19 MEDITERRANEAN WETLAND LANDSCAPES: THE CASE OF PRESPA LAKES

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INTRODUCTION

Within the concept of landscape, culture and nature are inextricably linked. The reasons are that landscapes have often resulted from the interaction between humankind and nature and that human activities are the main driver for landscape changes. Landscapes are also the lived context experienced and perceived by human beings, making, as a consequence, all landscapes cultural in essence. This perception in turn is extremely valuable in determining human attitudes towards the continuum of space and time. Thus, landscape gains its structure from the human projects, which are carried out within a given environment and through the landscape itself, being as much a process as it is an entity (Zedeño, 2000).

Human attitudes in turn may lead to actions that will have negative or positive im-pacts on landscapes and their constituents. This is exactly why those concerned with the conservation of the cultural and natural heritage, which depends to a large extent on human attitudes and interests, must look at landscapes as the most appropriate scale of intervention. The objective of these efforts remains simple, but so very difficult to achieve: establishing harmony between humankind and its culture, on the one hand, and nature, on the other (Catsadorakis, 1999).

Figure 1: View to Ochrid Lake (source: T. Papayannis).

The purpose of the present paper is to consider from this perspective the landscapes related to water and the wetlands in the Mediterranean Basin, a fascinating part of our world, with its own unique specificities. The paper is enriched by a deeper analysis of a specific case study, the area of the Prespa Lakes in southeastern Europe, from which some conclusions of wider pertinence can be drawn.

WETLAND LANDSCAPES AND THE MEDITERRANEAN

According to the Convention on Wetlands (Ramsar, 1971), wetlands include whatever portion of space is affected by water, independently of degree of salinity. Beyond the ob-vious categories of lagoons, marshes, rivers and their deltas, lakes and peat bogs, the Ramsar's definition covers coastal marine areas to a depth of 6 m, underground water bodies,[1] salinas, rice fields, oases and mangrove forests, as well as dam reservoirs. As water is the common element of all wetlands, it cannot be dissociated from them. In fact, wetlands play a key role in the operation of the water cycle (Acreman, 2000).

Characteristics of wetlands in the Mediterranean

Globally, wetlands incorporate some of the most productive ecosystems, with a mosaic of biotopes and very high biodiversity, both of flora and of fauna. They support

[1] The first underground Ramsar site has been designated in Slovenia (Skocjan Caves).

ecological functions, which in turn provide significant values for human beings, in terms of primary resources (from fish to reeds and salt) and a variety of services (from flood protection to travel facilitation) (Skinner and Zalewski, 1995). Since Antiquity people have lived in wet-lands or in their proximity, have benefited from their resources and values and have in-corporated them in their spiritual and cultural heritage. Nowhere was this more evident than in the Mesopotamian Marshes and the rich culture of the Ma'dan peoples, who cre-ated a unique architecture using local reeds.[2] As a result, and because of their very na-ture, wetlands are depositories of very significant archaeological remains, including those made of organic matter (Coles and Olivier, 2001).

In the Mediterranean, wetlands have certain specificities that must be taken into account (Papayannis and Salathé, 1998).

The first one is their diversity (Pearce and Crivelli, 1994). Because of the climatic variability in the region, its wetlands range from large river deltas and lagoons on the North shore, menaced by seasonal floods, to *sebkhas* and temporary marshes in the South, which appear only every few years. Freshwater inland lakes have their own characteristics. Artificial wetlands include traditional oases and salinas, rice fields, as well as contemporary reservoirs created by hydroelectric and irrigation dams on major and minor rivers, from the Nile to the Neretva and the Acheloos.

