MedWetCoast

Projet pour la Conservation des Zones Humides et des Ecosystèmes Côtiers dans la Région Méditerranéenne
Project for the Conservation of Wetland and Coastal Ecosystems in the Mediterranean Region
Projekti i Ruajtjes se Ligatinave dhe Ekosistemeve Bregdetare ne Rajonin Mesdhetar
مشروع صون المناطق الرطبة و النظم البيئية الساحلية في حوض البحر المتوسط

Regional Coordination Unit

Socio-Economics and Conservation Of Mediterranean Coasts and Wetlands

Lessons from the MedWetCoast Project

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About MedWetCoast Project

The MWC project objective is to conserve globally endangered species and their habitats, recognising wildlife conservation as an integral part of sustainable human development while improving capacity of government and non-government agencies to tackle biodiversity conservation issues. The project addresses biodiversity conservation in 15 Mediterranean coastal and wetland sites of global importance, situated in Albania, Egypt, Morocco, Tunisia, Lebanon, and the Palestinian Authority. The project is implemented by UNDP. It is financed by the national contributions of these countries as well as the Global Environment Facility (GEF) through the United Nations Development Programme (UNDP) and the French Global Environment Facility (FGEF).

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Cover photos by MWC National Components.

Contents.

Foreword.

The MedWetCoast project is, has been, should have been, would be or will be a comprehensive undertaking with the aim to reconcile the safeguard of rich and endangered ecosystems and habitats and the demands for socio-economic development of the communities living in or near the site and using and depending on those resources. The international community has customarily termed such an aim an "Integrated Conservation and Development Project". There, one should understand that, in order to protect a site and its resources, there is no other way than putting in place the mechanisms that will bring the stakeholders to change their resource use practices in favor of ones that sustain ecological regeneration and the 'natural'[1] evolution of the ecosystems.

Of course, when one hears of 'change of behavior', one usually refers to education and awareness. True. It can be a hard undertaking though, one that requires patience and dedicated effort over a long time. But it works. When explained why and how such a behavior impacts on the ecosystems and endangers future uses, a majority of people would be sensitive and concerned. Only, that detrimental behavior is itself caused by a number of factors, usually socio-economic ones. To effect the change, people then need to be given the necessary socio-economic enabling conditions, e.g. an alternative livelihood, the proper technology, access to market, access to land, correct pricing, alternative fuel resources, etc. Educating is then necessary but often not sufficient. Changes would also happen and should happen, in the case of rapidly degrading environmental situations, with control measures and/or with positive encouragement: putting in place the incentives and the enabling conditions that will lead the resource users to modify those practices that are most damaging for the environment … using less pesticides, reducing the size of the herds, adopting drip irrigation, keeping on the designated visitors' path, etc. In an environmental project, a socio-economic approach is then being able to analyze the socio-economic contexts and understand the reasons that motivate this or that behavior, and implementing a balanced mix of actions (educate, control, or encourage) that will bring about changes in the practices and therefore less pressure upon the environment.

As the MWC project has now operated over more than 6 years, it seemed useful to look at how the project has tackled the subject. Though we have termed the various chapters 'lessons', the objective here is not to give lessons, but to illustrate what we have learned through the implementation of the project, i.e. present the main issues, portray various ways in which the project has addressed these, and, when relevant, highlight gaps and weaknesses. The analysis is supported by reference to commonly accepted guidelines and international best practices.

Initiated in late 2004, the report has been commented by project experts and a semi-final draft reviewed at the Paris workshop of MWC socio-economic practitioners (24-25 November 2005). However, even if we have tried to accurately display the information, balance the judgment and sensibly analyze the case studies, we are bound to have forgotten things, made mistakes, or misunderstood texts and comments. Apologies, if that is the case. We trust though that the report would prove useful, first to the MWC professionals in pursuing and sustaining the work, and also to our national and international partners, colleagues, and experts in transferring the experience of the MWC project.

[1] The evolution of a landscape or a protected area site of course does not exclude man and their activities; on the contrary, over history, man has forged the landscape and turned it into what it is now. The issue is then not to exclude human activities but to turn them to a level that is compatible with the ecological functioning of the area.

MWC LESSONS LEARNED SYNTHESIS

LESSON 1.

Project design and implementation (1): Operationalizing ICDP principles

Review/revisit the socio-economic issue in inception phase, translate the principles of ICDP into operational activities and give appropriate guidance and support from the start.

LESSON 2.

Project design and implementation (2): understanding cause and effect relationships

Understand and address the cause-and-effect relationships in inception phase, carry out stakeholders analysis to identify them and their dynamic relationships throughout the stages of project design and implementation.

LESSON 3.

Building trust and confidence with local actors

Building trust and efficient partnerships is of primary importance and need time beyond classical site management process.

LESSON 4.

Improving land tenure and natural resource access and control

Natural resource access, stewardship and ownership are key issues. Clarifying these rights and control concerns will help projects achieve the simultaneous goals of conservation and development.

LESSON 5.

Implementing alternative activities for livelihood (1) that contributes to conservation objectives

Systematically consider the linkage between the conservation and development objectives; local people should regard their efforts to conserve biodiversity as contributing to their economic and social benefits.

LESSON 6.

Implementing alternative activities for livelihood (2): dedicated expertise required

Integrate appropriate provision for technical and financial assistance to support the development and inclusion of alternative livelihood schemes in the project design, think collectively of the long-term consequences of the initiatives with a dedicated community development specialist and facilitator.

LESSON 7.

Institutionalization of the project: capacity building for NGOs and local actors

Local NGOs are essential organisations that must be involved in the site management process. NGOs are able to play an important role in the management of the site, in particular for raising awareness among stakeholders and governments. Their capacity and strengths must be developed; networking and workshops are essential tools to improve skills and enlarge visions of the members.

LESSON 8.

Monitoring and evaluation of the socio-economic site management activities

From the start of the project, provision must be made for monitoring, with indicators that measure both ecological and socio-economical impacts of the management actions. Being patient for recording results but claiming concrete achievements: changes take time.

LESSON 9.

Lesson from the lessons: "leap-frogging" the established lessons and experiences?

Integrating conservation goals in development project and development goals in conservation project

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List of Acronyms.

AFD:	Agence française de développement
APAL:	Agence de protection et d'aménagement du littoral
ATEN:	Atelier Technique des Espaces Naturels
CdL:	Conservatoire de l'espace littoral et des rivages lacustres (France)
EU:	European Union
FFEM:	Fonds Français pour l'Environnement Mondial
GAC:	Government Appointed Committee
GDFP:	General Directorate for Forest Protection
GEF:	Global Environment Facility
GTZ:	German Technical Assistance
ICDP :	Integrated Conservation and Development Project
IMP:	Integrated Management Plan
IUCN:	World Conservation Union
MAB:	Man and Biosphere Program from UNESCO
MEF:	Ministère des Eaux et Forêts
MoE:	Ministry of Environment
MP:	Management Plan
MWC:	MedWetCoast Project
NGO:	Non-government organization
NRM:	Nature Resource Management
NSADP:	North Sinai Agricultural Development Project
RCU:	Regional Coordination Unit
RFU:	Regional Facilitation Unit
SEA:	Socio-Economic Approach
SIBE:	Site d'Intérêt Biologique et Écologique
TdV:	Tour du Valat Biological Station (Camargue, France)
TCNR :	Tyre Coast Nature Reserve
UNDP:	United Nations Development Programme
UNEP:	United Nations Environment Programme
USAID:	United States Agency for International Development
WB:	World Bank
WWF:	World-Wide Fund for Nature

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MedWetCoast

Regional Coordination Unit

Chap I.

Introduction and aims

The Mediterranean Region is an area of high biodiversity with a high level of plant species' endemism. This "hotspot" is also a critical area for migratory birds in the Africa-Western Palearctic flyway as wetlands of this region provide essential staging, wintering and breeding habitats on each sides of the Mediterranean Sea.

These coastal and wetland ecosystems are threatened by a large number of human activities such as uncontrolled development, urbanization, increase of agricultural land use, growing national and international tourism, water pollutions, and unplanned or over-exploitation of natural resources.

The MedWetCoast project (MWC) aims at conserving the biodiversity of global and regional importance in six countries/authority in the Mediterranean basin: Albania, Egypt, Lebanon, Morocco, Palestinian Authority and Tunisia. Technically supported by the Station Biologique de la Tour du Valat (TdV), Conservatoire du Littoral (CdL) and Atelier Technique des Espaces Naturels (ATEN), it is financed by the national contributions of these countries as well as the French Global Environment Facility (FGEF) and the Global Environment Facility (GEF) through the United Nations Development Programme (UNDP).

Launched in 1999, the project consists of three components: (*i*) at the local level, it aims at managing 15 pilot sites for conservation (wetlands and coastal areas); (*ii*) at national level, it calls for developing innovative legal frameworks for removing the causes of biodiversity degradation, reinforcing the institutions involved in the management of natural resources and promoting coordinating policies; (*iii*) finally, at the regional level, it strives for strengthening capacities through training and technical assistance and developing and sharing experience through networking.

In August/September 2003, the project undertook a mid-term evaluation, which, in its recommendations, called upon greater attention to socio-economic issues.

> A number of design challenges are now conditioning the implementation of the project. These include: … a lack of focus on socio-economic issues; the absence of an in-depth institutional and capacity assessment at the country level … [6.1]
>
> With one exception, *economic impacts and alternative livelihood* strategies and options have not been given adequate priority by the various national components. It is the view of the evaluators that this is due in part to the lack of focus in the initial diagnosis stage, piloted by the RCU, on the socio-

> economic analysis and dynamics affecting resource use at the site. In addition, at the design stage, management plan implementation budgets for the various national components made inadequate provisions for such actions. [6.1]
>
> With respect to the technical assistance function … Technical backstopping from the partners should be pursued, with particular emphasis on providing technical support in the areas of … socio-economic analysis and sustainable alternative livelihoods. [among other issues] [6.3.1.vii]
>
> The RCU should provide support to the national components to help them ensure that socio-economic dynamics acting as root causes of biodiversity loss are dealt with in the management plans, as implementation of those begins. [6.3.1.xiv]
>
> Site diagnosis and management plans in development would benefit from additional data collection and analysis on socio-economic dynamics acting as root causes of biodiversity loss so that interventions around those issues can be integrated to the site management strategy. Management plans already developed will require revisions along those aspects. [6.3.2.ii]
>
> *Selected extracts from the Mid Term Review final report, October 2005.*

As such, within the framework of the RCU technical support to the national components over 2004-2005, efforts were deployed to assist and focus on the integration of socio-economic issues in the MWC project strategies. This was undertaken in three ways:

- technical assistance, upon request, to facilitate the integration of socio-economic considerations in the site management planning processes (visits to Albania and Lebanon);
- documenting the socio-economic efforts undertaken at the national and site level, whether as part of the diagnosis stage, implementation of urgent measures or implementation of the site management plans, or as part of the overall national project strategy;
- facilitating the establishment of a network of environmental socio-economists in the Mediterranean region, building upon the capacities of the MWC national teams.

As the MWC entered the fifth year of implementation, it was important that socio-economists involved in the project met to discuss common experiences from the field. The "MWC Workshop of Socio-Economic Practitioners", 10-11 November 2004, organised at the Station Biologique de la Tour du Valat, was the first opportunity for MWC specialists in socio-economy to meet and exchange information on the integration of this issue in the site management process. The input of the participants led to discuss lessons-learned from country experiences.

This booklet is designed to address primarily the experience and lessons learned from MWC implementation from a social and economic perspective. The aim is to document how the socio-economic considerations have been taken into account in the approach of the MWC project, in the Management Planning process at the site level and in the implementation of concrete/urgent measures. Thus, the conception of this booklet provided an interesting forum for the exchange of ideas and experience from the involved experts.

Sustainable management of MWC sites is critical to the long-term health and welfare of many Mediterranean local communities. Despite their importance, these sites are being modified or exploited, driven by short-term economic motives. The decision process to reach sustainable development of a MWC site can be seen as a debate about the possibilities to integrate social, economic, biophysical, and cultural development goals. To make this integration successful, it

is crucial to consider carefully social and economic interests of each stakeholder during all the steps of the project.

After describing the main social and geographic characteristics of the MWC case study sites, the pressures and threats to MWC sites and their root causes are highlighted, through a comparative analysis. Then, we discuss what socio-economic approach means in the context of the MWC project. Finally, lessons learned from the different case studies are presented.

With this document, we expect to provide elements of policy guidance to governments and planners and to be also a valuable teaching resource.

Chap II.

Description of the MWC sites

In this booklet, we present studies of five countries from the MWC project. All the national MWC components have produced substantial outputs concerning priority actions such as legal frameworks and intersectoral management bodies, capacity building or physical structures on site. But none of them presently would seem to have a complete functioning of integrated site management. Also, the national components are not at the same stage of implementation and of integration. The conception and implementation of the site management process always require more time than expected and achievements are often difficult to evaluate. From the 15 key pilot sites containing globally threatened biodiversity, we retained 12 study sites. Without any exemplarity value, due to the diversity of situations and contexts, from a Mediterranean country to another, the sites presented here have an illustrative value. Each study shows the variety and importance of the threats and causes of the degradation of Mediterranean coastal and wetland sites. They were selected by the involved experts to demonstrate how the socio-economic issues have been integrated in the site management process but also to show the use of different approaches and tools.

Each study presented here follows a standard format that basically includes a summary of the major biophysical features, the key biodiversity issues and significance; and finally the main uses of the sites and the threats they have to face.

The lessons learned from each site have been analysed and synthesized in the last section. They are illustrated by boxes describing various stages of the site management process, as these were contributed by national teams.

ALBANIA

Narta Lagoon, Llogora, Orikumi and Karaburun Peninsula

Biophysical features

All the Albanian MWC sites are located on the South-Western Adriatic coast of the country in the district of Vlora.

The **Narta Lagoon** site covers c. 19,738 ha with the surrounding. The total wetland area is 10,210 ha with the 2.900-ha lagoon and 1,500 ha salinas. The sand dunes and beach reach c. 500 ha, while the pine forest is c. 1.167 ha and halophytic scrublands and cultivated lands cover c. 7,798 ha. There are two Managed Nature Reserves/Hunting reserves established inside the two Mediterranean pine forests. In the South-western part of the lagoon there are two islands: the bigger one is covered by cypress trees (*Cupressum sempervirens*) and has a remarkable 14th century monastery. Narta lagoon is undergoing rapid degradation due to limited marine and fresh water input. The lagoon is subject to frequent dystrophic crises. It has only one outlet channel with the sea that is increasingly blocked by marine sediments transported by coastal currents. During summer and early autumn almost half of the lagoon dries out completely and the rest of the lagoon has a depth of only 15-20 cm. Bird colonies are established mainly in the salt pans, where they are subject to disturbance, and have low breeding success.

The site of **Llogara, Orikumi and Karaburun peninsula** covers c. 31,383 ha. It includes the western slope of Çika mountain, Llogora, Kanali ridge, the Karaburun peninsula, and Orikumi lagoon. The Llogora (1010 ha) is a National Park, while Karaburun Peninsula (20,000 ha) has the status of Managed Nature Reserve. The hills rise to 2,000 m and the coastal geomorphology of the area is characterised by high, wave-cut cliffs. These coastal cliffs dominate the coastline along the Karaburun peninsula. Important habitats include alpine and subalpine pastures and meadows; pine and beech forests mixed with *Quercus coccifera, Q. macrolepis*; typical Mediterranean maquis; rocky coastal vegetation; wetlands with alluvial forests. The only wetland inside this area is the Orikumi lagoon. It has a size of 130 ha while the low laying surrounding, Dukati wet field (the flooding plain of the Dukati river), covers c. 1,000 ha. The Orikumi lagoon itself is located near the military base of Pasha Liman (western part) and Orikumi village in the East. The lagoon communicates with the sea through a single channel. It is surrounded by a dike in the South-east, where a pumping station does not allow

freshwater to flow into the lagoon. In the South/South-Eastern part of the lagoon a drained former marshland exists in the form of a rich peat soil. The whole ecosystem has undergone a significant change of water regime due to reduced water exchange with the sea and the diversion, 15 years ago, of Dukati River which once flowed into the lagoon. The former fresh and brackish water types of habitats and vegetation have been mostly replaced by typical salty and brackish-water habitats. Reedbeds are well-developed along the western part of the lagoon and is maintained by the freshwater input coming from several small springs.

Biodiversity significance

The **Narta lagoon site** has a wide range of habitat types. As such, it presents a high biodiversity potential and value. Endemic species of *Orchis albanica and Orchis x paparisti* which is a hybrid form between *O. albanica and O. coriphora* can be found there. Outside the breeding season, globally threatened and vulnerable species use the site for feeding and roosting (*Pelecanus crispus, Oxyura leucocephala*, *Aquila clanga, Haliaeetus albicilla*, *Larus audouinii*, *Phalacrocorax pygmeus*). About 34,800 wintering birds can be count on the lagoon, and the site is the second most Important Bird Area in the country after Karavasta lagoon in terms of numbers of bird species that occur here. A number of vulnerable invertebrates and reptiles occur in the area, like the turtles (*Testudo Hermanni, and Emys orbicularis hellenica*).

At national level 215 taxa have been identified as being globally endangered (excluding fish; invertebrates incomplete) of which 69 taxa occur in the coastal zone (32.1 %). Of these 69 taxa, 44 are present on the site of **Karaburun / Orikumi**, (63.8 % of threatened coastal taxa) although some species are more associated with the mountainous habitats, rather than the coastal ones of the site (eg. *Rupricaria r. balcanica*). Even if the field studies have to be completed, the area of Llogara, Orikumi and Karaburun peninsula is already one of the highest biodiversity are of the country. The Llogora National Park is an Important Bird Area. The caves and shores of Karaburun peninsula provide suitable sites for the globally threatened Monk Seal *Monachus monachus.* Endemic, subendemic, relict and many rare and threatened taxa occur inside the area which includes Orikumi lagoon (*Lutra lutra, Mauremys caspica*).

