high confidence is that Sea-level rise is likely to cause an inland migration of beaches and the loss of up to 20% of coastal wetlands. In the Mediterranean, many ephemeral aquatic ecosystems are projected to disappear, and permanent ones to shrink. Agriculture will have to cope with increasing water demand for irrigation in southern Europe, and with additional restrictions due to increases in crop-related nitrate leaching. Summer cooling demands are expected to increase: around the Mediterranean, an additional two to five weeks will need cooling by 2050.

Overall, climate variability and change already affect Europe's production systems (agriculture, forestry and fisheries), key economic sectors (tourism, energy) and its natural environment. Some of these effects are beneficial, but most are estimated to be negative. The sensitivity of Europe to climate change has a distinct north-south gradient, with many studies indicating that southern Europe will be more

severely affected than northern Europe. The already hot and semi-arid climate of southern Europe is expected to become warmer and drier. From these results it is clear that tourism in the Mediterranean will not only be affected by direct climate change related impacts; there will also be increasing competition with other sectors for scarce resources such as fresh water. This is likely to be true for the North African part of the Mediterranean as well.

3 Climate change: affecting tourism in the Mediterranean

A specific problem with scenarios regarding climate change and tourism is the comparability of timelines. Climate change is a long-term, non-linear process, with significant changes taking place over periods generally exceeding 20 years. Tourism as an economic sector, on the other hand, can be more easily affected by short-term economic change or trends. Both the financial crisis in 2008/2009 and its consequences for long-haul travel (declining) as well as the emergence of low-fare airlines and their impact on travel patterns can here serve as examples. Any comparison of longer-term changes in the physical environment and socio-economic change is thus inherently difficult.

In the Mediterranean, climate change may have a wide range of impacts that could be detrimental to the sustainable development of tourism. Anticipated changes include, for instance:

- Temperatures will continue to increase;
- Droughts will become more frequent;
- Water stress will grow;
- Food production will decline;
- Fire risks will increase;
- Heatwaves will become more frequent;
- Biodiversity will be affected;
- Jellyfish outbreaks or algae blooms will become more frequent.

(Source : UNWTO-UNEP-WMO, 2008; IPCC, 2007)

Together, these could have considerable negative consequences for tourism. Generally, these changes and their consequences are not well documented or understood. It becomes increasingly clear, however, that increasing temperatures in the Mediterranean will not per se influence tourist arrivals (in the sense of reporting that “the Mediterranean will be too hot”), at least in the medium-term future (20-30 years). However, increasing fuel prices due to climate policy, as well as changing seasonality patterns, weather extremes, and, possibly, disease or pest outbreaks (algae blooms, jellyfish outbreaks) could have serious consequences. A number of examples can illustrate these consequences.

Example 1 - Heatwave 2003 : A severe heatwave affected large parts of Europe between June to mid-August 2003, raising summer temperatures by 3 to 5°C in most of southern and central Europe. The warm anomalies in June lasted throughout the entire month (increases in monthly mean temperature of up to 6 to 7°C), but July was only slightly warmer than on average (+1 to +3°C), and the highest anomalies were reached between 1st and 13th August (+7°C). Maximum temperatures of 35-40°C were repeatedly recorded and peak temperatures climbed well above 40°C. Average temperatures were far above the long-term mean, implying that this was an extremely unlikely event under current climatic conditions. However, it is consistent with a combined increase in mean temperature and temperature variability. As such, the 2003 heatwave resembles simulations by regional climate models of summer temperatures in the latter part of the 21st century. The IPCC concludes that human-induced warming may therefore already have increased the risk of heatwaves such as the one experienced in 2003 in Europe.

Perry (2006: 371-372) reports the following impacts of the heatwave on tourism:

1. The most vulnerable tourists seem to have been campers and caravanners. Forest fires threatened campsites and actually destroyed some and there were a number of injuries and

fatalities. At several sites emergency evacuations were required. The worst fires were in southern France, Portugal, southwest Spain and southern Italy. These low-cost holidaymakers are also especially vulnerable to heat waves since there is no obvious access to air conditioning. There were many reports of holidaymakers abandoning their holidays and returning home early to escape the great heat.