The second is the strong relation and intimacy of local inhabitants to wetlands through the centuries and the resulting strong cultural elements (Benessaiah, 1998; Viñals, 2002). Not only have the Mediterraneans used wetlands, but they often chose to live in them, as demonstrated from archaic lacustrine settlements (Hourmouziades, 1996), ancient Greek trading posts such as Empurias (Catalonia, Spain) and Narona (Croatia) to major Mediterranean cities, of which Tunis and Venice are the most well-known (Matve-jević, 1990).[3]

The third is their highly menaced status. In the last century, the Mediterranean has lost about half of its wetlands, as a result of demographic and developmental pressures, leading to a dramatic degradation of their functions and a diminution of their values for human beings (Finlayson *et al.*, 1992). To counteract this trend, serious conservation and restoration measures have been initiated at all levels, from the local to the international, but the loss and degradation of wetlands has not yet stopped and been reversed (Papayannis, 2002).[4]

Specificities of wetland landscapes

Water, an invaluable element essential for the existence of most living entities, characterises wetlands and provides the basis for their specificities (Wenger, 2004).

[2] Unfortunately, Saddam Hussein drained these marshes and the Ma'dan had to move from the area. International efforts are now on the way to restore the wetlands and to encourage the return of the Ma'dan.
[3] In recent years, innumerable airports have been located in the wetlands.
[4] According to the goal agreed during the Grado Conference on the future of Mediterranean Wetlands, in February 1991.

Water has movement, caused either by flow or the action of wind. This movement gives wetland landscapes a dynamic character visually and it becomes a natural driver of change through flooding, shore erosion and riverbed modifications. Water experiences seasonal changes, turning into snow and ice and impacting dramatically on the visual aspects of landscapes.

In addition, it functionally affects flora and fauna and their ecosystems, and indirectly landscapes (Pearce, 1996). Thus, vegetation cover is determined by the water regime of each area, and may be drastically modified once this regime is changed.

Human works for the management and utilisation of water, such as irrigation canals, jetties and harbours, water mills and dams, are elements that play a major role in moulding landscapes. Excessive water abstraction on the other hand may lead, intentionally or unintentionally, to radical landscape changes, ending in the drainage of wetlands and the loss of their functions and values.[5]

Human interaction of humankind with nature in wetlands

Natural climatic events and human actions are the drivers of change in the water cycle. Furthermore, climate change as well, which has been considered a natural phenomenon with a decisive impact on wetlands, is almost certainly caused by human actions and the production of "greenhouse" gases. There are other human activities that directly affect water and wetlands and their landscapes, causing reversible or irreversible changes. The environment in turn – and in particular, water – has a determining influence on societies and their culture (Fagan, 1999).

[5] As it is happening at present with the Volvi and Coronia Lakes in Northern Greece, which have been designated as Ramsar Sites of International Importance since 1974.

Figure 2: Land use in Gla, Greece (source: T. Papayannis).

Among traditional activities, agriculture is perhaps the most important. The drainage of wetlands for cultivation is known since the Mycenaean times, about three millennia ago,[6] with profound impacts on landscapes, but today it seems to be diminishing. At times it has even created unique landscapes, as in the case of the Neretva Delta in Croatia (Benessaiah, 1999). Water abstraction, however, for the irrigation needs of contempo-rary intensive agriculture has very negative impacts on freshwater wetlands, while the resulting runoff, rich in fertilizers and pesticides, leads to pollution and eutrophication of aquifers and other bodies, including marine ones.

Grazing, if carried out in a sustainable manner, can contribute to the diversity of shoreline ecosystems, with positive ecological and aesthetic results. But excessive grazing pressure can deplete vegetation, impoverish ecosystems and cause trampling of waterfowl nests (Kazoglou *et al.*, 2001).

Hunting and fishing in wetlands have little impact on landscapes, but can cause ecological degradation if carried out excessively, beyond sustainable limits (Maitland and Crivelli, 1996).

Damming of rivers has caused tremendous damage to landscapes, not only by changing flowing rivers into static reservoirs and completely destroying riparian ecosystems, but

[6] See Iakovidis, S.E. (2001), Gla and the Copais in the 13th century B.C., Archaeological Society, Athens, Greece, pp. 264.

also by damage to mountain landscapes during the construction of dams.[7] An indirect impact has also been noticed through microclimatic changes caused by the artificially created water bodies, which usually have little value for biodiversity, due to their depth and water level fluctuations.