Uses and threats

Eighteen villages organised in two communes arise in the **Narta Lagoon area** with a total of 24.000 inhabitants. The severe shortage of fuel-wood in the area led to a general illegal fire-wood harvest in the forests that are not exploited for timber. Forest fires are not usual but several few c. 100-ha fires happened during the last decade. Forest, agricultural and abandoned lands are grazed by a large number of cattle, cheep and goat herds. Outside protected areas, about one hundred hunters hunt mainly big games such as wild boar. The pollution of the lake sediments and border lands from industrial waste dump of an old PVC factory which contains heavy metals (mercury and cadmium) is a major threat that is not well evaluated. The impacts of the pollution of the lagoon (dystrophy crisis) are amplified by the limited water exchange with the sea due to natural sedimentation in the channel. This phenomenon threatened the fishing activity by decreasing the fish renewal in the lagoon. The catch of the fishing rights owners (12 fishermen) has dramatically fallen during the last decade may be also due to over-fishing. Uncontrolled fishing, grazing and hunting activities, sewage discharge in the lagoon, dune erosion and sand extraction for construction, unplanned

tourism and urban development underlined the urgent need of an integrated management plan approach for the whole site area.

In the area **Llogora-Orikumi-Karaburun** there are two municipalities; Orikumi and Himara with c. 10,423 inhabitants. The Karaburun peninsula covers c. 10,000 ha and is traditionally grazed in winter by c. 32,000 sheep and goats. An over-grazing is obvious and even the legal status of the area does not allow the use of existing forest for grazing and timber, the local population does not have any other alternative source of fuel-wood. Forest and maquis fires occur more and more often and they are set intentionally by shepherds to improve the pasture lands. Despite their protection status there are no existing management plans for either Llogora NP or Karaburun peninsula managed nature reserve. In the area the hunter association has c. 80 members. Illegal fishing and use of dynamite was frequent in the area during the 90s. Red coral may be collected by local and Italian divers but information is lacking. Uncontrolled tourism and recreation activities are increasing in the whole area.

Panoramic view of Dukati wet fields and Karaburun peninsula
- Photo from MWC Albania Team (2004)

Working group of local experts and stakeholders on Llogora-Orikumi-Karaburun site
- Photo from MWC Albania Team (2004)

Sources:

Adapted from Project Document Albania (1999) ; Berxholi (2001) ; Final Report Stakkeholder Analyzes and Governance Aspects

MP document for project sites

EGYPT
El Omayed, Burullus, and Zaranik

Biophysical features

El Omayad Protected Area is situated in the eastern province of the North Coast 80 km west of Alexandria, Egypt's second largest city. It is a Biosphere reserve of UNESCO MAB programme that covers c. 70,000 ha. The reserve includes mainly sand dunes, inland ridges and tablelands. The whole area covers c. 250,000 ha of coastal plain that is fairly wide with calcareous sand dunes along the coast and series of long calcareous ridges running parallel to the sea with depressions containing salt marshes. The inland tableland is a relatively flat plateau containing rich steppe habitat. The five main micro-habitats contained within the reserve are: the coastal sand dunes, the inland ridges, the saline depressions, non-saline depressions and the inland plateau.

Lake Burullus is a Ramsar site lying in the north-western Delta. It is a part of the Governorate of Kafr El-Sheikh that lies between the two branches of the Nile. It was declared a nature reserve under Law 102/1983 in May 1998. The lake is separated from the Mediterranean sea by a 65 Km long sand bar, the middle section of the bar is narrow and is cut by an outlet that connects the sea and the lagoon. The latter covers c. 4,100 ha. The area decreased during the last 50 years due to land reclamation of its south-western banks. Nine agricultural drains of the nearby farmlands discharge into the Lake some 3.9 billion m^3 of water per year, most of this water flows to the sea through the unique outlet. The original balance between inflowing sea saltwater and drainage brackish water is disturb, with impacts on flora and fauna including fish populations and species diversity. Some 50 small islands provide habitat for a large number of birds. Thus, the Burullus Protected Area provides a wide range of habitat types, from the sand dune to mudflats, open water, reedbeds and ricefields.

The **Zaranik Protected Area** on the Mediterranean coast of North Sinai is a very important stopover site for the migratory birds. The reserve was established en 1985, it covers c. 25,000 of terrestrial and saltmarsh habitats. The reserve encompasses also 28 km of Mediterranean coast including the eastern tip of Lake Bardawil that covers c. 60,000 ha. The lagoon is separated from the sea by a sand bar and is a vast area of shallow water with small islands, marshes and salt mudflats. The lagoon is the least polluted lake of the country and unlike all

the Delta lagoons, it maintains a salinity higher than sea water with water circulating through the three outlets which connect it to the sea.

Biodiversity significance

El Omayed area is representative of the Mediterranean coastal desert. The area has high flora diversity; over 1,000 plant species have been recorded. 20% of these are considered to be nationally threatened and some are restricted range and globally threatened species. The North Coast also has some of the highest mammal and reptile diversity in the country, with a number of restricted range and globally threatened species occurring. 38 species of mammal and 35 species of reptile and amphibian have been recorded. In addition, the area has a rich invertebrate life with endemic insects and spiders. As for birds, the sector is situated on internationally important flyways for birds migrating between Eurasia and Africa, with the greatest numbers and species diversity occurring in the autumn when millions of migrants pass through the region. A key threatened species is Corncrake, *Crex crex* which is netted and trapped for the more common Quail *Coturnix coturnix*.

The **Lake Burullus** is a registered Ramsar site. Field studies showed rich biodiversity of planktons, higher plants, and fauna including birds. Biodiversity includes numbers of rare, endemic and threatened species. A total of 197 species of flowering plants have been recorded from Burullus with 3 endemic species (*Zygophyllum album* var. *album, Sinapis arvensis* ssp. *allionii, Sonchus macrocarpus).* 25 species of fishes and 22 species of reptiles and amphibians in Burullus Protected Area have been found among them two species are globally-threatened: the Loggerhead Turtle *Caretta caretta* and the Green Turtle *Chelonia mydas*. 53 species of birds have been recorded in Burullus Protected Area. Among them 6 are endemic species. Even if bird studies have to be completed, the lake Burullus is a wintering area of international importance for waterbirds with more than c. 200,000 birds.

Typical flora of the **Zaranik** saltmarshes and foreshore includes: *Halocnemon strobilaceum, Arthrocnemon glaucum,Juncus subulatus.* Three endangered flora species occur: *Zygophyllum aegyptium, Plantago chamaepsyllum,* and *Allium crameri.* Ten mammal species are recorded, two of which are endangered: Fennec Fox *Fennecus zerda* and Sandcat, *Felis margaritta*, both occur in the reserve. 244 species of birds have been recorded at Bardawil lagoon. Hundreds of thousands of migratory waterbirds pass through the area during autumn, including for instance c. 13,000 flamingos *Phoenicopterus rubber*, c. 5,600 white pelicans *Pelecanus onocrotalus,* c., 2,500 Little bitterns *Ixobrychus minutes,* or c. 221,000 Garganeys *Anas querquedula.* Millions of passerines, large numbers of birds of prey and globally-threatened species migrate through Zaranik. Due to the exceptional numbers of migratory birds that use or fly-over Zaranik, the area is a Ramsar site of international importance.

Uses and threats

El Omayed is located on the Mediterranean coastline to the west of the Delta that is rapidly being built up, with tourism developments spreading along the coast road. The town of Matruh has a population of c. 50,000 people and the total population of the area is estimated at c. 190,000, of which 85% are Bedouin. Water is the main limiting factor for agriculture, and water harvesting techniques are being introduced. Livestock rearing is a major source of livelihood, and round 500,000 sheep and goats are present along with small numbers of camels, donkeys and cattle. Over-grazing and fuel-wood harvesting is a significant problem with the spread of secondary housing and tourist resorts along the coast that is causing

irreversible loss of sensitive areas. Uncontrolled hunting and trapping is widespread. Quarrying and soil mining are also increasing in the coastal belt. The coastal plain has also been designated for land reclamation. An irrigation scheme construction will allowed the cultivation of the rangelands. All the area, including the reserve, is under pressure from tourism and agriculture.

The total population living within the **Burullus Protected Area** was 188,900 in 2001. The average annual growth rate is 2%. The area is a mixture of public and private landownership. Fisheries provide the principal life-support system for the inhabitants of the Burullus area. The total catch is c. 57,000 tons/year by 28,000 fishermen. However, the area is grazed by a total of c. 30,000 buffaloes, cows, sheep and goats. The agricultural lands in the surrounding cover c. 121,000 ha of ricefields, wheat, beans, grape, maize, tomatoes and cotton. Other resource uses include: fish farming (c. 155,000 tons/year), reed harvesting, bird hunting, tourism and recreation. Land reclamation, fish farming stocked with fry caught illegally, over-fishing, over-hunting, overwhelming flow for drainage water, water pollution by fertilisers, reed encroachment, threatened the lake and its surroundings functioning and biodiversity. New planned development projects, including the International Highway that runs along the sand bar, fishing port to the west of the outlet, and future sea-side resorts along the sand bar to attract international tourists may add new impacts on the protected site or increased known ones like coastal erosion.

In **Zaranik**, the land is State owned; however, the local Bedouin retain traditional exploitation rights. More than c. 200,000 people live along the coastal road of the Sinai. 2,000 families live around Lake Bardawil and they own c. 2,300 camels, c. 29,000 goats, and c. 12,000 sheep. During the fishing season, 50 people live in the Zaranik Protected Area. Unplanned private summer houses, resorts and hotels occupy the coast between El Arish and Zaranik. The tourism is mainly domestic with c. 25,000 people. Claims of property rights inside the reserve boundaries, uncontrolled coastal tourism development and hunting, over-grazing and planned road threatened the integrity of the site. But the main environmental issue is The North Sinai Agricultural Development Project (NSADP) that will bring irrigation water along the El Salam Canal to irrigate 170,000 ha. This project plans to settle c. 300,000 to 1,000,000 people. Doubtless, this project may have huge impacts on the functioning and biodiversity of the area.

Reedbed clearing in Burullus lagoon
- Photo from MWC Egypt Team (2004)

Distribution of Olive trees in El Omayed
- Photo from Ghonem (2004)

Sources:
Adapted from Project Document Egypt (1999) ; Kassas *et al.* (2002) ; Ghonem (2004) ;

LEBANON

Aammiq wetland and Tyre Coast Nature Reserve

Biophysical features

Aammiq is the most significant remaining wetland ecosystem in Lebanon and one of the last natural wetlands of the Middle East Region. This fresh water marsh that covers c. 300 ha is located in the centre of the country and in the valley of the Beqaa on the western edge of the Mount Lebanon. Aammiq is a private estate and the marshlands are surrounded by agricultural lands. Reedbeds, water bodies, grazed and cultivated lands, drainage channels and ditches provide together a high diversity of wet habitats, completed by wooded and rocky areas of the adjacent mountain slopes.

Tyre Coastal Nature Reserve (TCNR) is a coastal zone located near the historical city of Tyre south of Lebanon. TCNR has been declared a nature reserve by law 708/98. It is a public governmental land that depends of different ministries and governmental institutions. The surface area is c. 400 ha. It is the only remaining sandy beach ecosystem in Lebanon. It contains fresh water springs and estuaries. The water from the springs flows out to the sea thus creating a mixed fresh water/salt water environment. TCNR is an important nesting site for sea turtles. The site presents a mosaic of habitats, water bodies, marsh lands, coastal dunes and sandy beach. The whole area covers c. 3,800 ha including agricultural area.

Biodiversity significance

Aammiq wetland lies on the main bird migration flyways of eastern Mediterranean and constitutes a crucial wintering, stopover or breeding place for more than 250 species. As such Aammiq wetland has been designated as an Important Bird Area in the Middle East (Birdlife International, 1994) and is included in the Directory of Wetlands in the Middle East (IUCN, 1995). Several globally vulnerable or threatened bird species occur in the area, like the Great Spotted Eagle (*Aquila clanga*), Imperial Eagle (*Aquila heliaca*), Pallid Harrier (*Circus macrourus*), Lesser Kestrel (*Falco naumannii*), Great snipe (*Gallinago media*), and Ferroginous Duck (*Athya nyroca*). In addition to the variety of birds, several species of mammals (Swamp Cat *Felis chaus*, the Otter *Lutra lutra*), amphibian, reptiles and butterfly have been recorded.

Tyr Coast Nature Reserve is also a Ramsar site and partly a World Heritage Site with the Tyre City. More than 200 bird species were recorded but the list has to be completed. Among them four globally threatened species occurs in TCNR (*Phalacrocorax pygmeus, Pelecanus crispus, Falco naumannii* and *Crex crex*) and 12 regionally threatened species, like *Botaurus stellaris* or *Accipiter brevipes*. Information on mammals is still partial with 13 species. The main interest of TCNR relies on the breeding of Loggerhead turtle *Caretta caretta* and the Green Turtle *Chelonia mydas* that are both classified as a priority rank for conservation.

Uses and threats

AAmmiq wetland has presently no legal protection. The main threats are the water pollution from agriculture activities, land use changes for cropping, the mismanagement of the water due to over-pumping, uncontrolled hunting and grazing. Rain and snow falling on the adjacent mountains provide a water of very good quality. However, water pumping for irrigation of nearby farm lands created important changed in the water regime of the wetland increasing the drawdown period from mid-July to January. Recently designed as a Ramsar site the area is in the process of being declared a Nature Reserve with the support of the landowner and the NGO A Rocha Lebanon.

The Tyre Coast Nature Reserve is threatened by unregulated tourism and increasing leisure activities mainly in summer. About 60 wooden booths are erected to serve c. 3,000 tourists on week-ends along the one kilometre of sandy beach with illegal development of parking area in the Reserve perimeter. The water pollution from agricultural activities is also a problem to face. Fodder crop and market gardening are the main agricultural activities. Farmers use fertilizing products that reach the streams and the marsh area. The whole area is more or less grazed during all the year by small herds of cattle, goat and sheep, inducing a common over-grazing. Conservation efforts are taking place through organic farming promotion and several others activities such as fencing, reduction of disturbance and eco-tourism development.

Organic farming in Tyr Coast Nature Reserve
- Photo from MWC Lebanon Team (2004)

Bird watching in Aammiq wetland
- Photo from MWC Lebanon Team (2004)

Sources:
Adapted from Project Document Lebanon (1997) ; A Rocha (2004) ; Rteil (2005) ;

MOROCCO
The Moulouya Estuary

Biophysical features

The Moulouya is a Site of Biological and Ecological Interest (SIBE) that includes principally the estuary of the Moulouya's river and its alluvial plain. The SIBE covers c. 2,700 ha of river meanders with riparian forest, sand dunes, beaches, and a wetland of 400 ha. This site consists mostly of public lands and is presently untouched by urban development. The estuary is a vast area of halophytic scrublands (*Salicornia sp.*) and Tamarisk forest (*Tamaris sp.*) while going upstream the river created thin gorges over hanged by few hills.

Because it is the largest estuary ecosystem in the Maghreb Region, the Moulouya estuary presents a high Nature Heritage value. Its ecological functions are numerous from the flooding management to the wintering or stopover place for migratory birds.

Biodiversity significance

This SIBE is one of the last refuges for several endemic, threatened or rare species at the regional and national levels. 10 species of birds, 4 species of reptiles, 2 species of mammals and 6 species of plants under threat are present at the estuary of the Moulouya River. Particularly noteworthy among the plants is one 13 species endemic to Morocco, *Spergularia embergeri,* currently endangered. The slender-billed curlew *Numenius tenuirostis* and the Andalusian hemipode *Turnix sylvatica sylvatica* were still observed recently and it may very well be that the estuary of the Moulouya river remains potentially favourable to these two birds among the rarest in Europe and probably in the world. The offshore bar at this site also provides a habitat for two highly localized reptiles, *Chalcides parallelus* and *Chalcides mauritanicus,* present only in this area of the Maghreb.

Uses and threats

The total population of the watershed's area is evaluated to c.43,700 inhabitants however only 30% lives along the river. No village or inhabitants are located in the marshland of the estuary area. Fishing and shell harvesting dramatically decreased during the last decade in the SIBE

due to an obvious over-harvesting. About 8,000 ha of the SIBE are mainly agricultural lands exploited by c. 1,200 farms. Wheat and market gardening are the main crops followed by the fodder crop. 19% of the farms are irrigated and stock breeding of small herds of sheep and goat is widespread. A 200-hectare fish farm (sea fishes and shrimps) is established close to the estuary. It was installed without ensuring isolation of the ponds and canals giving access to the sea and caused accelerated salination of the groundwater table. This process has had an increasingly serious impact on the vegetation cover.

Two seaside resorts are surrounding the SIBE: Saidia on the right river bank and Ras Elma on the left bank. With 12 km of sand beach the area of Saidia is one of the preferred attraction spots for the Moroccan population. Unplanned urban development is growing with the beach tourism increase.

Over-grazing, fuel-wood harvesting, and poaching impact directly the whole SIBE, where hunting is forbidden. The problems of water management (water flow limited by two dams upstream the SIBE and over-pumping in the groundwater table), the pollution related to agricultural activities, the sand extraction for construction, the coastal erosion, the unplanned land use changes for agricultural and urban objectives, the salt-water intrusion problems, the planned tourism and road development, are the most important challenges to face to conserve this important nature area.

Moulouya flood plain landscape
- Photo from MWC Morocco

Goat grazing in the Moulouya SIBE
- Photo from Khattabi (2004)

Sources:
Adapted from Project Document Morocco (1999) ; Snoussi (2003) ; Moulis (2004) ; synthesis report of the MWC diagnosis (2003).