2. Excess heat wave deaths reached 15,000 in France, 6000 in Spain and 4000 in Italy and the European total probably reached or exceeded 40,000. Although it is not known how many of these deaths involved tourists, the heatwave can be classed as a major public health incident.
3. Local people, especially those living in cities such as Rome and Milan, tended to abandon their cities whenever possible and retreat to the coasts, lakes and countryside, joining the normal tourist influx and increasing congestion on roads and beaches.
4. Infrastructure problems, including power cuts in Spain and Italy as a result of excessive demand for air conditioning, and train cancellations because of buckled rails, also affected tourists.
5. British tourists travelling to the Mediterranean received very little advice or warning before their departures. It was often left to tour reps, themselves with very little medical knowledge, to warn of the dangers, especially from dehydration from excessive alcohol consumption.

Perry (2006) also reports substantially changing booking behaviour under the heatwave. This booking behaviour does not only seem to have changed during the heatwave, but has even affected travel planning in 2004: for instance, many Germans, obviously expecting similar summer conditions, decided to spend their holidays at home. When the summer proved to be cold and rainy in 2004, a last-minute rush on "warm destinations", including the Mediterranean took place in late July/August 2004 (Gössling and Hall, 2006). Overall, this indicates a situation where travel decisions may increasingly consider climate conditions, potentially increasing the number of last-minute travellers.

Example 2 - Algae blooms: In the past, there have been several incidents of algae blooms in the Mediterranean: „In the summer of 1989, the effects of eutrophication consisted in the appearance of large mats of a brown-colored, slimy, sticky, rotting and sometimes malodorous substance and its washing up on the beaches. ...the phenomenon reached its peak right in the middle of the tourist season, i.e. mid-July, and received extensive media coverage, especially in West Germany" (Gasperoni and Dall'Aglio, 1991). Even though there have been more recent algae blooms, the situation in 1989 appears to be the only one researched; little is known about the perception of tourists of such events. Asked whether they would "seriously contemplate not spending a holiday along the Adriatic this summer"?, 35% of interviewed tourists stated yes (Gasperoni and Dall'Aglio, 1991). Another third of the tourists (34%) said they hoped it would get better, and 23% indicated that it was too late to change plans. Only 18% said that algae had no influence on their holiday, indicating that more generally, algae blooms may have a considerable impact on tourism. Incidences such as algae blooms are important for tourism, in that they are difficult to deal with, given that they affect the primary tourist attraction, i.e. the sun, sand and sea product.

Example 3 - Forest fires in Greece: Forest fires in Greece in 2007 received Europe-wide media coverage affecting tourism and possibly in particular undecided travelers, who abandoned Greece as a destination in favor of other destinations. While there appears to be no research on the issue, information gathered from various websites indicates that for instance German tour operators reacted conservatively to the crisis by outlining that they had no hotels in the affected areas. Cancellations or changes in bookings were not free of charge for tourists, even though some round trip based journeys were adjusted by tour operators to not enter or pass affected areas. It was also reported that 4000 tourists had to leave campsites in Apulia. While forest fires cannot be linked to climate change, it is nevertheless clear that such events may become more frequent in the future according to the IPCC. The situation in 2007 also shows that this can put destinations into the media, with potentially detrimental consequences for travelers. Tour operators were poorly prepared for the crisis and reacted conservatively, potentially angering customers. Independent travelers have been those with the best opportunities to change their

travel behavior, and spontaneous decision-making in tourism may become more frequent in the future should such events continue to prevail.

These three examples illustrate how recent events associated with changing ecosystem conditions have affected tourism. There is no proof these are related to climate change, but they might very well be seen as examples of what could become conditions more regularly encountered in the future. A notable key knowledge gap remain the adaptation strategies of tourists in extreme situations, and further research is required to better understand how decisions are made. In any case, avoiding excessive climate change is in the interest of all actors in tourism to avoid more frequent occurrences of incidences as outlined above, and mitigation, i.e. the reduction of greenhouse gas emissions, will thus become an important adaptive measure, also with regard to increasing prices for transport under scenarios of serious climate policy.