The construction of other large public works, such as water and rail arteries, airports and harbours, energy networks and water transfer schemes,[8] has major impacts on wetland landscapes, either directly or by changing scale relationships.

Finally, spreading urbanisation for permanent and resort housing, tourism and various services and facilities is affecting landscapes deeply, especially in coastal zones. The fragility of water-related landscapes makes them much more sensitive to heavy damage from urbanisation, and the resulting losses are immense.

It is evident that such human activities must be faced through integrated territorial planning at the landscape scale, which must take into account a wide variety of factors, coordinate the usual sectoral approaches, implement land use controls, while resolving conflicts and providing guidance for the sustainable management of space and water resources, now and for the future (Phillips, 2002).

CONSERVING WETLAND LANDSCAPE VALUES

The cultural values of the natural environment have often been neglected. However, in recent years there has been a positive trend to redress this failing.[9] We are still not at the stage where the cultural and natural heritage is handled in an integrated manner by interdisciplinary, experienced and well-trained teams. Nevertheless, social sciences are becoming more and more sensitive to physical environmental aspects, while conservationists have started taking into account cultural aspects in the management of protected areas (Posey, 1999).[10]

The global scale

The Convention on Wetlands was signed in Ramsar, Iran, in 1971 and came into force in 1974. Although it focused from the beginning on nature conservation aspects, and espe-cially on waterfowl, it included the concern for cultural values in its preamble. As it ma-tured, it started taking into account other species, such as fish and invertebrates, as well as water and various socio-economic aspects. Finally, in the year 2000, the process of incorporating cultural values in its work begun.

[7] Typical examples in Greece are the Thissavros dam on the Nestos River in the North and the Messochora dam on the Acheloos River in the West.
[8] It is fortunate that the new Spanish government has suspended the previous *Plan estratégico hidrológico*, which provided for very large water transfers and the construction of many new dams.
[9] Noteworthy are in this context the initiatives of the World Heritage Convention and the Convention on Biological Diversity.
[10] IUCN (The World Conservation Union) for example has established a Task Force on Cultural and Spiritual Values of Protected Areas.

This led to the adoption,[11] in 2002, of Resolution VIII.19 on "Guiding principles for taking into account the cultural values of wetlands for the effective management of sites.[12] This document includes Guiding Principle 3, which states among its objectives To safeguard the wetland-related cultural landscapes" (see Box 1).

Box 1: **Resolution VIII.19; Guiding Principle 3**

"The protection of cultural landscapes, which have resulted from traditional human activities, should be a major component of policy and management objectives. Today, we lament at the extent and depth of de-struction caused by contemporary human activities, from urbanisation to forest clear-cutting, from transpor-tation infrastructure to mining. Yet traditional activities created landscapes compatible with the natural envi-ronment, of considerable biodiversity and of a unique beauty. Many examples come to mind, such as the sculptural rice fields in many parts of Southeast Asia, the canals of the Neretva River in Croatia, or the land terracing in most Mediterranean islands. In numerous parts of the world, the traditional activities that have moulded the landscape for millennia are regressing or disappearing. As a result, the landscapes dependent from them are starting to erode and may also disappear with time, leading to the loss of their cultural values.

The protection of cultural landscapes requires the following measures:

- Official recognition (at the national and international level) of wetland landscapes as part of the cultural heritage and designation of appropriate protection status.
- Incorporation of their protection in policies that concern them directly or may affect them indirectly.
- Completion of national inventories of cultural wetland landscapes and official listing.
- Taking them into account in territorial planning and in the determination and control of land uses.
- For cultural landscapes that still maintain some of the traditional activities that have formed them, provi-sion of economic and regulatory measures for stimulating these activities and ensuring their sustainability. This is particularly pertinent in the case of salinas.
- Wherever this proves impossible, search for other means to maintain the beauty and function of the cul-tural landscapes.
- Inclusion of cultural landscapes in tourism promotion activities."