TUNISIA
El Haouaria, Dar Chichou, and Oued Abid

Biophysical features

The Tunisian MWC sites are all located in the Cap Bon peninsula, close to Tunis in the North-Eastern part of the country. The Cap Bon area is home to a wide variety of habitats.

The **Mountain of El Haouaria** (970 ha) includes a nature reserve (created in 1993) that consists of a set of three caves on an area of one hectare inhabited by over 10,000 bats belonging to 5 of the 6 species known in Tunisia, and a combination of cliffs, beaches and a mountainous area forming a particularly interesting biotope for birds of prey (migration and nesting).

The forest of **Dar Chichou** has been created during the XXth century to fix the fields of dunes. These dunes are presently stabilized and cover about 6,000 ha. The forest is constituted of different oaks and pine species but also of *Juniperus sp*. and *Eucalyptus sp.* It belongs to the State and is exploited and managed by the Forest service. The area is fed by numerous little wadis and by the groundwater table. This set of wetlands (c. 40) extending between strips of blow sand is the second Mediterranean site of this type together with the Coto Donana site in Southern Spain. Within the site, 100 ha of forest have been protected as a reserve since 1964. The site is surrounded by three small villages of few hundreds of inhabitants. The urban development is moderate but no planning document exists. The growth of this rural population is moderate and with the towns of the Southern part the total population reaches c. 12,000 inhabitants. Located on the western coastland of the peninsula the **Oued Abid valley** offers a remarkable riparian forest in its lower course. Benefiting from the permanent flow of the stream it provides habitats for the avifauna.

Biodiversity significance

The **El Haouaria** site is considered as the richest area in Tunisia for the number of globally threatened plant and bird species that occur in wetland and coastland. Five threatened plant species, of which 2 are endemic to Tunisia, are present: *Scabiosa farinosa, Isoetes velata dubia, Isoetes velata adspersa, Anthyllis barbajovis* and *Limonium clupeanum.* The area is visited each spring by thousands of migratory birds, particularly birds of prey which also use

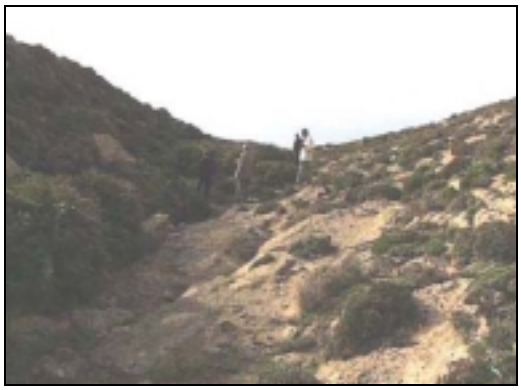
it as a nesting site (*Falco peregrinus*) and the globally threatened *Circus macrourus, Falco naumanni* and *Milvus milvus.* Finally, the bat *Rinolophus blasii,* a threatened species, is also present.

The sites of **Dar Chichou and Oued Abid valley** are very interesting for the presence of three little-known species confined to the Maghreb: the plant *Erodium mumbyanam,* the reptiles *Acanthodactylus blanci* and *Emys orbicularis occidentalis*, a threatened Maghreb subspecies. In addition to the species generally observed in the Cap Bon area, the otter *Lutra lutra* and the mongoose *Herpestes ichneum* were also reported.

Uses and threats

The forest is managed by the "Direction des Forêts" that depends on the Ministry of Agriculture. Despite the control of the forest service agents, illicit fire-wood collection and hunting still happen and led to a fence construction on 2.5 km of the northern border of the forest of **Dar Chichou**. Important over-grazing also occurs in the **Mountain of Haouaria** with illegal light rural lodges building.

All these sites are surrounded by agricultural lands, like Dar Chichou area, for example, where 422 ha are irrigated and cultivated by 350 farmers. The most serious problems are related to human population pressure, the expansion of areas under cultivation with its attending consequences on the water resources (increased pumping, borehole drilling, underground table salinification). Appropriate management of the water resources would allow a reduction of the withdrawals from 7,000 m3/ha to 4,000 m3/ha, which is necessary for the preservation of intradunal wetlands. In addition to the problems stemming from the overdraft of underground water, plans to build a dam on Oued Abid could have an impact on the site's ecological balance. Also noteworthy is the beginning of under-regulated tourism with the erection of light cabanas on the beaches. The forest of **Oued Abid** is degraded due to over-used. The setting of a management plan of these sensible areas goes through the negotiation with the different types of stakeholders.



Degraded landscape in El Haouaria
- Photo MCH from El Hamrouni (2001)

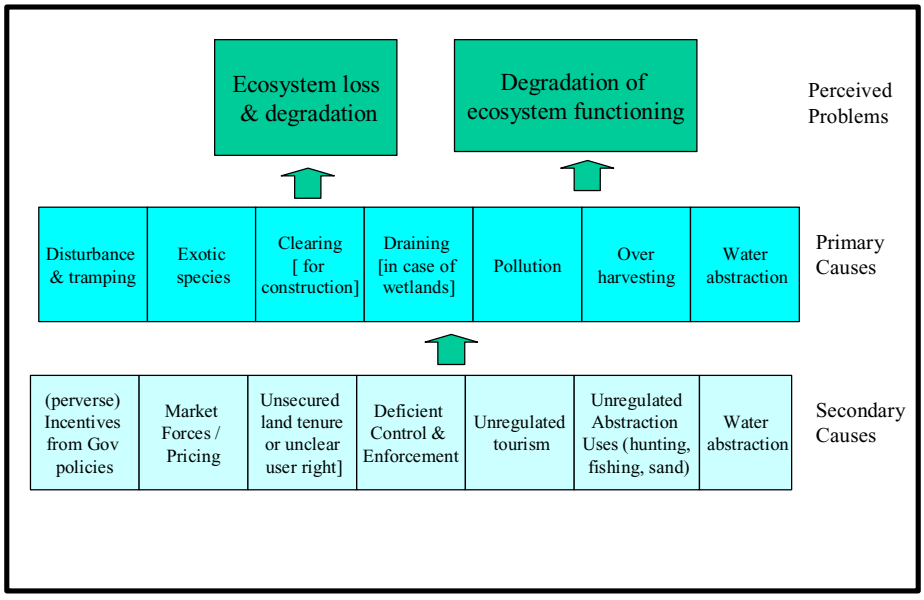
Juniperus phoenicea on sand dune
- Photo Chihaoui from El Hamrouni (2001)

Sources:
Adapted from Project Document Tunisia (1999) ; Chabbi (2001) ; El Hamrouni (2001) ; El Ouni & Rabeh (2001)

Chap III.

Threats to MWC sites and their causes:
On the way to integrated conservation and development projects

The main pressures/threats to MWC sites are those that result in (1) ecosystem loss (i.e. disappearance or degradation of a surface area of habitat or of a species), and those that result in (2) major degradation of the ecosystem functioning and the natural resources renewal. The processes that generate these pressures/threats are linked both to the nature itself and characteristics of the ecosystem and to socio-economic underlying causes. The following figure is an attempt to summarize the causal chain analysis.



In the MWC case studies, six main processes have been identified that result in ecosystem loss & degradation, and in degradation of ecosystem functioning (Table 1 & 2). In Egypt, for example, **incentives from government policies** led to the establishment of new cultivated land in the marshland located in the southern part of Burullus' lake. In other places, such policies result in infrastructure development, such as highways or hotels for tourism like in Morocco, and reservoir construction or urban development like in Tunisia. The private sector is usually the operator generating the degradation of these ecosystem losses, but as a response to government decisions and to market forces. Responding to social and economical drivers, **unsecured land tenure or unclear user rights** encourage also unplanned conversion of land uses or abandon, like in Albania.

Table 1. Primary causes in the MWC sites.

	MWC SITES				
PRIMARY CAUSES	ALBANIA	EGYPT	LEBANON	MOROCCO	TUNISIA
Ecosystem loss and degradation					
Planned conversion of land uses		X	X	X	X
Unplanned conversion of land uses	X	X	X	X	X
Abandon of land uses	X				
Planned infrastructure development	X	X	X	X	X
Coastal dune erosion	X	X		X	X
Natural Resource Mismanagement					
Over-fishing	X	X			
Over-hunting		X	X		
Over-grazing		X	X	X	X
Over-harvesting of fuel-wood		X	X	X	
Water allocation by uses (over-pumping)		X	X	X	X
Under regulated tourism	X	X	X	X	X
Sand extraction for construction	X	X	X	X	
Ecosystem functioning degradation					
Water management	X	X	X	X	X
Exchange of water with the sea (fresh *vs* salt water)	X	X		X	
Water pollution by agriculture	X	X	X	X	X
Water pollution by industry	X		X		
Water pollution by domestic inputs	X	X	X	X	X
Forest fire	X				
Invasive species (local or exotic)		X			

The order in which the causes are listed is not the order of priority, since prioritization depends of the local situation. The absence of a cause for a country does not mean that it does not exist but rather that it was not considered as significant by the involved experts.

Table 2. The secondary causes identified in the MWC sites.

	MWC SITES				
SECONDARY CAUSES	ALBANIA	EGYPT	LEBANON	MOROCCO	TUNISIA
Land tenure unsecured or changing	X	X	X	X	
Unclear user rights	X	X	X	X	
Lack of site legal protection			X	X	X
Deficient control (low risk of penalty)	X	X	X	X	X
Demography growth		X	X	X	X
Lack of public awareness	X	X	X	X	X
Poverty trap, lack of capital access	X	X	X	X	
Lack of technical information and market access	X	X	X		
Financial incentives for changing land use from Government policies		X	X	X	
Inadequate land planning process		X	X		X
Cross-sectoral planning	X	X	X	X	X
Institutional conflicts		X		X	X

The **deficient control and enforcement** from the government service explains partly this process and contributes also to natural resource mismanagement. Most of the time, in this context, small or large-scale resource extraction is conducted in an unsustainable way with a high risk of resource collapse in the short-term. Hunting, fishing but also grazing and even fuel-wood collection with inappropriate harvesting method and seasonal timing can result in **over-harvesting** situation with a consequent degradation of the natural resources renewal. Uncoordinated water allocation resulting in over-pumping is often rather critical in the arid context. By disturbing the wildlife or excessive water uses, **under-regulated tourism** can contribute to natural resource and ecosystem degradation, like in Moulouya river estuary in Morocco or Tyre coastal land in Lebanon. Most of the MWC sites are also concerned by important degradation of the ecosystem functioning, such as water **pollution** by agriculture, urban and industrial development, and poor waste collection.

The identified primary causes are resumed in Table 1. These listed threats come from the different diagnostic studies related to the MWC sites. However, the lack of precise data did not allow to quantify and to prioritize the weight of each threat. Whatever the country or the site, these causes are always numerous and mixed. The problems to be addressed are often interrelated and they cut across geographical scales and institutional boundaries. Face with this complexity, it is well known that omitting to address properly the cause-and-effect relationships necessarily undermine the site management process. Protected area managers often have limited resources, both financial and human. It is then important that they are able to focus their attention and efforts onto those activities that would most effectively generate the greatest impacts upon the protection of the sites and the conservation of its remarkable resources, i.e. targeting - with remedial, alternative, control and awareness activities - the main drivers of the pressures and threats to the sites, as appropriate and feasible. To do so, the managers must examine the nature of the pressure, where it comes from, why and how. For example, if poaching is a primary source of concern, the manager must analyse who poaches and where the individuals come from and how, why they carry out this activity (whether for survival and own livelihood, for tradition, for sports, for supplying the nearby urban markets, for supplying tourist hotels and restaurants, etc.), whether they do it alone or in groups, etc. It is only through this thorough analysis that one will be able to design and implement the most appropriate activities that may curb or eliminate the problem.

Conservationists, ecological specialists, hydrological experts, and development planners involved in MWC increasingly recognize that efforts to conserve biodiversity and healthy ecosystems in the MWC countries have no chance to succeed in the long run without a comprehensive integration of the social and economic issues at each levels of decision-making. This need for greater integration has become obvious. However, what integration really means in the field depends of the management practitioners. In the context of the MWC sites, the concept of integrated management highlights two kinds of interactions: (*i*) in-between biophysical components of the environment (e.g. between wetland and coastal ecosystems), and (*ii*) between them and numerous human and environmental uses of these components. Damage to important environmental functions or values, or even definitive loss of a natural resource, may result if this way of thinking is not adopted during the process. The MWC site management approach has to be a way of ensuring proper resource management in the long-term. Managers have to find the good balance between economic, social and environmental requirements.

On the other hand, it is increasingly recognised that a wide range of natural resource management plans are unsuccessful unless local people recognize those actions as serving

their economic and social benefits. With a dual goal of meeting social development priorities and conservation objectives, integrated conservation and development projects (ICDPs) have been developed and implemented for the past 10-15 years to efficiently conserve ecosystems and biodiversity. This kind of projects addresses biodiversity conservation objectives by using socio-economic tools, attempting to link the conservation of natural resources with the improvement of the quality of life of local people (Annexe 1). According to this approach and considering the MWC context, what does the socio-economic approach (SEA) clearly mean?

First, the SEA can be appreciated from three perspectives resumed in table 3.

Table 3. Socio-Economic analysis of the natural resource uses relies on the integration of three types of relationships.

DIMENSION	TYPE OF ANALYSIS
The relationship between the users and the use through the social and symbolic representations of what a wildland is and the kind of uses in effect in the particular ecosystem	Initial situation, stakeholders analysis, root cause analysis, analysis of resource use practices
The relationship between the natural resource use and the socio-economical and technical contexts	Public policies, legal frameworks, territorial governance analysis
The relationship between the use and the natural systems, in terms of impacts (positive and negative).	Technical, harvest, impact issues related to the natural resource management

It is being put in practice in the MWC project through:

1) Diagnosis phase and monitoring: socio-economic studies and stakeholders analysis, ongoing monitoring of socio-economic dynamic parameters;
2) Working on the uses that exert pressures upon the resources, with the aim to address root causes of biodiversity loss and degradation, i.e. a) directly reduce the pressures or threats (Box 1) and b) develop alternative livelihood schemes to take communities away from uses that degrade the area ;

3) Applying a participatory approach: local dialogue, consultation, participatory process, to accompany the management plan process and its implementation.

This approach of the integration of socio-economical issues in the site management process requires the creation or activation of both horizontal networks (across people, communities, agencies and sectors) and vertical networks (across agencies, community groups, individuals). The approach acknowledges the need to promote participation and collaboration of several individuals and organizations with a stake in the management of the natural resources of the sites.

Promoting participatory approach implies a different way of working than the usual site process developed mainly for strictly protected areas. This approach needs the use of different methods (i.e. focus group workshop, PRA, resource mapping, role-playing game, etc.). Successful changes in behaviours and environmental progresses require coordination of several stakeholder groups within a predefined policy framework. Within this framework, a participatory approach needs to be developed at three levels of decision-making:

- ⁄# At the national level, to create a favourable change in the context through legislation and national policy development that integrate outcomes and issues from the field with stakeholders needs;
- ⁄# At the provincial or regional level, to create well adapted institutional and support, lobbying for integration of specific needs within the national policy;
- ⁄# At the project site level, to work closely with local communities and define relevant goals and relevant environmental management objectives and solutions.

Finally, managing environmental issues is rather about managing uses and social issues than managing waterbirds, habitats and water levels. Environmental issues are strongly linked to such macro factors as population growth and poverty levels but also some micro and site factors as human values, particular uses and perceptions on site concerning natural resources. Such local factors like land ownerships, natural resource access rights and unemployment situation have to be deeply integrated in any environmental management plan and site management approach. The participative approach should contribute to increasing the skills and knowledge of local groups and people to inform and improve their decision making process. This suggests that it is necessary to make shared responsibilities and values known to clarify both decision-making process and collective decision itself.

A fundamental element in the design and implementation of an ICDP is to always consider the links that exist between the conservation and development objectives, for example, a project will work to develop local fishery cooperatives, as an alternative to large scale commercial fisheries which destroys the resources at great environmental cost.

Benefits of any initiative that aims at the development of alternative livelihood have to be clearly related to the conservation objectives (i.e. bee keeping development instead of goat herd size decrease to reduce over-grazing). ICDPs are biodiversity conservation projects with rural development components, and the ICDP practitioner has to ensure that local people perceive well that sustainable development activities and wise use of the natural resources are conducive to ecosystem conservation, thereby ensuring their long term use of the resources, for them and their children.

Several experiences show how difficult this bridging exercise is. Activities within the MWC project focusing on socioeconomic integration in the site management process aimed at closing the large gap between the socioeconomic data collection embodied in classical MP process and the participatory approach and actions developed by project experts and NGOs in pursuit of biodiversity improvement and life quality enhancement.

ICDPs often target local people and their natural resource management in order to reduce human pressure/threats on the site. As the degradation causes are often external to the area itself, the situation in the areas next to the site itself must be taken into account. The state and the sustainability of the biodiversity that one can find on the site are very much linked to the particular productive activities and resource use practices that prevail in areas next to the site. It is then important to strategically consider the management of the sites within a broader geographical scale of the territory or the landscape. There, a detailed and precise root-cause analysis will help identify those particular sources of pressures and threats that can be found outside. Further, the work must necessarily involve cooperation with the various agencies responsible for planning sectoral and productive activities in these areas: agricultural extension office, urban planner, water utilities, etc. Often the site manager is only responsible for actions inside the boundaries of the protected areas; it is critical that the site management

team and their actions are not only confined to these boundaries but that they are able to influence the practices and planning of activities that take place in the vicinity. In the Management Plan process, the identification of buffer zones serves that purpose: a number of protected areas laws specify that buffer zones are subject to separate management plans (that must of course be linked to the management plan of the protected area), and are managed by a buffer zone committees. Central are indeed the question of enlarging the mandate of the site management team to be able to influence the buffer zones development strategies and the question of ensuring that the site management plan includes a particular section for the buffer zones.