4 Mitigation needs, challenges & opportunities

Tourism has been identified as an important contributor to greenhouse gas emissions (GHG), accounting for a share of about 5% of global emissions of CO₂. This share is considerably higher in countries that are either important destinations and/or markets. Given the predicted growth of tourism in most countries, emissions from global tourism are expected to increase by 150% by 2035 compared to 2005, even when efficiencies through technological and managerial progress are considered. The growth in emissions from this sector will consequently be in stark contrast to global climate policy, with for instance the European Union (EU) envisaging emission reductions of -50% to -80% by 2050, compared to 1990. Any reduction in national emissions should also affect tourism, as there is growing evidence that no additional growth in emissions can be accommodated if post-Kyoto and regional goals, such as the European Union's 2°C maximum warming goal by 2100, are to be taken seriously. Aviation in particular is increasingly seen as a threat to climate stabilization goals, and aviation will, in the EU, be included in the Emission Trading Scheme (EU ETS) from 2012 onwards.

This points at a situation where mobility will become increasingly expensive, as it is in sharp contrast to emission reduction needs. The tourism system should thus be characterized by continuously declining specific emissions on a per journey level, i.e. a reduction in energy use per trip made. The opposite is currently the case. There is a considerable growth in air travel, for instance, with 42% of all international tourist arrivals being by air. At the same time, there is a trend towards shorter and more frequent journeys, increasing overall energy use and emissions in greenhouse gases. Currently, there is no evidence that the global tourism system will decline in emissions, despite considerable potential options to technically reduce specific energy use.

No assessments of energy use and emissions from tourism exist for the Mediterranean. There is evidence, however, that energy use is not generally seen as a key issue that should be addressed. With rising prices for mobility, decision makers in Europe would thus be advised to more strategically consider options of investing in transport systems that are contributing less to climate change, including high speed trains and combined transport (for instance train and aircraft) to create links to northern Africa. These efforts need to go along with the provision of incentives to tourists in order to make them use environmentally friendly transport and to stay longer, while legislation would simultaneously need to be implemented to discourage the use of high-emission transport. With regard to on-site changes, accommodation establishments in all Mediterranean countries have economically viable opportunities to use solar power for warm water and power generation, which could also initiate a new cycle of innovation within the new Deal for a green economy. Together, these measures could contribute to a major reduction in greenhouse gases in the Mediterranean. More information on these issues is also provided in Simpson *et al.* (2008).

DAY 2: ICZM AND RESOURCES EFFICIENCY

The interventions of the second day were made by the representatives of PAP/RAC (Mr. Ivica Trumbic, Ms. Zeljka Skaricic and Ms. Marina Markovic) and an external consultant, Mr. Alessio Satta.

5 Integrated coastal zone management, climate change, and tourism

ICZM is a continuous, proactive and adaptive process of resource management for environmentally sustainable development in coastal areas. It requires a multidisciplinary approach, solution of problems within “sectors” instead of transferring the problems to other “sectors”, participation of all interested parties, as well as integration among sectors, institutions and government. For tourism countries, adaptation and development policy are strongly interconnected, and climate change within the framework of ICZM should become central to national tourism planning.

The tourism sector has been trying in recent decades to develop approaches and strategies that allow for the better planning and management of tourism activities in coastal zones. This is not an easy task and the effort becomes even more complicated as these extremely fragile environments are targets for many other human-induced development activities.

Integrated Coastal Zone Management (ICZM) has been recognised lately by many tourism operators and decision-makers as a path to follow towards the sustainable development of coastal tourism. The ICZM is an adaptive, multi-sectoral governance approach, which strives to a balanced development, use and protection of coastal environments. It is based on principles such as holistic and ecosystem-based management, good governance, inter- and intra-generational equity, safeguarding distinctiveness of coasts, precautionary and preventive principle, all of which give a context for achieving the aims of sustainable tourism.

ICZM creates a constructive dialogue between the interests of authorities and multiple user-groups. It also prepares government representatives and other relevant actors for developing effective environmental legislation within their jurisdictions. Given the magnitude of tourism in Mediterranean coastal zones, one of the greatest challenges faced by coastal managers is giving tourism development a proper place within integrated coastal management in order to increase its long-term sustainability.

ICZM is carried out through a process which, generally, has three major stages:

- initiation, which includes analysis of triggering factors which could strengthen public awareness of coastal issues and the need to take actions in coastal areas;
- planning, which refers to the development of policies and goals, and the selection of concrete sets of actions (strategies) to produce the desired mix of goods and services from the coastal area over time; and
- implementation, which is the vehicle through which the plan is put into effect.