At present, the Convention on Wetlands is encouraging its members to carry out joint management activities for the conservation of cultural and natural values and to present the results at the next Conference of its Contracting Parties (COP9).[13] The aim is to cre-ate a positive impetus and to encourage other countries to follow.

The Mediterranean programme

[11] By the Eighth Conference of the Contracting Parties of the Convention (Valencia, Spain, November 2002). Although the adoption was unanimous, it resulted from lengthy and heated debates.
[12] To find this document go to: http://www.ramsar.org/key_res_viii_index_e.htm.
[13] COP9, to be held in Kampala, Uganda, in November 2005.

In the Mediterranean there is a high interest in the cultural heritage. That is why the Ramsar initiative on the cultural values of wetlands took a concrete form in Djerba, Tuni-sia in 2000.[14]

To encourage the implementation of Resolution VIII.19 in the region, MedWet[15] estab-lished in March 2004 a working group on cultural values, consisting of representatives of the Ramsar Bureau, the MedWet Co-ordination Unit, SEHUMED and Med-INA.[16] The main objectives of this group are to analyse activities related to cultural aspects in spe-cific wetland sites, draw conclusions, contribute to a methodology for the integrated management of the natural and cultural heritage, and prepare a regional presentation for Ramsar COP9.

Such activities are already carried out in a number of national or transboundary Mediter-ranean wetlands, such as the Albufeira de Valencia (Spain), Butrint (Albania), Evros / Meriç / Maritsa River (Bulgaria, Greece, Turkey), Guadalajara Salinas (Spain) and Prespa Lakes (Albania, Greece, FYR of Macedonia).

The MedWet/Culture Working Group has also decided to focus on two very particular wetland types:

- salinas, found throughout the Mediterranean shores, of a unique importance from both the cultural and the ecological side (Petanidou *et al.*, 2002) and
- oases, in North Africa, and especially in Algeria, which are ecosystems created by specific human actions.

PRESPA LAKES

Prespa is a good case study to illustrate the above reflections, as it is a wetland area of high biodiversity and long human history, with evidence that documents the sustainable use of its natural resources until very recent decades.

[14] At the technical session on this theme of the Third Meeting of the Mediterranean Wetlands Committee. The two persons primarily involved at the global level were from the same region (Thymio Papayannis and María José Viñals).
[15] The Mediterranean Wetlands Initiative, under the aegis of the Convention on Wetlands.
[16] SEHUMED is the *Sede para el estudio de los humedales mediterráneos* of the University of Valencia in Spain, while Med-INA is the Mediterranean Institute for Nature and Anthropos, based in Athens, Greece.

Figure 3: View to Megali Prespa (source: T. Papayannis).

Geography, geology and climate

Lakes Mikri and Megali Prespa are shared by Greece, Albania and the Former Yugoslavian Republic of Macedonia. Lake Mikri Prespa is 47 km^2, in an area with an average water level at around 850 m above sea level. It collects water from a mostly granitic and calcitic hydrological basin of 189 km^2, which includes snowy mountains (Varnoundas, Triklario, Vrondero) rising to over 2300 m (Catsadorakis, 1995; Hollis and Stevenson, 1997). Mikri Prespa is separated from the much larger Megali Prespa by a sandy strip of land of about 4 km length. Due to the altitude difference between the two lakes, a thin channel (at Coula) allows the former to drain into the latter. The climate of the area belongs to the Humid Mediterranean Type (Kazoglou *et al.*, 2001: 19).[17]

Human and nature interface in Prespa

The area of Prespa has been a vibrant region over the centuries and has been shaped both by nature and people, resulting in a rich natural environment and an invaluable cultural heritage. Natural beauty and biodiversity are there, but human involvement constitutes a key element. Prespa has been an environment offering plant, animal and mineral resources, as well as shelter to a succession of human societies, providing them with the

[17] According to Emberger's bioclimatic classification.

opportunities for a wide spectrum of activities – political, economic, artistic and spiritual.