Chap IV.

Socio-Economic Approach in practice:
Lessons learned from MWC projects

The aim of the section is only to provide examples of what was done and learned. It is hoped that it will feed the reader with useful ideas and recommendations for the design and implementation of integrated conservation and development projects within the Mediterranean region and elsewhere. Each headline of lesson learned is followed by a short text and is generally illustrated by a box that contains an example written by the MWC contributor(s) to this study.

LESSON 1.
Project design and implementation (1): Operationalizing ICDP principles

Review/revisit the socio-economic issue in inception phase, translate the principles of ICDP into operational activities and give appropriate guidance and support from the start.

During the design of the MWC project, the priority sites were identified in each country, based on its global biodiversity significance, national interest and feasibility of intervention.

For each of these sites, the site management process entailed:

a) a diagnosis study: detailed TORs were proposed for carrying out a series of diagnosis studies at each of the sites. The diagnosis studies were to serve a) the preparation of the management plan and b) the identification and implementation of urgent actions to protect threatened Mediterranean biodiversity elements;
b) initial site actions (urgent measures) defined on the basis of the diagnosis assessment (or the project document – in some cases, these were already defined in the project document);
c) development of the management plan, in consultation with local stakeholders;
d) initial implementation of the management plan with focused and strategized activities, defined by the plan; and
e) development and strengthening of the institutional organisation(s) that would lead the site management process and the implementation of the plan.

As the initial chapters of this report implies, socio-economic activities should have prevailed throughout all of these stages and kept in mind thoroughly in the implementation of the project.

However, in the project design and initial implementation, prevailing activities were those that directly addresses the need to better understand the biodiversity status of the site. The linkage between biodiversity conservation and changes in livelihood practices was not explicit. Nor was it clear that the two components are like the two sides of the same coin.

The project documents do not specifically make reference to the socio-economic approach and, when it does or when it can be inferred from the general context of the document, it is not clear what this 'socio-economic approach' could be and what activities should have been carried out. Also the terms of reference for the key project staff do not include expertise in socio-economy, but focus essentially on scientific, biology and other environmental technical skills (except for a minimal mention in the TORs of the legal expert in Albania and Egypt project documents and in the Local Operational Units in Morocco project document, where the latter are responsible for 'the linkages with the socio-economic actors and the local population groups'). It is symptomatic to note that the word 'socio-economic' appears, at most, 4 or 5 times in the project document of the respective national components; yet, in all, generating socio-economic benefits is one of the four expected end-of-project situation (together with biodiversity benefits, institutional benefits, and benefits for the Mediterranean basin).

The project documents also then give little guidance to the national teams in that area. The documents were drafted between 1995 and 1999; then the approach of integrating socio-

economic issues was possibly not fully appreciated and the concept of Integrated Conservation and Development Project (ICDP), though then largely used by organisations such as WWF and UNDP for management of protected area sites, not prevailing in the Mediterranean region. For one, the principles were not reflected in the MWC project document. It would be useful to further specify some of the principles of an ICDP. But, since this is not the subject of this report, the reader is invited to refer to annex 1, which extracts some key elements of the ICDP approach and proposes a number of reference readings.

The first regional meeting of the RAC (RAC1 in Rabat, April 2001) did correctly highlight the need to consider, within the efforts for conservation of ecosystems, not only ecological aspects but also socio-economic and land-use aspects (tourism activities, fishing and hunting activities). It further recommended "to follow an integrated management approach in the implementation of all aspects related to wetlands and coastal zones through:

- promoting intersectoral cooperation and involvement of the relevant institutional structures in the project
- ensuring a proactive role of the site managers in local action and promoting their responsibilities and capacities
- enhancing the role of the local and national committees
- closely involving local actors and NGOs in the project's activities, establishing partnerships with them and strengthening their capacities
- addressing socio-economic, zoning and land boundaries issues within the project"

On the other hand, the MWC Regional Component quickly realized that there was a gap in the design of the project in that area and that specific training was required. The MWC/ATEN regional training course on "Resources and uses of wetlands and coastal ecosystems in the Mediterranean region", Tunis, March 2001, gathered a number of experts from Albania, Egypt, Morocco and Tunisia and proposed a working methodology and some useful and practical tools for the socio-economic assessment of the MedWetCoast pilot sites. The aim of the workshop was to propose a series of instruments, a sort of toolbox for socio-economic practitioners. The workshop usefully suggested 5 steps for a simplified socio-economic diagnosis[2]:

Step 1: Identification of the actors and their legitimacy
Step 2: Prioritization of the main issues
Step 3: Indicator framework in regard to the management aims
Step 4: Data collection based on participatory approaches
Step 5: Communication

It is not clear though that the recommended approach presented and discussed at that workshop was used as a basis for the socio-economic diagnosis of the sites. The socio-economic experts in charge of the diagnostic work were not all present at that workshop and it is also not clear whether the report was systematically handed and shared with them. It would have been useful then to question how the workshop and the report did serve to guide the work, as a post-workshop evaluation. One may also regret that the workshop was not supplemented by follow-up technical guidance, documentation and assistance in that area. Bringing the messages directly to the sites, hand in hand accompanying the diagnostic experts

[2] Khattabi et al. (2001)

in the task, and peer-reviewing the assessment studies, could help in guiding the Socio-Economic Approach (SEA).

Also, some key concepts like "developing alternative livelihood initiatives" and "addressing root causes" were not sufficiently defined. Among other things, the project document should have made reference to the option of developing alternative livelihood initiatives and the project should have provided guidance and help to define what it means and how it can practically be translated into.

As a result of this vacuum we thus observed very different interpretation of what the socio-economic approach meant and how to achieve it in the MWC sites. In several contexts, social and economic issues were not, as such, clear issues within the local MWC Projects' designs and were related in very indirect ways to the concerns of site managers which had frequently an ecological education background and not a social or economic one.

The following should be noted about the socio-economic approach that was carried out under the MWC project:

1) In some cases, it was clearly acknowledged that the approach was about implementing the socio-eco activities that were written in the project document; there was little questioning of the relevance of the activity in effectively addressing the root causes; and little further review of that initial suggestion of the project document (e.g. feasibility study, market study, etc.).

2) All of the MWC components did undertake a socio-economic analysis in the framework of the diagnosis study. But there, experts remark that the analysis was mostly carried out at the macro level – population, economics of the area, etc. – and did not pay enough attention to the individual and behavioural level. It was also pointed out that the analysis was not integrated with the other ecological studies and, as such, little could be said about how a particular usage or practice would bring about a detrimental impact on biodiversity of the site.

3) In all of the MWC components, it was considered that the approach implied bringing on board various stakeholders around the table, i.e. the participatory approach, and ensuring that all representatives can voice their concerns during the development of the management plan;

4) Finally, some have looked into the needs and interests of the communities, fostering the development of alternative livelihood schemes, encouraging better practices of resource use, and raising awareness and capacity of those local actors.

Referring to experience, we have tried to spell out in table 4 below what the socio-economic approach may translate into, in terms of activities, and assess, in the next column, whether the MWC project has addressed this issue.

Table 4. SEA activities applied in MWC project.

SEA ACTIVITY	APPLIED/USED IN MWC
Root causes analysis	+
Specific analysis of a small number of pressures/threats, digging into the behavioural practices that are sources to the degradation	++
Implementation of the specific alternative economic schemes that were identified in the project document (bee hives, ecotourism)	++
Macro socio-economic diagnosis analysis	++
Land use analysis	+
Public policies and legal frameworks	+
Governance analysis	-
Stakeholders analysis	+
Public participation (PRA)	+
Interviews (individual, groups) / consultation	+
Micro-credit facility / revolving funds	+
Small grants implementation	-
Conflict resolution meetings/workshops	+
Problem trees and objectives trees	-
Options analysis (cost/benefit analysis or multi-criteria approach)	-
Logical framework analysis	+
Risk analysis	-
Communication and awareness raising	++

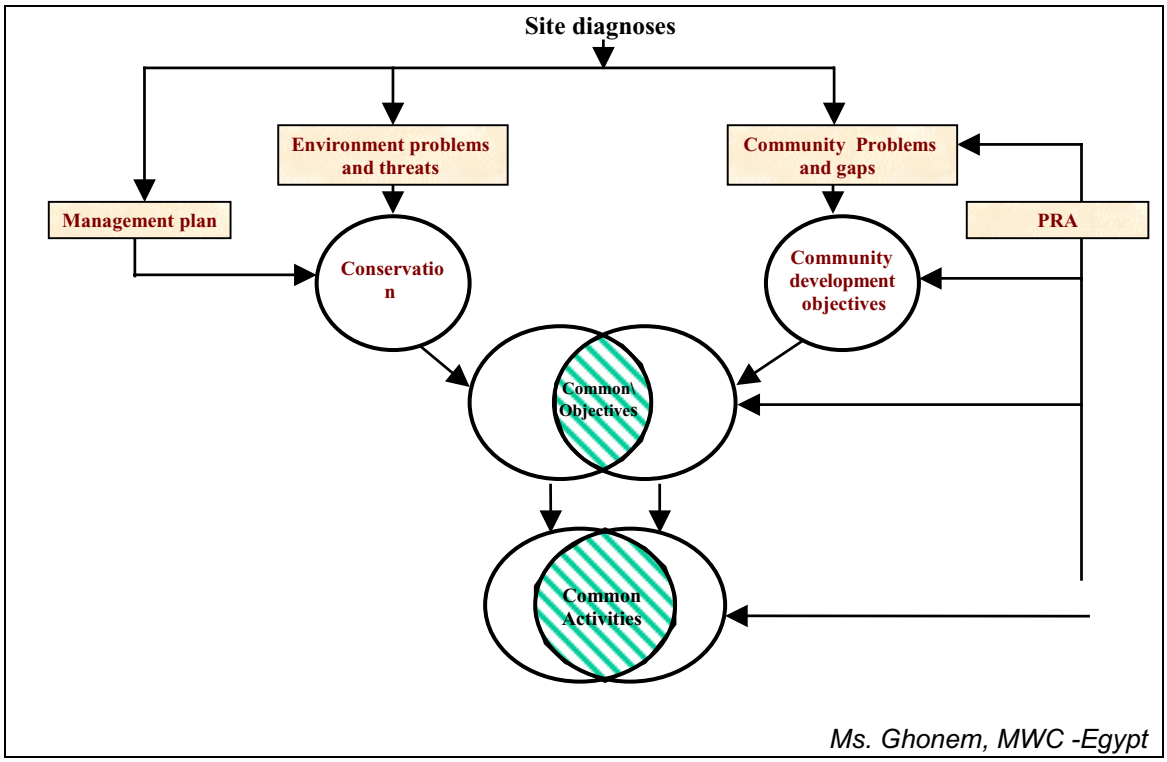
Legend: - unused; + partially used; ++ largely used. The list of activity is not exhaustive.

What was required was a bridge between the questions related to the socio-economical components and the issues related to the sites themselves, treated not separately but in the same times (Box 1). Thus, it appears clearly that the conceptual basis proposed by the regional project was not well understood by implementing counterparts in national teams.

BOX 1. Linking socio-economic issues to conservation objectives – MWC Egypt.

As aforementioned, the Project Document did not take the socio-economic factors well into consideration. This was reflected on the site diagnosis studies which did not address this issue sufficiently. Thus, we had to find a method to complete the missing aspects and reach an action plan to fulfill the conservation objectives, consistently with the socio-economic objectives, in the project's three protectorates, in accordance with the following steps:
- Identifying conservation objectives and priorities in the management plans;
- Identifying socio-economic objectives and their priorities, with the local community, through the use of PRA;
- Identifying the common area between conservation objectives and socio-economic objectives, through the use of the above-mentioned methodology;
- Outside the area of common objectives, the relationship between the project and the local community was based on mutual cooperation.

The following diagram identifies the above-mentioned process.



Socio-economic issues were often looked into when the site management process was already well advanced. It often translated in a macro-scale analysis and not really integrated with the different themes of the diagnostic. Then, the two main streams of work have been (*i*) from an environmental protection perspective and (*ii*) a community development approach. Several socio-economic gaps of the diagnosis were identified and filled during the MP process. The choice of the approach was done according to the local and institutional contexts and capacities. For example, in Albania, at the start of the MP process, the experts felt the need to carry out a Stakeholders Analysis. In Egypt, when getting into the implementation of the management plans, it was quickly realized that more needed to be done in terms of community participation and development and activities were developed to that end.

During the MP process, all the involved teams recognized that poverty and human rights should be addressed to foster environmental improvements but the lack of coherent linkages between conservation goals and development actions led to plan activities for which the biodiversity enhancement result is likely to be insignificant (Box 2). Face with the huge challenge of addressing social development and poverty of certain sites, it was extremely difficult to deal with both conservation and development activities within the same project umbrella. The integration of socio-economic issues would have led, sometimes, to 'compensating' the communities for their acceptance of the foregone benefits because of conservation requirements. At times, the project was also tempted to develop and fund separate rural development plans, next to the site management plans, thereby dangerously disassociating the two aspects of the same coin.

International experience has shown that both of these strategies proved ineffective and rather antagonize the local actors against environmental protection and the protected areas.

BOX 2. Problem identification and suggested solutions from Focus groups within Moulouya Site – Morocco.

Because the project aim is to implement an integrated management plan based on a participation of the main stakeholders, focus groups and interviews were conducted with the local communities. The objectives of these workshops were to define the main problems the population has to face, during day-to-day life and specifically in relation with the wetland use and natural resource harvests. The main results are that three problems were shared by most of the local people: (i) lack of water for drink purposes; (ii) crop damages by wild boars and (iii) unemployment. Among the actions that were identified by the involved communities to resolve all or part of these problems, three kinds of actions were distinguished. First, the actions related to the improvement of the quality of life by the creation of activity that generates new income; second, the action that reinforce the basic infrastructures and social services; and third, the actions of awareness. Opening up small villages, developing drink water supply to improve the health of local communities and the reduction by shooting of the density of wild boars were the main recommendations suggested as companion measures of the local biodiversity conservation.

A. Khattabi – MWC Morocco

LESSON 2.
Project design and implementation (2): understanding cause and effect relationships

Understand and address the cause-and-effect relationships in inception phase, carry out stakeholders analysis to identify them and their dynamic relationships throughout the stages of project design and implementation.

The mid-term review in mid-2003 stressed the lack of integration of the socio-economic issues and encouraged the regional and national teams to address this topic (Box 3).

BOX 3. Integrating root causes understanding to the management plan process – MWC.

The RCU should provide support to the national components to help them ensure that socio-economic dynamics acting as root causes of biodiversity loss are dealt with in the management plans, as implementation of those begins.
Site diagnosis and management plans in development would benefit from additional data collection and analysis on socio-economic dynamics acting as root causes of biodiversity loss so that interventions around those issues can be integrated to the site management strategy. Management plans already developed will require revisions along those aspects.

Extract of Mid Term Review, October 2003 final version

As reminded in the previous chapter, to improve the quality of life and conserve biodiversity, it is necessary to develop projects and approaches that integrate the management of natural resources with basic economic development. For that purpose, understanding and addressing the cause-and-effect relationships are necessary. Although the local underlying factors of ecological dysfunctions and natural resource mismanagement were globally identified during the design of the MWC project, no diagnostic analysis evaluated in depth the external trends, such as market demands, demographic growth, and regional land use planning prospective. Also, detrimental practices due to poor behaviour were not properly analysed. As a result, the main activities of the project focused on legal protection of the sites, local communities and their resource management, despite the clear identification of several important threats to the biodiversity of the site, such as planned infrastructures construction, like dam building in Tunisia and irrigation scheme in Egypt, or hotel and road constructions in Morocco (see Chap III.). Considering the economical issues, and despite the identification of these global threats, nothing was really done to stop or alter these projects because it was felt too difficult to address. Likewise there does not seem to have been any proper costs/benefits analysis or impact analysis of these projects upon the protected area.

That being said, one of the principles that underpin the integrated conservation and development projects is that local people may play a major role in the design and implementation of field actions, and eventually then lead to success of the protection work. For this reason, the first step is to consider the diversity of stakeholders, individuals and groups. Usually, planners carry out a stakeholder analysis in order to clearly identify the people who are interested in the outcomes of the project and the potential conflicts that can destabilize the whole process, their interests and requirements. In the context of the MWC project, this first step of the process was never done during the diagnosis phase of the projects. For diverse reasons, mainly linked to an initial planning based on environmental focus, this analysis was finally done during the participatory process of the MP, when it was done, but was nevertheless precious to assess the relevance of the project and to agree on

forthcoming steps (Box 4). The Stakeholders Analysis process often appears useful to avoid misunderstanding and to limit conflicts from the start.

BOX 4. Partnerships for socioeconomics' integration – Albania

The project management has taken full account of all elements having impact and role in the ecosystems status and development. The project has carefully investigated and identified the available expertise in the country enabling for the first time throughout diagnosis of the project sites including socio economic analyses. The socio-economic analyses was successfully developed by the Geographical Research Institute, which is a state institute specialized in the field. All the sites diagnosis process passed through field visits, meetings with the experts, community, local institutions representatives, international consultant, as well as meetings of National and Local Steering Committees. Following country developments and increase of capacities, aiming to upgrade continuously the socio-economic issues, the project enacted synergies with other active donors interested in addressing the relevance of socio-economic issues (including territorial planning and urban development) to the environmental management. This yielded very collaborative links with GTZ/COPLAN for the handling these issues in the MP. The strategy tackled by the project has asked for identification of the user groups (farmers, stockbreeders, light industrial activities (Salinas, small food processing factories, businesses in service an production sector, government planning for the strategic development in the Vlora region with relevance to the project sites, etc.). There are identified the main conflicts among actors in the area, which pose potential obstacles to development and implementation of the management actions.