Tools such as Strategic Environmental Assessment (SEA), Carrying Capacity Assessment (CCA), Environmental Impact Assessment (EIA), sustainability indicators, etc., each applied at the proper stage of ICZM for tourism planning and within a well defined regulatory and legislative framework, are a good guarantee of the sustainability of tourism activity and its harmonious coexistence with other activities in a well-preserved environment.

Successful cases have shown that sustainable tourism can be achieved through wide participation and consensus building. The informed involvement of all relevant stakeholders, inter-agency co-ordination and strong political leadership are integral to this process. The development of sustainable tourism necessitates holistic and integrated management. This concept entails the identification of pertinent issues; preparation and adoption of management plans and full subsequent implementation.

Sustainable tourism practices are an effective tool to raise awareness among both tourists and the local population. Some examples are:

- The Regional Landscape Planning of Sardinia: Coastal setback no construction zone and sustainable tourism development;
- Tourism Carrying Capacity Assessment: the DESTINATIONS project;
- European Ecolabel: principles and application;
- WWF's Belek and Cirali project in Turkey;
- Sustainable Tourism Indicators: Case of Calvià.

6 Strategic Planning for Sustainable Tourism Development

Strategic planning is the process of identifying objectives and defining and evaluating methods of achieving them. Strategic planning considers all of the tourism resources, organisations, markets and programmes within a destination. Strategic planning also considers economic, environmental, social, and institutional aspects of tourism development. Strategic planning is a "step-by-step" process with definite objectives and end products that can be implemented and evaluated. Put simply, it is a process by which we look into the future, paint a picture of that future based on current trends and of objectives that we set for ourselves, and influence the forces that will affect us. It tells you where you are, where you want to go, how you wish to get there, when you want to arrive, who will do the work, and how much you are willing to pay.

The process of Strategic Planning for Sustainable Tourism Development in coastal areas includes the following steps:

1. Decision to begin the Strategic Planning Process;
2. Consensus on the Vision Statement;
3. Initial Analysis of the Destination;
4. Tourism Carrying Capacity Assessment;
5. Definition of a Baseline Scenario;
6. Preparation of alternative scenarios for tourism development and definition of the Sustainable Scenario (SS);
7. Preparation and adoption of the Strategy for Sustainable Tourism;
8. Formulation of the Strategic Action Plan;
9. Implementation of the Strategic Action Plan;
10. Monitoring;
11. Review.

While the above steps appear sequential, the process is an iterative one, with feedback loops connecting the various steps. It is also important to note that this is a recommended process - each destination may need to tailor this process to suit its own requirements, norms and values. The specific aspect that will characterise this process is the continuous involvement of stakeholders and the search for their consensus.

Adapting a tourism coastal destination to climate change involves preparing for and adjusting to its projected impacts. Adaptation strategies need to be coupled with mitigation measures that aim at decreasing the rate of climate. Adaptation will include both increasing physical protection from rising sea levels, more extreme weather, and making tourism more sustainable by increasing its capacity to adapt to changes. Protecting and restoring coastal ecosystems will require coordinated multi-disciplinary efforts involving all levels of government, the private sector, and the research sector.

The ICZM plays an important role in shaping coastal ecosystem management policies, as well as improving and coordinating local activities. In particular creating the framework for sustainable tourism

tools. Integrated Coastal Zone Management has been recognized lately by many tourism operators and decision-makers as a path to follow towards the sustainable development of coastal tourism. Sustainable tourism development and Integrated Coastal Zone Management are seen as two parallel, complementary and strongly interlinked processes. Principles, objectives and policy measures of the former contribute largely to the implementation of the latter, and vice versa.

7 Exercises

In order to train participants in the use of tools to achieve sustainable tourism planning in coastal zones, two exercises were carried out.

7.1 Exercise 1: Scenario Planning

The first exercise focused on Scenario Planning. Scenario Planning is a relatively new tool to work with destination planning, helping to understand how the destination will develop under various scenarios. This allows for a critical reflection on those processes/developments that may be more or less warranted. In order to facilitate scenario planning, a number of guiding questions were provided to participants, focusing on the role of increasing/declining markets, new and declining tourism products, changing consumer needs and wants, and the role of climate change in these developments.

