

Management Plan

Vjose-Narta Landscape Protected Area

June 2005

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ACRONYMS

ASCI	Areas of Special Conservation Interest
AULEDA	Aulona Local Economic Development Agency
BIO SAP	Biodiversity-Strategic Action Plan for Marine and Coastal Biodiversity
CAMP	Coastal Area Management Program
CNPPA	Commission on National Parks and Protected Areas
CTAAR	Council of Territorial Adjustment of the Albanian Republic
CZMP	Coastal Zone Management Plan
DCM	Decision of Council of Ministers
DFS	District Forest Service
ECNC	European Commission National Conservation
EECONET	European Ecological Network
EIA	Environmental Impact Assessment
FD	Fishery Directorate
GDFP	General Directorate of Forests and Pastures
GDP	Gross Domestic Product
GEF	Global Environmental Facility
GIS	Geographic Information System
GNP	Gross National Product
IFPR	Institute of Forests and Pastures Research
IHM	Institute of Hydrometeorology
IUCN	International Union for Conservation of Nature
LAC	Limits of Acceptable Change
LG	Local Government
LPA	Landscape Protected Area
METAP	Mediterranean Action Plan
MoAF	Ministry of Agriculture and Food
MoE	Ministry of Environment
MoLG	Ministry of Local Government
MoTA&T	Ministry of Territorial Adjustment and and Tourism
MP	Management Plan
NBSAP	National Biodiversity Strategy and Action Plan
NCTA	National Council of Territorial Adjustment
NGO	Non Governmental Organisation
PA	Protected Area
PEBLDS	Pan-European Biodiversity and Landscape Diversity Strategy
PEEN	Pan-European Ecological Network
PLPA	Proposed Landcape Protected Area
REA	Regional Environmental Agency
RFU	Regional Facilitation Unit
SB	State Budget
SPA	Specially Protected Areas

SPA/RAC	Specially Protected Areas/Regional Activity Center
ToR	Terms of References
UNDP	United Nations Development Program
UNEP	United Nations Environmental Program
VC	Visitor Centre
WTO	World Tourism Organisation

1. Introduction

1.1. Background

Compared with other parts of the country, Albania's coast is the most important and valuable in economical terms, both for its environment and development potentialities.

Economical and social liberalization of the country has caused a massive and uncontrolled migration of the people towards the coast, and hence an increase of the human pressure and demand on marine and coastal resources. Consequently, threats to marine and coastal biodiversity are evident and becoming more and more significant. Integrated Management of the Coastal Zone and the Action Plan for the Administration of the Coastal Zone should be considered a high priority for Albania in order to ensure a sustainable use of the marine and coastal natural resources, protection of biodiversity and creation of a legal and institutional base for the implementation of the sustainable development strategies.

As a contracting Party to many international conventions, such as Barcelona Convention, Ramsar Convention, Biodiversity Convention, and Bern Convention, Albania is committed to create an effective system for the administration of its coast. An important part of this system is the preparation of management plans for areas of particular conservation concern.

The wetland complex of Vjose-Narta has been highly evaluated for its natural and biodiversity resources by numerous national and international documents such as BIO SAP National Report (2002), NBSAP (1999), CAMP (1996), CZMAP (1996), and the report on Activity 7.2.4 "Specially Protected Areas and implementation of the SPA Protocol" for Albania (SPA/RAC, UNEP/MAP, 1996).

Based on such values, the site has been selected as one of the priority sites of the regional MEDWET Coast project. Under this framework, Vjose-Narta Wetland Complex has been subject of various activities aiming the sustainable management of biological diversity through the development of adequate legal and regulatory framework, the creation of institutional organizations adapted to the complexity of the issues at stake, capacity-building and the development of an exchange network.

The Management Plan is an important step in the fulfilment of MedWetCoast objectives because it will give a clear idea in attaining the conservation and sustainable use of natural and biological resources of Vjose-Narta Wetland Complex.