V. Zuna, E. Dodidba & E. Myrtaj – MWC Albania

Later in the implementation of the project, some national MWC components have undertaken to study more carefully what motivated the behaviour of user groups. This is the correct approach. For, behind degradation and abuse of the natural resources, there is usually a behavior or a practice that is at the origin. Understanding why and how a certain user group (fisherman, farmer, hunter, tourist) does use the natural resource in this or that way, is important and key to designing the remediation actions. The manager of the protected area is then able to elaborate activities that target specifically those pressures. In the case of MWC Morocco, better understanding the nature of the tourism that takes place at the Moulouya site has allowed the project team to design more targeted awareness raising materials and physically set up the tourism area to cater to the needs of the visitors while protecting the site (Box 5).

BOX 5. Tourism analysis at the Moulouya site – Morocco.

With the aim to rationalize the use of natural ecosystems for leisure & tourism as well as environmental education, MWC Morocco undertook a qualitative study of tourist visits to the Moulouya site between April and July 2005. The ultimate objective of the study was to define, in a participatory way, what measures would need to be put in place to ensure a more sensible economic management of the area while preserving nature and the rich biological heritage of the site. The objective of the study was to understand why the visitors come to the site and what they look for. This would guide the setting of site physical infrastructure for better conservation. The method used for this study was developed with a view to gather as much information as possible both in terms of the type and nature of the visits and in terms of the demands expressed by the visitors. It also took into account the concerns of the various concerned actors. The expected results include: number of visits, characteristics of the visits, characteristics of the visitors.

MWC Morocco. July 2005

Similarly in Lebanon, the MWC national component worked with fishermen to better understand their fishing practices, how these can be detrimental to sea turtles, and then working with the groups to adjust the fishing techniques and practices (Box 6).

BOX 6. Fishermen training in Tyre Coast Nature Reserve – MWC Lebanon

Tyre Coast Nature Reserve is a beach reserve that is a nesting site for sea turtles. Fishing is a major activity in the city of Tyre. There are almost 450 fishermen in the city. These fishermen are sometimes a threat to turtles and dolphins. They have also experienced a major drop in the fish population due to the use of illegal fishing techniques and the use of small net size openings.

The MedWetCoast project in Lebanon in partnership with the UNDP-South project is planning an awareness campaign for the fishermen by the end of the year 2003. The campaign will be in the form of a two-day workshop with the fishermen and it will focus on the economic and long term benefits of fishing with the right size nets and the need for the protection of sea turtles and other marine fauna and flora. This experience was successfully undertaken previously by UNDP-South in Naquoura, a coastal town south of Tyre. A speaker in the workshop will be one of the fishermen from Naquoura. Form fishermen to fishermen the message will be more convincing.

The plan also involves the provision of legal size nets to the fishermen and to monitor, as possible, the effect of proper fishing techniques on the fish population in the area and other marine flora and fauna. On the economic side the project expects an increased in revenue for the fishermen and accordingly an improvement in their social status.

In the Egyptian sites of Zaranik and Omayed overgrazing is considered one of the severest threats to biological diversity in the area. Local communities relay on herding as a primary source of livelihood and on fuel-wood harvesting as a primary source of energy for home consumption. With the over-harvesting of plants, the botanical cover has been degraded with various degrees, in the two protectorates. The degradation of the botanical cover does not only constitute an environmental problem, but also economic and social problems, due to its negative effects on herding. The role of local communities was addressed through cooperation between project experts and the local actors. Common work included (i) compiling an inventory of degraded lands and identifying their level of degradation; (ii) identifying the now extinct or rare floral species; (iii) collecting and cataloguing plant seeds; (iv) re-planting the seeds; (v) laying a grazing management programme and over-seeing its implementation. Finally, work on the sustainable use aims at halting any future misuse, through: (i) raising awareness of the problem, its consequences and the importance of facing it; (ii) directly alleviating pressure on the botanical cover through providing substitutes for the heavily used species; (iii) indirectly alleviating pressure on the botanical cover through elevating the socio-economic level of the local community; (iv) designing and implementing a programme for sustainable management of pasturelands.

In Tunisia, the MWC team developed workshops with local communities to understand the cultural values and the various ways in which people make a living. According to the team it led to the participation of the local community to create a fence to protect a forest known as a cultural place (Box 7).

BOX 7. The protection of the wild olive-trees and mastic trees forest in Haouaria – MWC Tunisia

Investigations carried out in the site diagnosis studies for the Haouaria stressed the degradation of vegetable cover and that the single forest of oleo-mastic trees that is safeguarded is located in the enclosure of the Marabout ' Sidi Ameur'.
Participative workshops and investigations carried out in the site made it possible to understand that safeguarding this scrap of forest is related to several factors of which in particular: (i) the site belongs to the State Public Domain; (ii) culturally the vegetation and the goods located in the enclosure of the Marabout are under his protection and that a curse will strike all those which cut the wood of the saint man.
A Dialogue process was started with the local populations, the NGO (Birds Friends Association - Haouaria) and local authorities (religious and political) of the zone ends to the decision of:
- To protect the forest of mastic tree and wild olive-trees, by a woody fence, considering its ecological and cultural importance;
- To build the Ornithological Studies Center in the enclosure of the Marabout.
Continuation with that an information awareness campaign near the populations close on the basis of that local belief to explain that the project *puts itself under the protection of Marabout* and ' will bring bois' to him to sit this protection.
At the time installation of the fences the local population expressed its satisfaction that resulted in a priceless help offered to the contractor.

Mr Chihaoui – MWC Tunisia

LESSON 3.

Building trust and confidence with local actors

Building trust and efficient partnerships is of primary importance and need time beyond classical site management process.

Whatever the method adopted, with clearly identified stakeholders, the establishment of a cooperative approach was successful when people felt comfortable and were able to talk of their needs and to work together. Obviously, the development of these trust-relationships took a lot of time – always much more than expected – but ensured the collaboration of people and local communities (Box 8). As trust grew, the willingness to share information and to participate to a collective reflection on what to do and how to do it increased.

BOX 8. Building trust and confidence in El Omayed – Egypt

Complete segregation of men and women is the norm in the Bedouin society of Omayed; thus, it was necessary to hold separate meetings for men and women. At first they did not welcome us, since they felt suspicious of anyone coming from environmental institutions, as they suspected these would be trying to enforce new regulations upon them. It took many meetings to start a dialogue; as I visited each house and each family.

Meetings with women were the most difficult, since women were totally isolated from public life. On the first time, I talked and talked a lot about the project, its activities, what we were trying to achieve, etc... In return, they were very silent and only exchanged looks together. To my surprise, at the end of the meeting, they only asked “are you married? Do you have children?” It was then that I realized that we speak different languages, and that it was up to me to learn theirs. Thus, my greatest challenge was to create a common language and a common dialogue.

Then on later meetings, they talked and talked a lot, explaining to me their problems, their concerns, their need to feed their children, etc. In return, I only acted as a moderator. It was only when one of them described a suggestion from another as being "un-sustainable" that I became sure that we were on the right track. Today, after a long process, I got their trust and confidence. Together, we identified a series of activities for the area, involving them and their communities.

Ms. Ghonem - MWC Egypt

Participatory approach appears to be a real effective modality for peaceful management of social representation rifts, and use conflicts. This approach offers users of the sites a way for collective governance, and enhancement of legitimate access rights and needs. It highlights (and sometimes structures) the civil society functioning through the development of professional associations or NGOs at both local and national levels. However, participatory approach may contribute to social frustration following the development of a demagogic approach. These frustrations have to be integrated and managed within the site management process. It could in practice be very difficult and result in social demobilization, chaos or adverse effects.

In the frame of the MWC project, obviously the degree of participation in the field depends of the context (Box 9). It is a kind of collective and individual engagement, based on granting responsibility and accountability to the individual or to the group. Different types can be identified from MWC experience:

- daily and local actions to improve the local environment, awareness arising of the friends or neighbours on the project, punctual actions with an NGO;
- active participation to project elaboration through meeting participation and implication in decision-making;
- taking responsibility in the collective management, for instance though becoming member of a steering committee or contributing to control & enforcement or information sharing.

People are not necessary implicated throughout all the steps of the process (Box 10). According to the MWC experience, women and young people were mainly involved in the participatory approach when it concerned domestic or small-scale handicraft production activities, while men were the prime targets when the issue involved natural resource use (i.e. fishing, hunting).

BOX 9. Involving and empowering people to allow them to participate in the making of local environmental/development policies – Albania

The project has been significantly supported in the initially set up structures such as National and Local Steering Committee. Both these instances have facilitated the involvement of state institution related the wetland management, different experts, local authorities and stakeholders, as well as have encouraged the participation of local community groups, NGOs and stakeholders to introduce their concerns and ideas for the sustainable development of the sites.

The main stakeholders and key actors during the whole MP process as well as for its implementation identified include:

- Central level: mainly Ministry of Environment, Ministry of Agriculture and Food (through its General Directorate for Fishery, General Directorate of Forestry and Pastures), Ministry of Territorial Adjustment and Tourism, Ministry of Education, Ministry of Industry and Energy; to be mentioned is also the cooperation with the Ministry of defense and Ministry of Internal Affairs related to certain specific of some parts of the project sites under their jurisdiction; of great and outstanding importance is the role and involvement of the central institutions such as Academy of Science through Institute of Hydrometeorology, Museum of Natural Sciences, Institute of Biology and other affiliated expertise and research teams.
- Local level: Municipality of Orikum, Qender Commune, Novosela Commune, the main local institutions such as Directorate of Waters, Directorate of Agriculture and Food, Regional Environment Agency.
- Other stakeholders: several regional associations & users, drainage & water boards, pastures' and agricultural land owners, hunters and fishermen association, association of organic agriculture, apiculture association, collectors and dealers of medicinal and aromatic plants, environmental NGOs, etc.

On the other site, MP process is being developed based in PRA principle i.e. wide consultation, round tables, training sessions with the thematic local groups identified, addressing environmental problems, their analyses and solution alternatives, has been established by MP team. In order to make the MP ownership of the local community the MWC Albania has been working in contractual approach when it relates to local moderators in the sites, thematic local expertise, but also very close links and progress has been noted form the partnership either with the local CBOs/NGOs or local state institutions and authorities.

As the rationale of the participation and community involvement are noticed the following elements:

- a very prominent and significant life and occupational experience collected by the community and user groups in their respective actions related to agro-economic profile of the sites
- community needs in further acquiring and sharing up-to-date knowledge according to the actual status and challenges faced for the future development
- a satisfactory level of commitment to changing and improving overall economic and social situation as well as existing knowledge, skills, particularly qualified expertise for the area concerned.

V. Zuna, E. Dodidba & E. Myrtaj – MWC Albania

BOX 10. Women of El Omayed: No Longer Invisible Citizens – Egypt

One of the major hindrances to community development in El Omayed has been the failure of many locals to issue birth certificates for their newly born daughters; thus, depriving them of all citizenry rights, such as education, health-care, pensions, applying for bank loans, joining NGOs or voting. In other words, they were officially non-existent or invisible citizens. The main reason why Bedouin women suffer this problem, was that conservative Bedouin traditions do not encourage the encryption of women's names on official documents to be seen by unrelated men. However, other factors also come into play, such as the lack of awareness of birth certificates' importance or failure to pay the nominal charges. Realizing the dimensions of the problem, meeting with the locals were organised by the Community Development Advisor to convince them of the importance of issuing birth certificates and hence identification cards. The meetings were successful, as 350 birth-certificate applications were completed by locals. Finally, Omayed's women are now expecting to receive their birth-certificates any minute now and could totally contribute to MWC project action on the field. With them, comes their new sense of identity, social integration and solutions to many of their problems.

Ms Ghonem - MWC Egypt

Information and communication were essential for building trust and confidence. The simple exchange of information is a kind of passive participation that has turned very important in several countries (i.e. Egypt, Morocco, Tunisia). The most common shortcoming is the failure of some national components to invest sufficiently from the start in the communication to and education of local people in order to establish the social context that is needed and conducive to achieve conservation of the sites. Communication is essential to ensure better transparency and trust. It is rather important that the purposes remain clear; people have to well understand the issues and feel comfortable with the process. Throughout the implementation of the project, information helped enhance the knowledge of people and local communities and help raise their awareness to the issues and to the threats (Box 11).

BOX 11. Communication for the Moulouya site - Morocco

Communicators like to talk of targets or audiences; I prefer the use of the more positive terminology of ‘audience’. The objective is to try and bring about ‘a change of behavior’. The latin origin of the word ‘communication’ points to two meaning: ‘sharing’ and ‘manipulating’. As such, there are both a rational aspect but also an emotional component of ‘communication’. What is important is to support the technical message with an emotional message, i.e. the translation effort. We have audiences, that may know nothing about the project, and the objective is to get these audiences to change their attitudes. The first task is then to understand what the people think and why they do this particular action. The behavior would change when the emotional change take place. The posters that have been prepared for the Moulouya site try to do that. It is the message and the layout (little girl) on the poster that carries the emotion.

Ms. Houda Belhaj at the MWC MPPR workshop, Rabat, June 2005

LESSON 4.
Improving land tenure and natural resource access and control

Natural resource access, stewardship and ownership are key issues. Clarifying these rights and control concerns will help projects achieve the simultaneous goals of conservation and development.

Access rights and land tenure are well known problems in the literature related to natural resource management or development. Land degradation in the Mediterranean sites could be analysed as directly liable on the apparently chaotic actions of stockbreeders, fishermen, hunters, and on communal uses of the site. Then many people think that the best option to improve the management is land privatisation, even though it has been demonstrated in several places that the main issue is rather to ensure collective social regulation. For diverse historical and political reasons, land tenure is a critical issue in all of the MWC sites. Sometimes different phases of nationalization, privatization of land, land grabbing and expansion of cultivated lands have resulted in a more or less chaotic land tenure situation on the field.

Customary rights based on land use may overlap with modern rights where the owner is the holder of rights and titles. For instance, in Lebanon if you exploit the land more than 16 years it is yours. You may also be the owner by use, as in Burullus lake in Egypt.

A good assessment of the land tenure prevailing at the sites is useful. However, it is often omitted from the diagnosis work, often due to the complexity of the situation and the difficulty of the task, as in Albania where some collective lands are progressively being redistributed to people. Securing land tenure in one form or another (rather than uncertainty) may lead to increased commitment from the owners as it was observed on the common lands of Burullus in Egypt, when allowing collective management of the reedbed expansion (Box 12). Despite few economic resources, the involved local groups or NGOs provided a large potential workforce based on voluntary service.

BOX 12. Local Citizens Rehabilitate Lake Burullus – Egypt

The spread of reeds in lake Burullus was considered one of the most important problems facing the lake and the fishermen, as it has caused ecological imbalance as well as the freshening of the lake. Through the local community development committee, -formed through the project's initiative-, the local community was mobilized, to dispose of the excessive reed in the lake. This was conducted in accordance with a reed management plan, which is considered an integral part of the Burullus management plan. The idea was also encouraged by the management committee; a committee initiated by the project, chaired by the Governor and inclusive of all concerned bodies. The idea was first met with skepticism and rejection from many parties, and was attacked at the pilot stage, in which only one local organization participated in an area of 20 feddans. Upon the pilot's success, 23 NGOs and cooperatives joined in the plan's implementation, in an area of more than 1000 feddans. Also, the mocking and oppositional voices have laid low. Nevertheless, there was still some little opposition from a limited category of people; those who benefit from the reeds in trying to cut out segments of the lake for their personal use with no legal deeds. The endeavor went very well and there were even requisitions from NGOs and cooperatives, to join. The environmental awareness activities have been integrated as part of the endeavor.

M. Ghonem – MWC Egypt

However, the literature also describes several cases where clarifying who owns the property rights resulted in overexploitation. Access to resources, especially the issues related to stewardships and ownerships, is a key element of integrated conservation and development projects.

Natural resource access control is a prevailing problem in all of the MWC sites. For instance in Egypt and Morocco, illegal fishing of glass eels (*Anguilla anguilla*) occurs each spring. Regulation does not necessary exist or is very difficult to apply and monitor when it exists. The dramatic decline of the annual catch and of the size of the fish is symptomatic of over-harvesting in the MWC lagoons. One underlying cause is also the short-term profitability achieved by stocking fish farms with fry caught illegally at the outlet between the lagoons and the sea, and the rapid growth rate of different fish species under the controlled conditions of the fish farm.

At the scale of the MWC sites, fishery management needs to be controlled at the local level through fishing rights and social sanctions (Box 13). Moreover, the fishing diagnosis should put the emphasis on how people fish rather than the harvest level. It should also help in adjusting people's requirement to the potential of the exploited resource (i.e. fish, grazing, hunting).

BOX 13. Fishing control activity in the Albanian project sites.

In both project sites there are small not well-unorganized groups running fishing activity as well as individual (either licensed or not licensed). This problem is tackled by MWC Albania in order to improve the situation.
After several investigation and surveillance in the sites, there was clear evidence of the illegal fishing and also of the real threat to the fishery reserves. In cooperation with the local committed NGO to this issue ('Laguna e Kalter' – Orikumi and 'Adriatiku' – Narta) there was a very wide awareness process and awareness rising among the community for the negative impacts of these activities. Representatives from the fisherman groups as well individuals were approached and the problem was discussed with them asking for a reshaping of the management of the fishing activity in compliance with the Law on Aquaculture and the relate bylaws.
MWC project has linked and facilitated the concerns of the community with the policy and strategy of the local authorities and institutions on this issue, organizing a round table between all actors affected: fisherman, Directorate of Agriculture and food, other community representative. It is a common understanding that the management pattern they had does not provide efficacy and consequently causes many problems.
All agreed that in order to achieve an efficient and sustainable fishing activity, given circumstances in the Narta lagoon and surrounding ecosystem, the fisherman should be organized in small fishing associations (6 associations with about 10 members each) which will exert their activity in well defined areas of the lagoon) Each association will be legally represented by a chair, on whom behalf will be issued the license of the fishing activity. Another measure to be taken is the matriculation of all fishing boats.
All this reshaping and measures taken made possible to:
- Decrease the illegal cases of fishing;
- Decrease of number of law infringements;
- Improvement of the control over the fishing equipments and fishing stations (either mobile or immobile);
- Increase the awareness among the fisherman.