An important outcome of this exercise is that in all countries, there are perspectives on continued growth in tourism while few destinations appear to have tourism development plans that integrate various dimensions of sustainability, and just two that look into climate change adaptation including mitigation. Participants were generally more concerned with the changing demography of tourism, including new expectations on for instance experiences. Clearly, destinations have a long way to go to include critical perspectives on development and growth and in particular climate change adaptation and mitigation in their planning processes.

7.2 Exercise 2: Strategic Planning for Sustainable Tourism Development

The second exercise focused on strategic planning for sustainable tourism development. The exercise focused on the case of “Souani” in the region of Al Hoceima in Morocco. In the first part of the exercise participants have analyzed the impacts of tourism investments on the environment and at the same time the potential risks of climate change effects on the same investment. In the second part the participants have defined a strategy for sustainable tourism of the destination proposing an action plan for climate change adaptation.

The objectives of the this exercise were:

- to get the participants acquainted with positive and negative impacts of tourism on the environment, in which it takes place, and also find means of eliminating or promoting these impacts;
- to explain the purpose and functions of a sustainable tourism development strategy and the procedure for the preparation of an action plan for climate change adaptation of a coastal destination.

In the first phase participants have analyzed the potential impacts of a tourism investment on the coastal area of Soauni. They were divided in 3 groups, developing a set of examples illustrating the negative or positive impacts, and defining the conditions that would make it possible to eliminate or soften the negative impacts.

In the second phase participants have carried out a practical exercise of designing a strategy for sustainable tourism development in the area of Souani (i.e. organization of the strategy development,

finances, sequence of steps to be taken and timetable, partners involved, etc.). Participants, still separated in 3 groups, have defined 3 different sustainable tourism strategies for Souani.

The strategies they have prepared consisted of five steps:

1. Diagnosis of the present state and problem analysis (referring to the first part of the exercise);
2. Defining the vision and goals of tourism development;
3. Identification of strategy;
4. Action plan (based on climate change adaptation);
5. Monitoring and feedback.

In Table 1 below are summarised the results of one working group as an example of a possible sustainable tourism strategy.

Table 1. Identification of a strategy

<p><u>Vision</u> Development of high value, responsible tourism that would appreciate natural and human environment with a view of creating special experience for visitors and benefits for local community.</p>		
<p><u>Identification of a strategy</u> Having examined possible impacts of a tourism development on natural and social environment, the following five strategic objectives were proposed as an example that could inspire the strategy for sustainable tourism development of the area:</p>		
GOALS	ACTIONS	INDICATORS
1. Profitability for both sides (community and investors)	<ul style="list-style-type: none"> - Creation of employment of local community - Education and training for locals 	<ul style="list-style-type: none"> - Monitor employment rate - Number of people trained, number of seminars organised
2. Development of the area by sustainable standards	<ul style="list-style-type: none"> - Carrying capacity assessment - Elaboration of scenarios - Defining indicators for achieving sustainability 	<ul style="list-style-type: none"> - Assessment carried out - No & type of scs produced - Indicators produced
3. Creation of a unique and diversified experience for tourists	<ul style="list-style-type: none"> - Recommendations for using traditional architectural styles, local know-how and local materials as much as possible - Creation of a span of indoor and outdoor activities to accommodate for different weather conditions (hammams, massages, local dances and other performances etc...) 	<ul style="list-style-type: none"> - Recommendations created - Number of programmes created and their diversity
4. Connecting resort activities with hinterland	<ul style="list-style-type: none"> - Organising trips to more distant local communities, perhaps even with 1 overnight - Workshops with local craftsman (try to make your own souvenir in the traditional way) 	<ul style="list-style-type: none"> - Number of contracts with local community and number of different programmes - Number of workshops organised and number of participants
5. Integrating other sector through the development of tourism in the area	<ul style="list-style-type: none"> - Making contract with local food producers - Arts and crafts - use them as part of tourism offer 	<ul style="list-style-type: none"> - Number of contracts with local food producers - Percentage of local craftsman included

DAY 3: SCENARIOS FOR SUSTAINABLE DEVELOPMENT

The works of the third day of the seminar were conducted by Mr. Stefan Gössling.