The perception of Prespa and its landscapes today may vary according to the different points of view of the inhabitant, the visitor, the scientist, the conservationist; yet, for all of them it is difficult to separate nature from culture.

The objective view of a biologist or a conservationist would be of exceptionally significant vegetation ecosystems. The vegetation varies from submerged aquatic formations and reedbeds to shrublands of junipers and oaks to forests of oak, beech, mixed broad-leaves to alpine grassland. In total, there are 1326 plant species in Prespa, 23 freshwa-ter fish species, 11 amphibian and 21 reptile species, more than 42 mammal species, among which are the brown bear, the wolf, the otter and the chamois, and over 260 bird species.

The two lakes are among the oldest in Europe and this is the reason why they host many endemic life forms, as well as species with a very narrow geographic range in the Balkans.

The view of the archaeologist, the anthropologist or the historian would be of an area rich in cultural elements and remnants dating back to the Neolithic (in the FYR of Mace-donia and Albania) and the Bronze Age (Kokkinidou & Trantalidou, 1991).[18] "Time has rolled over Prespa" (Catsadorakis, 1999: 9), which is not simply a natural space, it is complex and always subject to sudden or unpredictable changes in the political and so-cial order, shaped by events, by war and peace, by creativity and abandonment.

Concrete archaeological and historical evidence so far is quite poor and based on limited finds. However, examining Prespa, not in isolation but within the broader geographical context of the Balkans and the Mediterranean and on the basis of historical accounts, it becomes clear that it has been a passage – or closely related to other important pas-sages – between Europe, Greece and the Eastern Mediterranean. Diverse peoples dur-ing the great migrations of prehistory in the Aegean (c.1200 B.C.) probably crossed the area, while much later and during the Roman period (140 B.C. - 300 A.D.), Prespa lakes are found close and connected with the Via Egnatia.[19] Because of the great economic and military importance of this road during the Roman and Byzantine periods, Prespa would not have been unaffected, as demonstrated by the Byzantine monuments still visible throughout the region.

Together with the natural beauty of the area, the visitor today comes across both with the remains of the magnificent Aghios Achillios basilica,[20] but also with the traces left by the Second World War and the Civil War that followed it in Greece; dugouts,

[18] The earliest known settlements, in the lake Mikri Prespa (Greece), probably belong to the Bronze Age. The absence of Neolithic habitation may either be due to possible loss of sites as a result of lake level rise, or to the geographical isolation of the area itself, which would not have attracted occupation at this date.
[19] It started from Dyrrachium, passed from Ohrid, continued to modern Resen and then to Thessaloniki and Constantinople.
[20] It dates back to the age of Tsar Samuel, who had proclaimed Prespa as the first capital of his kingdom.

machine-gun nests and billets as well as dozens of artillery shells sticking out of the mud when the water is low (*ibid*, 11). Thus, movement of populations, diverse cultures and geo-graphic and environmental conditions have definitively resulted in what the landscape of Prespa is today.

At the same time local natural resources have been a factor in causing and perpetuating changes in the landscape, through their impact on human activities. Freshwater in particular is the main asset of the area, on which all species, including human beings, depend, while the land is constantly shaped by the power of its movement. All the above had a great impact on Prespa and its different landscapes, ranging from lakeshore to high mountains, from agricultural fields to stock-farming areas, from dense forests to wet meadows. Space constraints force us to focus on this last type, whose ecological and cultural importance is significant.

The wet meadows

Wet meadows play an important role in the lake ecosystem, because they are used as spawning grounds for *phytophilous* and *litho-phytophilous* fish species (Crivelli *et al.*, 1997) and as feeding and nesting areas by water birds; they support large numbers of invertebrate organisms and are vital to amphibians, reptiles and mammals (Kazoglou *et al.*, 2004). The total wet meadow area at the Greek part of Lake Mikri Prespa has radically decreased from 129 ha in 1945 to 89 ha in 1984 (Pyrovetsi & Karteris, 1986) and to only 33 ha in 2000 (Kazoglou *et al.*, 2004). The loss of extensive areas of wet meadows at Lake Mikri Prespa is due to four main reasons (Hollis *et al.*, 1989; Kazoglou *et al.*, 2004):

- The diversion of the stream of Aghios Germanos from Mikri to Megali Prespa (in 1935-1945), with the aim of avoiding floods and creating agricultural land, which led to the loss and drying out of a deltaic ecosystem with important areas of shallow wa-ters.