Due to similar approach applied with the Orikumi fisherman groups, supported and cooperating also with the local environmental NGO: 'laguna e Kalter' and 'Organic Agriculture' it was achieved to gather all the fishermen in fishing association: "DELFINI". This brought significant improvement in fishing practices in Orikumi area.

V. Zuna, E. Dodidba & E. Myrtaj – MWC Albania

Box 13 illustrates the issue of community self-control of the resource use activities. The peer pressure can work effectively in rural setting to ensure that individuals do not infringe the community common goal and decision. In Egypt, in the case of a decrease in overgrazing activities from the communities, once an agreement has been reached with the community on decreasing overgrazing in the protected area to a lower level, it is unlikely that individuals from that community would go against the collective decision.

In Morrocco, the Moulouya site needs to be controlled from disturbances mainly during summer holiday season. Several issues, such as increased visitor numbers and related waste management problems, or recreational activities are threatening the integrity of the wetland. The MWC project, helped by a national NGO (Enda-Maghreb) is trying to persuade local people and summer visitors to respect an access and use limitations through awareness raising and communication. However, several local stakeholders make their livelihood from tourists and visitors. As local communities play a key role in encouraging summer visitors to respect the access and use regulations, it is important that the control and enforcement measures are rapidly accompanied by alternative livelihood initiatives tied with conservation actions and targeting those local communities.

Using incentives for direct users to respect the access and use limitations is often difficult to apply and does not seem to have been implemented within the MWC project. It often requires innovative thought and creative schemes. Incentives for participation and adherence to conservation are an important challenge in conservation planning. How and to what extend is it necessary to compensate the users for the cost of foregone benefits when they do not fish, graze or hunt? Incentives may encourage motivation, information sharing, and collaborative understanding or actions. However, uncompleted socio-economic diagnosis can lead to undermine the incentive policy goal. Obviously, an efficient financial incentive approach requires an accurate understanding of the social and economical issues and needs. Incentive to stop the overuse of a natural resource can be addressed either through direct subsidies or more often through the development of alternative incomes to take people away from the damaging activity or through the improvement of the practices, like for example in Egypt, where motors for boat were supplied to fishermen in Zaranik lagoon and grants were distributed to fishermen cooperatives in Burullus as a deal for the improvement of the fish resource management. Despite this, it was often difficult to convince local stakeholders that it is to their benefit in the long-run to preserve the resources.

Social sanctions, conflict resolution and property rights are at the root of several management problems of the MWC sites. The observe failures were linked either to (i) the incapacity of the users to manage themselves (i.e. due to an initial lack of knowledge of the involved process or coordination facilities like in El Omayed); (ii) such external people punctual uses (i.e. hunting and grazing in Albania), (iii) rapid population growth (i.e. in Morocco) or (iv) harvest technology changes (i.e. traditional vs motorboat fishing and fish farming in Burullus). It is increasingly recognized that any natural resource management plan design has to integrate this complex issue. To maintain the global consistency, the site manager has to define the articulation with government agencies if there is any rules enforcement (Box 14).

BOX 14. Halting hunting in Zaranik site – Egypt

Bird hunting is illegal within Zaranik. Law 102 of protected areas provides the legal framework that regulates all activities within the protected areas. However, quail netting and falcon trapping are activities of the Bedouins of North Sinai who claim traditional ownership rights to the land. According to them, hunting, particularly of migratory birds on an annual basis within Zaranik Protected Area, is perceived as a proof that it is indeed their land. Officially, all desert lands not under cultivation are state-owned. This is the case in the Zaranik Protected Area. However, local Bedouins and members of certain clans living in El-Arish (capital city of the Governorate of Northern Sinai) claim traditional ownership of much of the area although they possess no proper ownership documents to support their claims. Without official documents these traditional claims have no legal standing in Egypt. Efforts to control the bird-hunting problem have been sporadic, and have posed a major problem. Not only because of its impact on biodiversity, but also because of the highly negative image it gives of the Protected Area. The unabated continuation of bird hunting eliminates all potential to establish any viable eco tourism industry in the Protected Area. The complete halting of bird hunting in the Protected Area is the first precondition necessary before launching any attempt to introduce eco tourism or bird watching tourism. Under pressure from the local communities of North Sinai, it was customary for the Governor to agree to set hunting nets within the protected area. This issue was raised in the validation of the management plan workshop in North Sinai that was attended by the Governor of North Sinai. After intensive negotiations, with the conviction of the benefit of developing eco tourism in Zaranik, he agreed to ban all bird hunting activities within the protected area boundaries for good, providing that the site boundaries are clearly marked. Accordingly, the protected area staff moved fast to delineate the site boundaries according to the coordinates stated in the protected area declaration, to capitalize on this success.

MWC Egypt

LESSON 5.
Implementing alternative activities for livelihood (1): that contributes to conservation objectives

Systematically consider the linkage between the conservation and development objectives; local people should regard their efforts to conserve biodiversity as contributing to their economic and social benefits.

Several initiatives were undertaken in the MWC sites to propose to the local communities livelihood alternatives (Box 15). The aim was to divert them away from traditional uses of the natural resources that led to degradation of the resources through overuse or disturbance, often due to rapid demographic changes (eg. Olive tree growing in lieu of overgrazing, Box 16). The objective is always to lead to a change in behaviour. It is yet too early to assess whether this kind of effort is having the positive impact that was originally expected. However, the first outcomes show that group discussions, formal group creation to share information and understanding are essential factors for changing behaviour and management practices. When people are involved in a participatory planning process and they have social and economic interests in the benefits of the potential changes, they are likely to contribute to the required changes.

However, a usual challenge for conservation managers is to evaluate if the development of alternative livelihood options really helps to decrease damaging activities (i.e. overgrazing or over fishing), or whether it acts as an additional source of income? In many cases, what is referred to as 'alternative livelihood' is in fact the encouragement to a supplemental economic activity that is designed to 'compensate' for the foregone loss of some other resource use activity that would now be banned because of the protected area status. For example, if fishing is banned in the area where the local community group used to fish, one could consider organic agriculture (watch for gender issue!) as alternative source of revenue.

The development of livelihood schemes must be encouraged, and tied in with such schemes as micro credit, revolving fund or small grant facility. But they have to be part of a larger strategy of community development and protection of the site: the total benefits to the community must be higher (or at least equal) with the protected area compared to without. In other words, the community must feel together better off - socially, culturally and economically – with the protected area than it felt before. If some resource use activities are then no longer possible, some alternative economic means must be encouraged, so that the family still has at least the same financial means to attend to its needs. But additional benefits could also be generated (like education of the children, social respect, increased sense of ownership, cultural revitalization, pride) that the community would value sufficiently to forego some other category of benefits (like the financial and economical one). One needs to consider the whole of the benefits; and this needs to be agreed to in progressive discussion with the community groups.

As such, a suggested way forward would seem to ensure that the project focuses not only on alternative livelihood but implements a number of supportive measures, all integrated within a community development and participatory strategy: alternative livelihood options, but also banning and control, dialogue, awareness raising and literacy, increased efficiency of the traditional uses (Box 17), social welfare, etc.

BOX 15. Developing ecotourism-based income trough Bed & Breakfast in Tyre – Lebanon

The objective of this project is to increase the ecotourism and its role in the development of society and enhance the living situation of the local community. Tyre city is a potential tourist area it dates back approximately 2750B.C. The old city, the international festival of tyre, the Tyre's shore all are titles for a promising ecotourism.
The first B&B initiative started in a 3-bedroom house owned by a lady called Souraya. Many people coming to visit Tyre, stay couple of days at Souraya's house where they get a bedroom to rest in and a delicious traditional breakfast for only 10 US$.
Several partners took part in the accomplishment of this project and cooperated for its success. The NGO AMWAJ renovated parts of the house. SRI an American NGO provided training on hospitality to the owner. The coordination of this project was the responsibility of MedWetCoast Lebanon project. This initiative is gaining a lot of positive feedbacks; this summer flourished with clients. Further to the success of the Souraya's place another house was renovated by its owners and its now fully operational. It has become obvious to the owners that most of their clients come through the reserve team and they have linked their livelihood toe the existence of the Tyre Coast Nature Reserve.

C. Rizk – MWC Lebanon

Introducing other alternative could or should lead to a change in behaviour away from damaging uses, however potential adverse effects should be anticipated. In Egypt, the objective of the gas oven distribution project was to take the communities away from cutting trees and using wood for cooking. The ovens were given by the project but the recipient must purchase the gas. After a while, the women should have appreciated the convenience of using gas for cooking and they should not come back to wood. But there was a rather significant change in the external conditions with a recent sharp increase of oil and gas prices … and people started to cut trees again.

BOX 16. Creating Alternative Sources of Income through Olive and Fig Plantation in Omayed – Egypt.

In coordination with local citizens, the project planed and implemented the implantation of around 60,000 olive trees (for olive oil or pickle production). The locals paid part of the olive saplings' prices. Their contribution was channeled for supporting development activities in the area. Regulations and stipulations were put forth for eligibility to receive olive saplings. Most important of these prohibited the use of pasture ground for the implantation.
Alternative activities like the growing of Olive trees aim at reducing pressure from overgrazing. There is no clear evidence yet that it is working. But a number of other measures have been implemented in parallel: the grazing by sheeps coming from outside was stopped by guards' control. The communities inside the protected areas have reduced their grazing in the site, but this is built on trust and peer pressure.

M. Ghonem – MWC Egypt

BOX 17. Bee keeping as alternative income to reduce overgrazing in MWC sites of Tunisia.

The Haouaria mountain and the forests of Dar Chichou/Oued Laabid are the pasture lands for a herd that totalizes about 5,000 goats. This grazing pressure constitutes a major threat for the conservation of the local Mediterranean maquis and forests. In the same time, this activity produces a very limited income to the stockbreeders due to the low milk and meat productivity of the local goat species. To improve their income, the shepherds use to conduct not only their own herd but also that one of area's foreigners. This practice increased seriously the pressure on the low pastoral resources of the MWC sites. The herd sizes increase at the expense of the quality of the sold heads that are usually meagre and sold at low price. As a consequence, the shepherds are victim of a perverse spiral, where they are controlled by stockbreeders exterior to the sites if they which to conserve or maintain their incomes, increasing by a cascade effect the overgrazing of the areas and reducing the productivity of the livestock while the carrying capacity of the whole sites is ten-less times than the herd size that presently grazed.

For all these reasons, the local MWC project initiated new alternative income activities to reduce the threat of overgrazing and improve the quality of life of the shepherds. A dialogue and negotiation process took place with all the stakeholders. It allowed the identification of a potential of new activities: (i) the economic valorisation of the milk by-products, implying an improvement of the goat species; (ii) the development of bee keeping, with more than one harvest per year; (iii) the development of fishing activities in the reservoir lake of Oued Tabbouda.

The development of bee keeping activity is coordinated by local agriculture authorities (CRDA) and is financially supported by the public agency APAL (35,000 $ US). Presently, 25 shepherds benefit of the project. They are equally distributed: 1/3 comes from the Haouaria Mountain, one third from Dar Chichou forest and the last one from Oued Labid forest. Theoretical and practical training sessions and bee hives were distributed during the spring 2005 under the sanitary control of the veterinary service of CRDA.

M. Chihaoui – MWC Tunisia

LESSON 6.
Implementing alternative activities for livelihood (2): dedicated expertise required

Integrate appropriate provision for technical and financial assistance to support the development and inclusion of alternative livelihood schemes in the project design, think collectively of the long-term consequences of the initiatives with a dedicated community development specialist and facilitator.

An obvious issue related to the alternative livelihood initiatives development relies on how to finance these local initiatives (Box 18). This issue was not properly addressed by the project from the start. There was no provision for assistance (technical or grants/credit schemes) in the project document towards that end, nor any linkages with relevant institutions to support it (micro-credit financing institutions for example). Should the local/national teams distribute grants or credit? Due to a lack of planning of this means to reach socio-economic integration in the site management process, no credit facility was able to be rapidly in operation in the MWC national components. One should however site the initiatives with revolving funds in Egypt (Box 19). The MWC national projects explored various options to transfer grants to local individuals or associations, whether directly or indirectly. The principle of co-financing by the beneficiary was a way to collective and individual engagement and responsibility regarding environmental issues, cash or in-kind. In Egypt, the MWC grants don't go directly to the fishermen, but through local NGOs (for nets) or through cooperatives (for engines).

One critical issue was to always think collectively of the long-term consequences of the decision made on the short-term in the context of urgent measures and community development. Reaching that purpose and fostering community development, empowerment by the local communities and involvement in the project activities is obviously a fulltime job, a specialist task. It needs a dedicated community development specialist and facilitator, working on a long term basis, with a continued presence on the sites with the local partners. It also needs an appropriate financial budget, which, often very small compared to other project components, was not always secured in the initial MWC Project.

This community development activity requires important people skills. The specialist should be able to help the local groups to manage the process, to ensure that every stakeholder participates, to understand the process seeking consensual approach. He(she) would be able to underline the complementarity of the different users (instead of stressing conflicts only) and to show them how they can play a crucial role for a management plan that is socially and ecologically sound.

BOX 18. Organic farming as alternative livelihood initiatives in Tyre – Lebanon.

To guarantee a sustainable management of the natural resources in Tyre, and in order to mobilize financial resources and ensure the economic viability of the nature reserve and surrounding area, MedWetCoast Lebanon project had initiated several activities among which are a pilot project on organic farming to improve the added value of agriculture crops in Ras el Ain and a "Bed and Breakfast" project. The purpose of these projects is to mobilize funds to the local community in and around the reserve as well as to reduce the threat on the natural resources on the site.

The pilot project on organic farming aimed to teach the farmers organic farming techniques and improve the added value of the crops. The promotion of organic farming has many objectives:

The first one is to reduce the pollution of soil and water from agro-chemicals and fertilizers used. These products may reach the streams that are more or less connected to the marshy areas and this may have an impact on the quality of water and consequently on the flora and fauna living there. Moreover, the soil will also contain pollutants and its extensive use will reduce its production capacity for the generations to come.

The second objective was the reduction of water consumption through the introduction of drip irrigation techniques that are 90% efficient in terms of water usage. Drip irrigation is a requirement in organic farming since chemicals can not be used to control weeds and drip irrigation helps in the reduction of growth of unwanted vegetation

The last and main objective of introducing organic farming was the improvement of the livelihoods of farmers in the area. Organic produce sells at higher market prices then conventional produce. The farmers were linked with two organizations operating in Lebanon: Helathy Basket and Campagna. These two organizations work as farmer cooperatives where the produce is taken straight from the farmer to the consumer. This way the farmers can sell organic crops at a better price then the conventional crops. The initiation of this project took place in March 2003. Four awareness campaigns were held explaining the following:

1. General awareness and introductory session included a brief explanation on the benefits and techniques of organic farming.
2. Wise use of agrochemical
3. Wise use of water resources according to RAMSAR guidelines
4. Financial and administrative sustainability of organic farmers in Lebanon, i.e. initiation of COOPS and association

Many Parties were involved in the success of this initiative. The coordination was upheld by the MedWetCoast project Lebanon, whereas the technical and part of the financial assistance was the responsibility of American University of Beirut (AUB) that contributed with the Ministry of Agriculture in the cost of the infrastructure such as the irrigation materials, the seeds and the agro-chemicals. Healthy Basket provided the market for the farmers and "Methyl Bromide Alternatives" project of UNDP and their very dedicated team assisted in the biofumigation and solarization of the plot. Raising awareness was conducted by the two NGOs: AMWAJ and Society for the Protection of Nature in Lebanon (SPNL).

The entire project was supervised by the Government Appointed Community (GAC) of Tyre Coast Nature Reserve through the Ministry of Environment.

The pilot project was successful and the vegetables are in good condition for marketing. In addition, many plots were added and the organic farming agriculture was expanded. The concept of "organic" is starting to gain ground in Lebanon and the idea of having fruits and vegetables free of any chemicals has been favored by customers. On the other hand, this project faced some difficulties. First of all, converting the traditional agricultural practices used for 50 years was a challenge. Farmers were hardly convinced and this took a lot of time. The investment in drip irrigation was not easy on some of the farmers.

C. Rizk – MWC Lebanon

BOX 19. Pasture-Land: A Treasure of Biological Diversity and A Source of Livelihood – MWC Egypt.

The degradation of pastureland in Omayed and Zaranik protectorates was an urgent problem threatening biological diversity in both protectorates, and baring negative impact on locals for whom grazing and herding is their primary and often sole source of livelihood. Thus, MedWetCoast – Egypt decided to resolve this problem through a four-axis plan.

The first axis was surveying all the degraded areas and rehabilitating them through re-introduction of threatened species. This process starts with the collection of seeds, implantation in green houses and their later introduction into pasturelands.

The second axis is decreasing pressure on pasturelands through a project to supply alternative fodder to Bedouins at cost price, and at installments. This ambitious project is being implemented by four Bedouin non governmental organizations NGOs in Omayed and two in Zaranik. MedWetCoast-Egypt had helped set up and train these six NGOs which are now executing the fodder project. Furthermore, it funds the fodder project through a grant to these NGOs, run as a revolving fund. MedWetCoast-Egypt also provides them with the technical support, in the form of a specialist in animal fodder and another in financial management. The fodder project is currently in its pilot stage, which will be followed by a full operation stage.