8 Towards an Action Plan

A third exercise based on the first two focused on the development of an Action Plan for a given destination’s coastal zone management within the framework of ICZM, and with a focus on integrating CC specific development/adaptation strategies. The participants worked in three groups, first identifying the destination they wanted to work with, followed by an assessment of climate change related impacts on coastal zones and the identification of adaptation/mitigation measures. The results of one working group are presented here as an example of the working process (Table 2).

The group focused on Malta, an archipelago consisting of three islands, some 60 miles south of Sicily, with a population of 400,000. International tourist arrivals in Malta are in the order of 1.1-1.2 million tourists per year, with a high season in May-October. Tourism is mostly organized (i.e. packages), leisure & sun, sand and sea oriented, and originating from Europe. Current plans to improve and adjust the tourism product focus on an expansion of the season, new markets in the Far East, and growth in niche tourism products building on the island’s history and culture.

Expected climate change related impacts include a rise of the sea level, with most residential and tourism developments being located along the east coast. It is also expected that a rise in temperature will affect seasonality, while changing rainfall patterns may lead to a lack of fresh water. To deal with these changes, it is planned to develop three desalination plants. It is also of importance to note that the national tourism policy includes sustainability as one of 14 topics. A carrying capacity assessment was carried out in 2000, covering 2000-2010. It was concluded that the maximum number of tourists should not exceed 1.5 million. These insights were further elaborated on by using the Adaptation Matrix (Table 2), which identifies a wide range of measure by type of management and actor group.

Table 2: Adaptation Matrix Malta

Type of Adaptation	Tourism Operators/ Business	Tourism Industry Association	Governments & Communities	Financial Sector (Investors/ Insurance)
Technical	EU Funding Assistance to through grant schemes “ERDF & ESF”	EU Funding Assistance to through grant schemes “ERDF & ESF”	Streaming of EU Directives & International Conventions	IT & Telecomunications
Managerial	Exchange programmes and best practice to enhance the HR training and development	Exchange programmes and best practice to enhance the HR training and development	Provides the framework for institutional training and development	Government induce initiative with banks to wave interest charges for one year “example”
Policy	Stakeholder Consultation & Debate	Stakeholder Consultation & Debate	The drivers for policy and strategy formulation	An interest by the financial sector to provide the right environment for investment
Research	Beneficiaries of the research and development studies	Provide quater data for tourism stati.and provides stud. together with univer. &ITS to government and the industry	Through MTA and MSO provide data that is used in studies and reports	Provides sponsorship to commision reports ans studies “workshops & seminars”

Education	The TO shows preference on HR trained at univ. & ITS for better service and hospitality	Supports training needs to the industry to institutions-	Provides the framework for tourism industry	DITTO research
Behavioural	Increase in CSR and responsible tourism management	Provide supplementary CPD training	Inc. civil awareness through local councils "increase attractions and differentiate the market offer"	DITTO research

A second goal of the exercise was to fill in the Mitigation Matrix to identify mitigation strategies, but this was not completed due to time constraints. The exercise nevertheless shows that it is possible to develop comprehensive frameworks for adaptation, to foster interconnecting thinking and consideration of the various issues at stake, and that these can be integrated in ICZM planning and management.

9 Field visit

The last day of the seminar participants have visited a coastal site in southwest Sardinia. The visit was organized to show 3 different approaches to climate change adaptation and sustainable tourism:

- a project for the rehabilitation of a natural dune system for increasing the beach resilience;
- the example of the CHIA Resort, a 4 stars tourism resort that has implemented a strategy for sustainability including environmental management of the structure and gold eco-design;
- the rehabilitation of an old lighthouse through eco-architecture (solar energy, waste water natural treatment, use of local materials, etc.) that have been transformed in a luxury hotel without the alteration of the surrounding environment.

10 Conclusion

The workshop was well received by the participants, with all of them recommending that similar events be arranged in the future. At the same time the reality is that developments on short term policy actions and key issues under negotiation are still moving relatively slowly, greenhouse gas emissions (GHG) continue to increase and not enough has been done to support increased resilience to climate change in Mediterranean countries. Capacity building is thus of great importance, including both a growing awareness of the issues as well as a concrete working knowledge of how to deal with the challenges facing coastal zones. Ideally, climate change adaptation and mitigation would be integrated in the ICZM framework, which is a management framework already accepted and implemented throughout the Mediterranean. ICZM can easily be updated to accommodate planning tools for adaptation and mitigation. In particular Tourism Carrying Capacity Assessment, used in the framework of ICZM and Strategic Planning for Sustainable tourism, has shown to be an ideal tool for adaptation of tourism destinations also for climate change impacts.