- The construction of the irrigation network since 1965, during which significant wet-land areas were converted to agricultural land.

- The prohibition of reed burning and/or cutting since 1976, aiming at the protection of nests of rare bird species (mainly pelicans and herons) found in the reed-beds.[21]

- The changes in the traditional activities that used to take place in the wet meadows zone and indirectly affected their management. Since the mid 1980's, the inhabitants have been mainly interested in the monoculture of beans, while livestock grazing on the littoral zone – especially cattle – was almost abandoned and lakeshore fishing moved to deeper waters with nets and other tools.

[21] This action, although favourable to the nesting of the target bird species, had a negative impact on several feeding birds and on the reproduction of carp, while it contributed to the degradation of wet meadows and led to the expansion of reed-beds. Conservationists had proposed to the Greek Government to implement winter burning or cutting of selected areas of reed-beds based on a rational management plan, but instead the total ban on burning was imposed.

Many traditional practices and occupations of the Prespa inhabitants in the past were closely connected with the wet meadows and the reed-beds. Reeds were used as a building and insulation material for the construction of roofs and ceilings, as a resource for making mattresses, mats, carpets and other household objects, but also as animal feed during winter. Until the beginning of the 1980's (Catsadorakis, personal communication), large herds of a local breed of cattle grazed the wet meadows. Sheep and cattle-farming close to the lake has played a significant part both in the richness of Prespa and, of course, its landscapes. Grazing maintained the diverse and low height vegetation of the wet meadows. Without it there would have been few pelicans or cormorants or any other rare water birds that are now found in Prespa. For thousands of years, by grazing on the reeds have the animals prevented the spread of the reed-beds, leaving plenty of space for wet meadows.

Furthermore, as fishermen used methods and tools mainly specific for shallow waters - such as traps made of reed stems - they kept the shallows of the lakeshore clear of high emergent plants in order to be able to fish. In addition, being familiar with the habits of carp, which constitutes the main catch in the area, they burned the unmanaged parts of reed-beds in the deeper parts of the shore every winter to facilitate fish reproduction the following spring.[22] With the increase of the water level in spring, carps can easily access the wet meadows. These practices indicate that management of the littoral vegetation was part of the every day life of the local people and necessary for their survival.

Figure 4: An example of Mikri Prespa's wet meadows (a) after treatment and (b) in spring, when the water level has risen (source: Society for the Protection of Prespa).

Obviously, the relationship of the people of Prespa with the reed was not merely one of exploiting the material; it was a very close relationship involving management of the reed-beds as a wealth resource and as a place in which to live and work. Thus, they provided sound management built in traditional experience with positive results (Catsadorakis, 1999: 70), while the lake rewarded them with a generous supply of its produce.

All the above demonstrate firstly the intimate and complementary relation between humans and nature, and secondly the way that this relation may formulate the landscape both functionally and aesthetically. So, nowadays, instead of viewing a 129 ha wet-

[22] This practice is based on the fact that winter fires cleared reed-bed stands from all dense and high vegetation, which starts to re-sprout by the onset of spring.

meadows area extending around Mikri Prespa we now notice only a 33 ha one (It sis hoped that by the end of the programme for the management of the wet meadows this area will increased to approximately 100 ha). Additionally, if oral traditions tell the truth, and they say that all the settlements of the area were once on the banks of the lakes (Marangou, 2001: 104), then we can imagine how different the appearance of Mikri Prespa must have been in the past.