Under the same axis "providing alternative fodder, to alleviate pressure on pasturelands" comes planting Acacia tress that are very valuable in nutritional value, provision of shade, and fixing of sand-dunes. In fact, 40,000 trees have been planted in Zaranik and another 10,000 in Omayed. They were all planted outside protectorate boundaries in order not to upset the delicate ecological balance of biological diversity through the introduction of an alien species.

The third axis is improving economic return of livestock, to decrease the need for more heads of stock, while alleviating locals' economic status. This is being conducted through the provision of a fodder specialist in both Omayed and Zaranik. This is in addition to the provision of veterinary care, through veterinary campaigns and the establishment of a veterinary clinic in Zaranik.

The fourth axis is alleviation of pressure on pasture-land through creation of alternative sources of livelihood, other than animal production. This was possible through the project for development of traditional Bedouin women's handicrafts in both Zaranik and Omayed, a craft now verging on extinction. This project is self-funded in all phases of production and marketing.

The fifth axis is the placement of a program of sustainable management of pasturelands that endorses rotation to ensure that pasturelands are not exhausted. This program is placed by specialized experts in consultation with the locals, to ensure that it is followed by locals under tribal / common laws.

Through this ambitious plan, MedWetCoast attempts to combine environmental conservation with development needs. Furthermore, it mostly relies on locals to execute it, which would guarantee its continuance and sustainability after the project's lifetime.

Ms Ghonem – MWC Egypt

LESSON 7.
Institutionalization of the project: capacity building for NGOs and local actors

Local NGOs are essential organisations that must be involved in the site management process. By their flexibility, their anchoring within the civil society, and their capacity to reach out to a broader spectrum of stakeholders, NGOs are able to play an important role in the management of the site, in particular for raising awareness among stakeholders and governments. Their capacity and strengths must be developed; networking and workshops are essential tools to improve skills and enlarge visions of the members.

Following negotiation phases between stakeholders and the adoption of several urgent measures, (such as implementation of alternative livelihood initiatives) a site management plans was prepared with involvement of local communities and representatives of authorities. Various options have been and are being considered in the MWC sites to set up an appropriate institutional structure for the management of the protected areas. None seem to be managed directly by NGOs, as it is widespread in Western Europe. Nevertheless, the MWC project is encouraging setting up mixed committees and registering it in the management plan as the institutional arrangements for implementation of the plan. In Egypt, the establishment of a council to implement the management plan was written in the management plan itself; once the plan was endorsed by the Government, the council became legal. In Lebanon, the Tyre Coast Nature Reserve is managed by a GAC – a Government Appointed Committee – and Aammiq wetland is managed by the private owner himself with the technical support of the A Rocha NGO. The main challenge is still to create and make this committee responsible, accountable and multi-representative of the stakeholders. It must also be carried out in accordance with the various institutional and legal conditions of the countries.

The MWC project overall proposes that the local steering committees that were set up to prepare for the production of the MP be turned into local management boards or units for the management of the sites, through confirming their legitimacy by government decision and building their capacity, in order that they become fully operational managers of the sites. This seems to be a guarantee of sustainability. The example of Lebanon where provision for the appointment of a GAC for the protected areas is enshrined in the law shows that this kind of institutional arrangements is possible. The GAC is at an operational management level.

To involve and empower people, local representatives became members on the Management Committees in Egypt. In the same way, marginalized segments of society (i.e. women) were integrated in discussion groups. In addition, the MWC specialist helped the establishment of local NGOs and assisted in building their capacity towards reaching goals and conservation related issues (Box 20).

BOX 20. Establishing, Rehabilitating and Capacity Building for NGOs in Egypt.

Out of a desire to establish sustainability for the project's activities, the project encouraged locals to organize themselves into NGOs. The project helped through reactivating suspended NGOs, rehabilitating existing ones and establishing new NGOs in areas that did not already have ones. The project succeeded in reactivating three suspended NGOs, and is supporting the establishment of two new ones. The project aims at strengthening and endorsing these NGOs' roles through three pillars:

- Building their institutional capacity
- Spreading community awareness of these NGOs' roles, importance and regulations.
- Providing the funding and technical support necessary for the implementation of their development activities.
- Joining the NGOs – as much as possible- in the implementation of the protectorates' management plans.

Ms. Ghonem – MWC Egypt

Collective and individual responsibility increases the awareness on natural resource wise use and helps to develop new projects through co-learning approach. The cooperation between stakeholders can be observed through: (i) the coalition of different groups sharing new common vision and several collective aims; (ii) the acquisition or development of new collective equipments (i.e. Egypt and Albania). All this process led to the development of know-how and legitimacy for the stakeholder groups and should contribute to establishing co-management of sites with public agencies (Boxes 21 & 22).

BOX 21. MWC Albania: Training and public awareness activities

A very important activity was the preparation and organization of the training in Vlora with all stakeholders and NGOs on issues related to development of ecotourism from 16 -20 October 2004. The theme regarded two training modules on coastal zone management, which were delivered and made available to participant in coordination with expertise from TdV. Several local representatives, apart of NGOs participated in this training (representatives local institutions, NGOs, District Council, Novosela Commune, Orikumi Municipality, Chamber of Commerce, Vlora University, AULEDA etc).

A significant development has been noticed as cooperation and collaboration with other donors and programs such as GTZ, and REC, with a common concern on environmental protection. As a result the second report on Urban Planning Instruments and Territorial Governance (for the areas of Orikumi Lagoon; National Park of Llogara and Karaburun; Narta Lagoon and Zverneci area; Vjosa River Delta and Pishe-Poro) is finalized through a cooperation with GTZ/COPLAN, as part of MP documents. While a project on cleaning up and territory arrangements in Zverrneci Island is commencing through a financial support received by REC to a local NGO (ADRIATIKU).

Another important training activity was the preparation and organization of the two-day training in Novosela and Orikumi respectively. The theme of the training in both places was dedicated to “management of the PA and National parks” whereby several local stakeholders and representatives of the local authorities and institutions were invited to participate and attend the workshops. Other exchange of experiences and cooperation with local NGOs like “KARABURUNI” and “Organic Agriculture” has targeted problems related to agriculture development and stock-breeding .in the project sites.

This cooperation was formalized through mutual assistance in rehabilitation of hydrotechnic works in Karaburunui Peninsula (water-bearing –strata) for improvement of the water supply to livestock and wild life in there, establishment and operation facilities for milk processing, production of traditional cheeses as well as conducting public awareness campaign and activities for the exceptional values of some food products in the area (mainly fish, dairy, horticulture) and medicinal plants.

BOX 22. NGOs to ensure an efficient approach within Moulouya Wetland – Morocco

In the context of the participative management of the natural resources of the SIBE, the ecotourism development and the awareness rising of local users has been discussed with the local communities and the local conservation NGOs. The latter, with the local and regional authorities, were motivated to collaborate in the MWC project. Training sessions and studies travels were organised for the local authorities and the civil society to increase their awareness and to present them tools and methods used in participative management of protected areas. An NGO (Enda) has been selected to apply conservation actions and participative approach identified in the diagnosis phase of the MWC project. This ONG is working closely with local NGOs and authorities to implement the urgent conservation actions and design the alternative livelihood initiatives.

A. Khattabi – MWC Morocco

According to the MWC teams, networking and workshops are crucial to improve skills and enlarge visions of the local and national teams, local experts and NGOs' members. Maintaining or developing a network of relations with colleagues across the network facing similar problems and working in other sites and countries, helps to exchange profitable expertise and access expertise and information. Thinking, discussing and exchanging technical experiences greatly enhance knowledge and skills of the experts and managers.

Finally, not only NGOs should be the target of capacity building and awareness raising activities. All different actors can play a role in the management of the protected area site. Within the MWC project, there are good examples of activities specifically organised for professional or society groups: journalists, religious leaders, women, or veterinary doctors (Box 23).

BOX 23. Journalists Learn of Wetlands – MWC Egypt

Within its efforts to spread awareness of the importance of wetlands and to mobilize public opinion towards their conservation, the project held a workshop for journalists, on10 January 2005, in Cairo. Around 40 journalists, mostly from the environmental sections of most national newspapers, attended. Addressing the audience were Chief Project Advisor & Renowned Ecologist Dr. Mohamed El Kassas, Project Manager Dr. Esam Elbadry, Socio-Economic Advisor Dr. Magda Ghoneim, Ornithologist Dr. Mahmoud Sarwat, and the three protected area managers PAMs. The workshop addressed the cultural, economic and environmental importance of wetlands. It also introduced the journalists to the importance of socio-economic development and its relationship to sustainable environmental conservation. More importantly, it paved the way to the World Wetlands Day WWD, soon to come. The workshop succeeded in fulfilling its objectives, as reflected by discussions and questions from the floor. At the end of the workshop, most journalists expressed a newly-found appreciation and understanding of wetlands, which they wished to pass onto their readers.

MWC Egypt

LESSON 8.

Monitoring and evaluation of the socio-economic site management activities

From the start of the project, provision must be made for monitoring, with indicators that measure both ecological and socio-economical impacts of the management actions. Being patient for recording results but claiming concrete achievements: changes take time.

The literature usually distinguishes monitoring and evaluation. Monitoring clearly involves analysing the situation in progress in order to improve the project and its actions. Evaluation purpose is to analyse the project to learn from its successes and failures in order to improve future and similar projects. The monitoring is often used to determine (i) if the planned activities were implemented; (ii) if they had resulted in the expected outcomes; (iii) and if negatives impacts have taken place. The monitoring has finally the function to determine if the wider objective is being achieved or not and as such it should provide information to persuade decision makers, policy makers and funding organisations of the success of the project.

From the start of the project, one has to determine what topic needs to be monitored according to the objectives. This can be done using a logical framework that defines indicators for each goals, purposes, outputs, and activities. Each indicator has to be measurable, consistent and of course sensitive to changes. It is necessary to define clearly the monitoring needs, as such monitoring should be integrated as soon as possible in the site management process.

How to evaluate the effectiveness of an ICDP is often a challenge for the NGOs and public agencies. One can consider the number of breeding pairs of a threatened bird, the number of new installation for hydraulic management or basic equipment for cooking or fishing. However, a relevant evaluation has to appreciate the environmental as well as the economic and social progress for the inhabitants and users. But how does one evaluate the sustainability in the field whereas the SEA generates results in the long term? There is a dichotomy between short term result oriented project and long term socio-economic conditions. Also, the costs/benefit analysis that is often used to assess return and results of a project is not so appropriate.

In the context of the MWC sites, were the strategies to survive are often of primary importance, people's participation can not be dissociated from their interest to organize themselves to try to benefit from any project. The windings or misappropriation of the primary goals of the project appears to be a risk structurally linked to the participatory approach. It is then critical to include ways and modalities for monitoring the effectiveness of the management actions, with a view to adjust these if required.

The level of participation can be an element of assessment. Different participatory tools and methods were applied regarding the target groups, from participation by consultation to interactive participation. For instance in Egypt, following the stakeholder analysis, several tools were used to involve people. The Rapid Rural Appraisal (RRA) and Participatory Rural appraisal (PRA) were used in the Egyptian Burullus lake site. Many round-tables, focus group discussions and individual in-depth interviews were done to elaborate projects in Albania (Box 24).

BOX 24. Level of participation in Narta and Orikumi wetlands – Albania

In Narta and Orikumi ecosystems, there has been growing interest shown to the MP preparation. Since the beginning of the project, there have been regularly missions in project sites gathering each time more the 10-15 people and sometimes wide meeting with focused groups of more then 30 people, encompassing different levels of participation, prearranged and embodied in site diagnoses process, introduction and elaboration of an improved legal frame related to biodiversity conservation and nature protection to the project sites, commitment in development and takeover of priority site management actions and management instruments, as well as active input and contribution in public awareness and community development and thematic training on PA management.

V. Zuna, E. Dodidba & E. Myrtaj – MWC Albania

From a decision-making process and information sharing perspectives, different types of participation levels have been reached in our case studies. These participation levels are always context dependant, and all of them are not appropriate to every local situation. Moreover, the participation level that was reached during the processes was often different according to the stages of the projects (Table 5). Usually, the local people participated mainly by being consulted or by answering questions. They also participated by forming groups to meet predefined project goals. Fewer times, like in Egypt or Albania, local community members participated in joint analysis, in development of action plans and formation or strengthening of local institutions.

According to some MWC project managers, consulting people trough predefined steering committee is still considered as a participation approach underlining the confusion between two ways of thinking. Participation process is based on democracy principle and is not always understood and accepted due to diverse political, historical and cultural reasons. That is why national and local authorities, encouraged by international agencies to develop this kind of approach, sometimes stopped the process when it became difficult to fully control it from a political perspective.

Table 5. Types of participation developed in the MWC case studies according to the stages of the Management Plan process.

PROJECT DESIGN	DIAGNOSTIC	MP DESIGN	IMPLEMENTATION	POLICY TOOLS	MONITORING
Consultation with all major stakeholders (meetings, interviews)	Information Consultation for data gathering (expert studies)	Expert + Consultation + feedbacks	Mainly top down control measures (fencing) and engineering work; others were based on cooperation, co-learning for some projects	Public meeting following expert groups meeting and national NGOs (National Wetland Strategy)	Little and non systematic, Community involvement in monitoring (i.e. fishermen provide information when they see a turtle, TCNR in Lebanon; Fishermen in Albania)

Obviously the socio-economic approach did not reach its aim if its impacts on the field are not clearly known or demonstrated. From a social perspective, the effects of the SEA may be evaluated according to three major issues: (i) observable changes of the individual and collective behaviours (i.e. in Burullus, Egypt); (ii) cooperation within and outside the site between direct, indirect users and public agencies (i.e. in Aammiq, Lebanon); (iii) governance change at the local level (i.e. in Orikumi, Albania). However, results are not immediate, institutional issues and diverse inertias have to be integrated in any assessment framework. Achieving results takes time in some political contexts. In most cases, working at multi-scales (local, regional, national, international) needs long-term engagement and investment. To avoid social or institutional demobilization, the MWC teams developed, as we have already seen, several small projects to create micro-actions (urgent measures) or showcase examples of what could be done through the MP process.

In terms of number of created jobs, benefits, incomes, the direct economic impacts were difficult to evaluate in most cases because they were still few visible and measurable (when the site is rather small or incredibly large in terms of population growth). However, as of now, this assessment has not really been done yet in the MWC of the sites. The financial incentives' volume, the training sessions realized by users and the training sessions realized by NGOs members are easier to measure. It should be interesting to describe how the process continues and allows the stakeholders emancipation from initial project to go further to generate their incomes themselves. Boxes 25 and 26 underscore some achievements with regards to integration of socioeconomic consideration within the MWC project in Egypt and Albania.

BOX 25. Socioeconomic achievements within the MWC project in Egypt

- Relaying on local NGOs in the implementation of the reed management program; thus adding to their experience and creating job opportunities.
- Traditional handicrafts projects for Bedouin women.
- Enabling cooperatives to supply fishermen with fishing gears.
- Illiteracy eradication and issuing birth-certificates for women.
- Fodder supply projects to replace grazing in the protectorate (under establishment).
- Planting olives on a large scale and figs on a preliminary scale.
- Rehabilitating roman wells for grazing purposes.
- Supplying fishermen with drinking water.
- Organizing regular veterinary campaigns for herds and cattle.
- Establishing veterinary clinics for herds and cattle.
- Organizing cleaning campaigns.
- Mobilizing local volunteers to safeguard the protectorates against illegal hunting practices.
- Recycling damaged or illegal fishing nets.
- Establishing and supporting NGOs for local development.

M. Ghonem – MWC Egypt

BOX 26. Rehabilitation of water bearing strat in Karaburun site – Albania

The Karaburun Peninsula covers an area of 62 km2, located between Bay of Vlora (E) and Ionian Sea (W). It is one of the vastest area hosting significant stockbreeding activities. There are raised nearly 40,000 heads of livestock, goats and sheep. The traditional activity of this area notes a tendency toward the growth of number of the small livestock. With a pastureland area of about 10,000 ha, Karaburuni is short in fresh water resources which is necessary to meet the water demand for the small livestock and the wildlife in the area. Given these circumstances, during '70, there were build mountainous hydro-technical works that serve for the water accumulation in order to meet the water demand for the livestock and other habitats. Actually, there are 15 hydrotechnical works of this kind that the local communities call as "*lera*" (a structure performing waterbearing functions).

Due to lack of proper and continuous maintenance and cleaning, last decades most of them are not functioning. For nearly 25 years, in the Natural Managed Reserve of Karaburuni, there has not been any significant investment to maintain and administer these hydro technical works. This resulted in destruction and not functioning of the water bearing strata, diminishing notably their water bearing capacity. Therefore, during all these years, there has been a gradual decrease of the number of livestock and cattle, as well as the time of pasturing (in a pasturing season). From the surveillance, activities performed it results that the number of livestock present in the area is reduced up to 50 %, and the pastures use is reduced up to 40%. The lack of fresh water supply for a relatively long time in the Karaburuni area has created difficulties for the wildlife (eg. for the wild bear, wolf, red fox, rabbit, mountain partridge, etc.). Looking for fresh water sources, very often are noticed cases when animals get close to the resident centers, being so captured by the inhabitants and the hunters, making them more and more extinct.

Given this situation and circumstances, MWC project, in compliance with project objectives and as part of project activities has taken over to rehabilitate some of these hydro-technical works as well as other measures such as improvement of grazing capacities and measure to enhance pasture land area. These are considered as complementary measures that affect the socio-economic life of the stockbreeders and other communities there, also diminishing fires cases and other forms of illegal activities.
The results of these actions, particularly improvement of the water bearing capacities will:
- augment the water volume and water supply in site;
- increased number of livestock in the pastureland;
- increased grazing time and presence of livestock in the pastureland;
- secured freshwater supply for the wildlife;
- alternative solution for water supplies needed for fire extinction in Karaburuni area (mainly in the Natural Managed Reserve of Karaburuni).