Similar workshops as the one held in Cagliari will then be needed to strengthen capacity building for identifying key issues related to operationalising the integration of climate and tourism resilience considerations into planning and decision-making processes in the Mediterranean.

The need to create cross-sectoral networks to enable the dissemination of knowledge, practical experience and new theoretical approaches to climate change in coastal zone management is crucial to overcome this challenge. Increased cooperation and coordination of work between sectoral ministries and programs, as well as private sector, international agencies and non-governmental organizations is required to advance in this field. Often very little information is available on on-going activities in a given

region or sector. Establishing an overview of existing activities and programmes in place for selected sectors and regions will help determine the climate related gaps in these areas and avoid duplication of efforts. Advancing regional cooperation to enhance the exchange of information, knowledge, and networks could also support to this end.

ANNEX I

List of participants

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ANNEX II

Agenda

07 June 2009	Arrival	
08 June 2009	Day 1: The need to adapt to climate change	
Date & time	Content	Speakers / Lecturers
09.00 - 09.30	Welcome and Introductions	Ivica TRUMBIC Helena REY Luigi CABRINI
09.30 – 10.00	The Mediterranean Protocol on ICZM <i>Legal framework and umbrella for seminar</i>	Ivica TRUMBIC
10.00 - 10.30	Tourism trends in the Mediterranean <i>What characterizes Mediterranean tourism in terms of visitor motivations and expectations? Which are the past trends in tourism arrivals and receipts and the forecast?</i>	Luigi CABRINI
10.30 – 11.00	Break	
11.00 – 12.00	Climate-related problems in the Mediterranean <i>Review of analogues, including the algae blooms in 1989 & 1997, forest fires in Greece, Portugal, Spain and Croatia in 2005-2008, heatwave in 2003, floods.</i>	Stefan GÖSSLING
12.00 - 13.00	Climate change and tourism: responding to the challenges <i>Presentation of UNWTO-UNEP-WMO report, along with policy conclusions. The “ Davos Declaration process” on climate change and tourism: the next steps.</i>	Luigi CABRINI Stefan GÖSSLING
13.00 - 14.30	Lunch	
14.30 - 15.00	Mitigation needs, challenges & opportunities <i>Future of energy prices and consequences of emission trading, importance of low-carbon tourism.</i>	Stefan GÖSSLING
15.00 - 16.00	The energy intensity of tourism (Exercise)	Stefan GÖSSLING
16.00 - 16.30	Destination Scenario Planning Presentation of scenario planning tools.	Stefan GÖSSLING
16.30 - 17.00	Where is Mediterranean tourism in 20 years? (Discussion)	

09 June		Day 2: ICZM and Resources Efficiency
Time	Content	Speakers / Lecturers
09.00 - 09.30	Introduction to Integrated Coastal Zone Management <i>Basic principles and stages of ICZM, legislative and financial framework, tools, benefits and challenges, need for decentralization of ICZM projects.</i>	Ivica TRUMBIC
09.30 - 09.45	Examples of ICZM practices in the Mediterranean <i>Current trends and initiatives, how to prepare and implement an ICZM project.</i>	Marina MARKOVIC
09.45 - 10.15	ICZM and Tourism <i>Importance of tourism sector within ICZM, complementarity of ICZM and tourism with regard to principles, tools, planning processes. Practical examples: CAMP Morocco and DESTINATIONS project.</i>	Zeljka SKARICIC
10.15 - 11.00	Sustainable tourism practices (Exercise)	Alessio SATTA
11.00 - 11.30	Break	
11.30 - 12.30	Strategic Planning for Sustainable Tourism Development (SPSTD) <i>Introducing SPSTD, principles and objectives, tools and planning processes, presentation of steps for implementation of SPSTD.</i>	Alessio SATTA
12.30 - 13.00	Discussion	
13.00 - 14.30	Lunch	
14.30 - 14.45	Pilot implementation of the SPSTD: Baška Voda, Croatia	Marina MARKOVIC
14.45-16.30	Working groups	
16.30 -17.00	Funding opportunities: ENPI CBC MED programme (http://www.regione.sardegna.it/speciali/enpicbc/en/)	Aldo PULEO