Prespa is definitely a cultural landscape, where it is difficult to distinguish what is natural and what is not. It is also a place loaded with strong memories providing a continuous reminder of the relationship between the living and past generations.

For these reasons, its conservation is based on the principle "not to reach as much a natural state as possible, but as much an ancient [hu]man-made state as possible" (Catsadorakis and Malakou, 1997: 176-195).

A local non-profit organisation, the Society for the Protection of Prespa,[23] aiming at the protection of the natural and cultural values of the area, is working on the restoration of the lost wet meadows, through various management methods (grazing, cutting and controlled burning of reeds) and at improving water level control.[24] The re-introduction of buffaloes for this purpose is contributing both to the extension and diversity of wet meadows, with their characteristic landscape features, and to the revival of a traditional activity. Simultaneously, systematic monitoring of the managed areas and the use of the project areas by the birds is carried out in order to follow up the results of the management interventions. It is hoped that the results of the project will provide a useful model for other similar lakeshore sites.

Activities planned for Prespa

In the area of Prespa Lakes, a Prespa Centre for Nature and Anthropos (PCNA) is being established[25] in the Lemos village on the Greek side of the lakes. Already, a traditional three-storey building is under restoration to house it and the programme and staffing of the new centre on the way.

The main objective of the PCNA is to collect and organise diachronic information on the interplay between humankind and nature in the hydrological basin of the two lakes, care-fully referenced as to space and time. This information will be made widely available through the internet to scientists, managers, decision makers and other interested par-ties. In addition, the centre will launch research projects on a number of issues, in order to further analyse the interface between culture and nature and to complete the knowl-edge of physical and anthropogenic processes in the area. Finally, the centre will at-tempt to present to the local inhabitants and to the wider public an integrated view of the area, geographic, temporal and sectoral. Projects in development include the following:

[23] An umbrella organisation of a Danish, a French, a UK and 7 Greek NGOs, with its headquarters in the Greek village of Aghios Germanos.
[24] Through a LIFE Nature project entitled 'Conservation of Priority Bird Species at Lake Mikri Prespa, Greece'.
[25] By SPP, the Society for the Protection of Prespa, assisted by Med-INA.

- Impact of human activities on the Prespa landscapes and use of the natural resources diachronically.
- Changes in habitation patterns during the 19th and 20th centuries.
- The interface of settlements and the lake shorelines.
- Culinary aspects and their relation to natural resources and local traditions.

It is expected that the centre will be in operation by late 2005 and that its activities will cover also the Albanian and Macedonian sides of Prespa and involve scientists from all three countries.

FINAL REFLECTIONS

A number of conclusions can be drawn from the above considerations, as well as certain final reflections.

Wetlands present sensitive landscapes, of unique dynamism and variety, which are usually of great functional and aesthetic importance and often incorporate significant cultural values.

Wetland landscapes are also perceived in different ways, by different people and in different time frames. The local inhabitant experiences the wetland very differently from the visitor, as does the natural scientist from the humanities researcher.

The continuing degradation of wetlands in the Mediterranean, though, is a reality that has resulted in damage to their landscapes and has led to a decrease in their multiple functions, services and values. Thus, efforts to conserve, restore and manage wetlands in a sustainable manner will have beneficial impacts on the landscapes associated with them. In this difficult process, the concept of landscape can play a positive role both as a platform for organising positive actions and as an appropriate scale for presenting to decision-makers and the public threats and problems, solutions and results.

Nature conservation and the sustainable use of natural resources, as well as the protection of the cultural heritage, depend, to a large extent, on the attitudes of local populations. Landscapes, with a focus on their cultural aspects, are a good way to reconnect people with their wetland heritage and to affect their attitude in a positive manner.

In addition, wetland landscapes in a good state, maintaining their functions and values, are an important factor in attracting visitors, thus providing income for local people and financially strengthening conservation and sustainable use options.

It seems evident, therefore, that any conservation initiatives in favour of Mediterranean wetlands must seriously take into account the landscapes associated with them as both an issue and an asset.

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