Actually, MedWetCoast project marks the successful results of rehabilitation of one "*lera*", which is also in compliance with the finding and recommendations of the management plane noting this way a promising commencement of the MP implementation. It is worth mentioning very fruitful and useful cooperation established with all interested groups, local experts, community, and mainly with locally based NGOs such as "Organic Agriculture". The hydro technical work rehabilitated is situated in the place called "Lugu i Leres" in Ravene, in the Natural Managed Reserve of Karaburuni, 12 km distant from the nearest inhabitant center. It was build on 1920, the water bearing capacity is 500-m3 water. Among the most important steps and activities taken to rehabilitate water-bearing strata are the following:
- Cleaning up of nearly 60 m3 residues and mud accumulated during last years;
- Washing –up inner part of the "*lera*", painting with hydropaint a surface of 82 m²;
- Covering the surface by a concrete layer;
- Plastering of the inner part;
- Dredging and maintenance works in the communication channel between the strata and the trough.

The rehabilitating works started on 17 October and lasted until 18 November 2004, facing a lot of difficulties and constraints due to very law water quantity in the "*Iera*" and the livestock is in the summer pastures. MedWetCoast project followed closely the works offering technical assistance as well. Other partners were the local authorities, (Orikumi Municipality), the stockbreeder's community, and other local association such as the stockbreeders association "Karaburuni".
Rehabilitation of this mountainous water-work in Ravena area (Karaburun Peninsula) plays an important role for the conservation of the biodiversity, by providing water supply in site and contributing to minimizes of fires and consequently to habitat improvement. Of paramount importance is the sensibilsation and impact to local community, framers, and mainly stockbreeders, towards a better environmental behavior, actions (such as investments in improving water supply facilities in site or increasing grazing capacities). They instead of putting fires on purpose will try to protect their pasture area from casual fires or other illegal phenomenon.

V.Zuna, MWC Albania

The main ICDP principle underlines that the approach must keep targeting the conservation goal of the project, i.e. help addressing the pressures that negatively impact upon the natural environment of the sites.

In Egypt for instance, alternative activities, like the implementation of around 60,000 olives trees for olive oil or pickle production in El Omayed site, aimed at reducing the common overgrazing of the rangelands. Have there been any positive impacts of the activity on the grazing pressure? MWC Lebanon successfully introduced organic farming to Tyr Coast Nature Reserve? Has the scheme helped in reducing water pollution of the downstream river? Obviously, it is too early to observe a clear impact in terms of behaviour changes and it will be difficult on the short term because no provision in the execution of the activity was made for monitoring and for developing indicators. This case is illustrative of a more common situation where all MWC projects failed to develop monitoring and indicators for measuring on one hand, the ecological impacts of the field actions implementation and the other hand, its social and economical effects.

LESSON 9.
Lesson from the lessons: "leap-frogging" the established lessons and experiences?

Integrating conservation goals in development project and development goals in conservation project

This report tried to capture the project's knowledge and validate the process for the participating countries. However, the lessons that come out might be not very surprising for experts of the ICDP approach. They tend to follow the general evolution of ICDPs and some readers may have the feeling that the booklet is occasionally reinventing the wheel in terms of ICD lessons. Obviously, from what we have seen in the analysis and preceding chapters, the project has applied a more or less simple first generation of ICD approaches. Some national and local biodiversity experts acknowledged only recently the need to consider socio-economic issues in conservation projects while in other countries the need has been recognised for more than 20 years.

In this chapter, we would like to underline not only what the project has learnt, but what it contributes to the overall ICD debate in order to improve the approach and the thinking at an international level. Annex I shows the evolution of ICDPs and the latest generation of issues and approaches. How the MWC project contributes to addressing the issues? Have the MWC countries been able to catch up on ICD issues by leap-frogging established lessons and experiences?

In several sites, the MWC project has already generated benefits for the local community through greater public awareness of the importance of their natural areas. A main visible impact could be illustrated by the example of Albania where the project site has seen a reduction of pollution and an increasing in the quality of life that results from it. However the lack of comparable ex-ante baseline of socio-economic and environmental indicators for most of the project sites constitutes again a major political and operational issue. These issues have to be addressed in future projects.

A general overview seems to confirm that (i) elaborating a strategic framework to integrate conservation in development project or to integrate development activities in conservation project is of primary importance and is still a challenge for ICDP implementation in the field; (ii) elaborating a clear shared vision seems to be the key for a successful strategy followed by a well-designed action plan; (iii) tourism development is a growing issue in Mediterranean coastal areas that has to be integrated in any land management planning; (iv) nature-based tourism that integrates conservation with the development of local incomes should be considered together with the constraints associated with the leadership from tour operators and the individual elitist tourism demand that this type of tourism may request, before starting any such initiative in the field; it is definitely a risky activity that should be well designed and planned due to the high level of expectation that it usually generates within the local communities.

On the other hand, the examples presented in this document point to six main areas of project weakness:

- Concentrating too much on the development axis of the project while loosing the initial goal of conserving biodiversity;
- Concentrating too much on the biodiversity conservation axis of the project while loosing the issues of development;
- Not considering enough the market forces and feasibility conditions behind tourism and other proposed economic alternatives; it might produce difficulties and frustrations for the local communities involved in the process;
- Unclear or sensitive decision-making process and no coherence of the site planning with the upper level of organisation and planning agencies;
- No understanding or misunderstanding of the existing local institutions, cultural issues and constraints;
- No realistic time schedule or poorly planned local projects that lead to ineffective actions in the field;

As a result, we would suggest that five principles should be considered in the design of future projects:

- Human uses and exploitation of natural resources affect biodiversity in many ways. This statement is usually right but one should consider also that human activities do not systematically reduce the functionalities of the ecosystem. Human activities in specific conditions may contribute locally to increasing the biodiversity significance. A careful analysis of the causes behind the degradation of the site or future threats thereon should be carried out.

- Poverty alleviation can work for but also against conservation initial goal. A clear linkage between conservation progress and alternative livelihood activities should be established to avoid perverse effects. In the same way, establishing clear relationships between outcomes (from both collective and individual perspectives) and success in decreasing impacts on the natural habitats should circumvent mismanagement.

- Implementing a participatory approach does not necessary mean a successful conservation project in the field. Several ways of participation can be developed at different stages of the process but several obstacles (i.e. central government control, corruptions, economic injustice, lack of skills, etc.) might bring the project to failure. The local context should be assessed during initiation and monitored regularly to be sure to be able to create realistic conditions to implement the actions.

- Adaptive management appears to be the new leitmotiv of conservation project in the field. It is an approach based on the recognition that management of natural resources is an experimental process, which can only be learnt from implemented activities, and that natural resource management can be improved on the basis of what has been learned. However, it is absolutely necessary to “explicit” the relationships and the assumptions of the expected and controlled changes of the social ecological system in order to be able to learn from doing. For such purpose, the monitoring of socio-economic and environmental indicators should be implemented as soon as possible. Else, this approach is in no way efficient and mostly chaotic.

- The rules-in-use are usually the means by which local communities adjust and act based on their own knowledge, to live from the natural resources. These rules should be identified through a social approach that would also integrate some of the common worldviews that may form the basis for collectively shared norms and rules of these communities. Very often, projects that are focused on technical issues neglect this element; it leads to misunderstanding and failure to culturally internalise the change. Identifying and enhancing such social mechanisms should greatly help to implement efficient project.

Finally, whatever the approach at the local level is, it must integrate the vertical dimension of inter-sectoral policies and the horizontal dimension of a large-scale conservation planning and approach. If this last statement is not so new, obviously the experience of the project shows that we still have to work to do better in the future.

In the MWC project, the learning-by-doing approach allowed making obvious progress while reinventing well-known mistakes of previous ICDPs. But, conceptual leaps did not occur and failures of the past took place because a) the initial framework did not make due account of the lessons learnt in this area, b) the teams and experts have been so busy trying to implement the said project and activities that they did not have the opportunity to stop and critically appraise the method and the doing, c) the teams and experts, early on, may not have received the exposure from other similar projects on experience with integrating conservation and development and d)to go up the steps of the new generation of ICDP, the worldview of the various key stakeholders and partners involved in the MWC process would need to change.

In the MWC project, a change has occurred. Some useful and positive initiatives have taken place in the later years; some of the experts have gotten convinced of the need to focus on socio-economic issues and familiar with the concept of integration; new experts have been recruited within the project and new partnerships contracted to address the need for integration. The change clearly results from a learning-by-doing with some experts recognizing that a change in focus was required with greater attention to socio-economic issues; it can also be traced to some critical reviews and targeted encouragements. We believe that it will allow the forthcoming of more efficient ICDP approaches. As the Chinese Wiseman says: “the experience is a lantern that poorly highlights the covered pathway” and leapfrogging established experience that happened elsewhere is not given to all projects; in the Mediterranean, obviously, some leaps are still reserved to the frogs!

Chap V.

Conclusion.

Drawing conclusions on the performance of the integration of socio-economic issues in the MWC site management is really a difficult task.

Very often, the lack of any in-depth biodiversity causal chain analysis and of any analysis of the external underlying factors of ecological dysfunctionning led to a lack of identification of the precise objectives in terms of biodiversity conservation. As a consequence, we observed some disconnection between the socio-economic activities and the biodiversity conservation issues. Of course, this could not be generalized in all places. Sometimes, the identification of threats, objectives and activities was clear and the team in place has followed a clear process for identifying the common grounds between conservation objectives and socio-economic objectives.

On the other hand, the lack of a comprehensive and coherent biodiversity monitoring or result-oriented-management monitoring beyond the initial ecological diagnosis does not allow us to evaluate whether the situation is better after the project, although there are some critical evidence that tells us that it is. The evaluation of the performance of the projects' socio-economic activities needs to use functional indicators and develop an evaluation system that involves steering committees. The Threat Reduction Assessment Index developed by WWF within the framework of the Biodiversity Support Program could be useful to measure project success by avoiding underlined limitations of classical methods and the reader is invited to look into it.

Finally, this booklet builds on the case studies, examples and reports gathered from the project and focuses on what has been learned, showing that a lot of work has been done by motivated teams. However, we can legitimately wonder not whether the integrated conservation and development approaches developed and implemented within the MWC project have worked – because it seems really too early for that – but rather if the MWC project is not sometimes a conservation project associated to few socio-economical measures whose impacts on biodiversity appears doubtful, and sometimes a development project taking place on strongly degraded ecological sites. In some places, the protected area itself obviously does not allow ecotourism development, due to cryptic remnant biodiversity and thus low potential. All that can be done there is to develop environmentally friendly activities that also improve the landscape and restore the former human-modified ecosystem functioning.

The MWC teams have tried, according to their capacities and the local contexts, to promote simultaneous biodiversity conservation and development at both local community and national levels with the aim to change, in the mid-term, behaviours and policies for establishing meaningful protected areas from both environmental and socio-economic perspectives. Most of these promising efforts to link conservation and development will not meet their goals if other economic and regional planning policies still work counter to the MWC projects in several places. Perhaps what matters is not the short-term results of the projects but rather the process itself, the sharing of a vision and the exchanges between peoples and experts that it has allowed. To be efficient, this socio-economic process – that finally just started in almost all of the MWC sites – should continue.

If development means increasing adaptive capacity of social ecological systems and sustainability signifies increasing opportunities to fight against irreversibility[3], all of the MWC national components projects have not yet succeeded, but some of them are obviously on the way.

[3] Gunderson L & C.S. Holling (2002). Panarchy. Understanding transformations in human and natural systems. Island Press, Washington D.C., USA.

References.

Within the framework of the preparation and production of this report, a number of reference documents have been used.

For one, the MWC publications have been extensively reviewed and drawn from, in particular:

- *the project documents of each of the 7 project components;*
- *the report from the regional training workshop on 'resource and uses: 5 steps for a simplified socio-economic diagnosis', Tunis, March 2001. That workshop served as reference for the production of the socio-economic diagnosis studies;*
- *the socio-economic diagnosis studies that were prepared for each of the MWC sites, as well as the other thematic site diagnosis documents, studies and reports.*

Second, the authors have reviewed and made mention of some general reference documents, which include:

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World Bank ICDP site
http://lnweb18.worldbank.org/ESSD/envext.nsf/48ByDocName/ToolsIntegratedConservationDevelopmentProjects

ICDP Lessons from UNDP Vietnam
http://www.undp.org.vn/undp/docs/2000/icdp/index.htm

ANNEX 1. Background Note on ICDP

Extracts from reference documents

Definition

Integrated Conservation and Development Projects (ICDPs) aim to conserve biodiversity and environmental integrity in an area while also improving the quality of life for local residents. They are an important example of how sustainable development can be achieved – improving the lives of people whilst also improving the environment within which they live. *Proceedings of Integrated Conservation and Development Projects Lessons Learned Workshop. Ha Noi, Viet Nam, 12-13 June 2000*
While now in common usage, the acronym ICDP (also referred to as ICADs in Asia) originated in the People and Parks report by Wells, Brandon, and Hannah (1992). A decade ago the promotion of development activities in conservation projects was a novel approach within the conservation community. Today, this approach is increasingly accepted worldwide and lies squarely within the mainstream of conservation work. *Designing Integrated Conservation and Development Projects, Revised Edition* *Michael Brown and Barbara Wyckoff-Baird. © 1992, 1994, 1995 by the Biodiversity Support Program.*
The first ICDPs began in the early 1980s in the Caribbean and Africa.

1) **Extract from presentation by Sejal Worah 'evolution of the ICDP approach'**
Proceedings of Integrated Conservation and Development Projects Lessons Learned Workshop. Ha Noi, Viet Nam, 12-13 June 2000

Table 1: Evolution of the ICDP Approach – Underlying Assumptions and Related Activities and Lessons Learned

Overall Assumptions	**"Typical" Activities**	**Lessons Learned**
When the ICDP approach was in its early stage of development, the prevalent idea was that... unless the basic needs of people living in and around biodiversity-rich areas can be met, they will not support (or will be hostile to) conservation efforts.	"Social development" activities such as building of roads, water supply, schools, health centres, etc.	Á Passive beneficiaries Á Lack of ownership Á Input intensive Á Unsustainable Á Conservation links unclear or non-existent
However, ICDP projects designed accordingly were not working well, so new ideas emerged that… impacts of local communities on biodiversity can be mitigated by providing them with alternatives to natural resources-dependent lifestyles.	"Alternative livelihood" development such as agroforestry, weaving, bee-keeping, mushroom, vegetable farming, etc.	Á Conservation-dev. links weak/not clearly addressed Á Loss of traditional knowledge/ Á management Á De-linking from resources Á weakens interest Á "D" failure- limited experience
Thus further ideas were developed that… local communities can use natural resources "wisely" if the "link" between conservation of biodiversity and improved livelihoods is "clear".	"Value added" to natural resources that are harvested sustainably such as forest bee-keeping, NTFP collection, marketing & eco-tourism	Á Policy/legal impediments Á (access/tenure) Á Inadequate information on biodiversity/impacts Á Benefits-sharing mechanism not adequate Á Internal conflicts

Later on the ownership aspect became more explicit that… communities will act to conserve resources if they have a "stake" in decision-making about the use and management of the resources	Access and benefits sharing, multiple use zones, participatory planning and management (usually limited to specific areas/resources)	Á Policy/legal impediments (access/tenure) Á Weak processes/limited Á experience Á External forces/threats not addressed Á "Stake" too limited to be of long-term interest

2) **Designing Integrated Conservation and Development Projects, Revised Edition**
Michael Brown and Barbara Wyckoff-Baird

Conservationists and development planners increasingly recognize that efforts to conserve biological diversity (biodiversity) in developing countries will not succeed in the long term unless local people perceive those efforts as serving their economic and cultural interests. With a dual goal of improving the management of natural resources and the quality of life of people, integrated conservation and development projects (ICDPs) offer new alternatives that, if properly implemented, could be successful at conserving wildlands and their biodiversity. ICDPs may offer a means of balancing the needs of local people, the environment, and future generations. Integrated conservation and development projects are actually experiments using new methodologies in conservation and sustainable development. As such, they are not based on a body of tested knowledge, but rather are the building blocks of theory and future efforts .
An essential element in the design of every ICDP is the consideration of the *linkage* between the conservation and development objectives. All material benefits of a project must be clearly tied to its conservation actions (Owe n - Smith and Jacobsohn, 1988). Local project participants must perceive development activities as incentives for sustainable management of the resources, the ultimate goal of the project . ICDPs must offer viable, ecologically sound development alternatives, particularly when the conservation activity requires the alteration of existing extraction or production activities. The first step in addressing linkages is to consider where the conservation and economic development goals intersect. When this intersection occurs, as is optimum, it is possible to effectively introduce development interventions that will result in conservation and wise use of the natural resources, provided several other factors (e.g. security of tenure, favorable policies, markets, etc.) are in place. If producers view the future of their livelihoods as a function of their present use of the renewable resources, they are likely to adopt more sustainable methods.

3) What Activities Should be Funded in an ICDP?

"…by the accepted definition of ICDPs…..almost all investments and activities in an ICDP project should be aimed at biodiversity conservation. Even when investments are made in activities designed to promote the economic and social well-being of the local people, they can only be justified as an ICDP (or use biodiversity conservation funding) if the ultimate goal of these investments is conservation with clear links between these activities and the well-being of the protected area. This does not mean general community investments are excluded but just that activities with indirect links need to be carefully selected with a system in place ensuring that they do indeed enhance biodiversity."

Sanjayan M.A., Shen S., Jansen M., 1997. Experiences with Integrated-Conservation Development Projects in Asia, The World Bank, Washington D.C.
http://wwwds.worldbank.org/servlet/WDSContentServer/WDSP/IB/1997/10/01/000009265_3971201161422/Rendered/PDF/multi_page.pdf