10 June 2009		Day 3: Scenarios for Sustainable Development
Time	Content	Speakers / Lecturers
09.00 – 12:30	Towards an Action Plan <i>Participants develop within framework of ICZM and with focus on CC specific development/adaptation strategies, based on three scenarios: for emerging, mature and declining destinations. Parameters to be included are e.g. energy use, water use, adaptation needs. How do these issues relate to national tourism strategies? How could they be integrated into national tourism strategies?</i>	Stefan GÖSSLING
12.30 – 13.15	Conclusions and Final Remarks	Helena REY Luigi CABRINI Zeljka SKARICIC
13.15 - 14.30	Lunch	
14.30 - 18.00	Field trip	
18.00	Cocktail	

11 June 2009	Departure
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ANNEX III

List of power point presentations

Day 1: The need to adapt to climate change	
Presentation	Speakers / Lecturers
Mediterranean Protocol on Integrated Coastal Zone Management	Ivica TRUMBIC
Tourism trends in the Mediterranean	Luigi CABRINI
Climate Analogues – learning from the past for the future	Stefan GÖSSLING
Climate change and tourism: responding to the challenges	Luigi CABRINI
New research on „Climate Change and Tourism: Responding to Global Challenges“	Stefan GÖSSLING
Mitigation needs, challenges & opportunities	Stefan GÖSSLING

Day 2: ICZM and Resources Efficiency	
Presentation	Speakers / Lecturers
Introduction to Integrated Coastal Zone Management	Ivica TRUMBIC
Examples of ICZM practices in the Mediterranean	Marina MARKOVIC
GIZC & tourisme	Zeljka SKARICIC
Le cas de “Souani” à Al Hoceima (Maroc)	Alessio SATTÀ
Impacts potentiels du projet touristique sur l'équilibre du milieu de la plage de Souani	Alessio SATTÀ
Sustainable Coastal Tourism: An integrated planning and management approach	Alessio SATTÀ
Baska Voda (Croatia)	Marina MARKOVIC
Funding opportunities: ENPI CBC MED programme	Aldo PULEO

ANNEX IV

Useful readings

Essential reading

UNEP and PAP (2009), *Sustainable Tourism in Coastal Zones: The ICZM Approach*, United Nations Environment Programme, Priority Actions Programme Regional Activity Centre, Split. (available in English and French)

UNWTO, UNEP and WMO (2008), *Climate Change and Tourism: Responding to Global Challenges*, UNWTO, Madrid, and UNEP, Paris. Available at: <http://www.unwto.org/sustainable/doc/climate2008.pdf>

Simpson, M.C., Gössling, S., Scott, D., Hall, C.M. and Gladin, E. (2008), *Climate Change Adaptation and Mitigation in the Tourism Sector: Frameworks, Tools and Practices*. UNEP, University of Oxford, UNWTO, WMO, Paris. Available at: <http://www.unep.fr/shared/publications/pdf/DTIx1047xPA-ClimateChange.pdf>

Recommended reading

Cicin-Sain, B. and Knecht, R. W. (1998b), *Integrated Coastal and Ocean Management: Concepts and Practices*, Island Press, Washington, DC.

Cicin-Sain, B., Belfiore, S., Kuska, G., Balgos, M., Rivera, E., Cid, G. and Calverly, C. (2000), *Status and Prospects for Integrated Coastal Management: A Global Perspective*, UNESCO and University of Nice, Nice.

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IPCC, 2007. *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press, Cambridge, UK, 976pp.

PAP/RAC (1997), *Guidelines for Carrying Capacity Assessment for Tourism in Mediterranean Coastal Areas*, Priority Actions Programme, Regional Activity Centre, Split.

PAP/RAC (2006), *DESTINATIONS - Development of Strategies for Sustainable Tourism in Mediterranean Nations*, LIFE - Third Countries Project document, Priority Actions Programme Regional Activity Centre (PAP/RAC) of the Mediterranean Action Plan (MAP), Split.

Perry, A. (2006). Will Predicted Climate Change Compromise the Sustainability of Mediterranean Tourism? *Journal of Sustainable Tourism* 14(4): 367-375.

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