1.2. Summary Description

The Management Plan provides a framework to conserve and enhance the special qualities of the complex so that they can be enjoyed by the present and future generations. In each step, MP seeks to engage the local communities in order that those communities could be part of their own decision-making and could contribute in the sustainable development of the wetland complex. The MP recognises that apart from governmental institutions, the resident community, local businesses, outside agencies, NGOs, voluntary bodies and individuals will have very significant parts to play in the successful implementation of the Plan. The management urges the creation of Landscape Protected Area along with its management structures: the Management Board and the PA Administration. The role of those two structures will be crucial for the successful implementation of the MP. They have to work very closely with local communities since their commitment is a basic step to its success. It must also be widely accepted that successful conservation activities within the site can only be achieved with the local communities support. They and the PA Administration must work together to achieve the Management Plans aims and objectives.

This MP provides the opportunity to:

- Take stock of the changes affecting the Site, especially in the light of the major political and social changes that have occurred in recent years.
- To assess the implications of designating the Vjose-Narta wetland complex as Landscape Protected Area.
- To develop a clear vision of the Site that we wish to pass on to future generations.
- To provide a framework of policies and actions that will support that vision.
- To improve collaboration and consultation with the wide range of national and international agencies and organizations that are committed to the conservation of protected areas and the biodiversity as a whole.

The proposed MP adopts an integrated approach through using the wide range of protection tools based upon the IUCN category system. This IUCN category system is firmly embedded into the Albanian law 'For the Protected Areas' 2002.

Considerations for adopting the integrated approach have been based upon:

- ❖ The need for specific levels of protection based upon the importance of the particular habitat, species or feature to be conserved;
- ❖ Maintaining the needs of the PPA resident population, by integrating local people in the conservation agenda through the support of the lifestyle and economic activities which are in harmony with nature and biodiversity;
- ❖ Maintaining and managing the formal recreation activities which have developed in certain area locations in a way which is appropriate to the LPA designation.
- ❖ Managing and controlling the increasing development pressures being placed inside the boundaries of the PPA.

Furthermore, the MP recommends a zoning system for the newly designated Landscape Protected Area (IUCN Category VI). Zoning will ensure the safeguard of some particular locations well-known for their high concentration of biodiversity and natural values. The total area of the Landscape Protected Area of Vjose-Narta is estimated at some 19,500 hectares.

1.3. European Policy Context

The growth in public awareness and concern for biological and landscape diversity issues created the background for the development of *Pan-European Biological and Landscape Diversity Strategy* (Council of Europe *et al.* 1996). This Strategy represents a European response to support implementation of the Convention on Biological Diversity by promoting a co-ordinating and unifying framework for strengthening and building on numerous existing policy initiatives and programs (ECNC 1996, Council of Europe 1998 (Annex 3)). The Strategy is intended to operate within a 20-year period, establishing a broad and consistent framework for achieving its aims and objectives (Box 1), and providing guiding principles for action.

Box. 1 Aims and Objectives of the Pan-European Biological and Landscape Diversity Strategy¹

Aims

- Threats to biological and landscape diversity are reduced substantially and, where possible, removed
- Resilience of biological and landscape diversity is increased
- Ecological coherence as a whole is strengthened
- Full public involvement in conservation of biological and landscape diversity is assured.

Objectives

- Conservation, enhancement and restoration of key eco-systems, habitats, species and features of the landscape through the creation and effective management of the Pan-European Ecological Network
- Sustainable management and use of positive potential biological and landscape diversity through making optimum use of the social and economic opportunities on a national, regional and local level
- Integration of biological and landscape diversity conservation and sustainable use objectives into all sectors managing or affecting such diversity
- Improved information on, and awareness of, biological and landscape diversity issues, and increased public participation in actions to conserve and enhance such diversity
- Improved understanding of the state of Pan-European biological and landscape diversity and the processes that render it sustainable
- Assurance of adequate financial means.

The Six Action Themes of the PEBLDS action plan are:

- ◆ Enhancing implementation of the Convention on Biological Diversity through the Pan-European Strategy process;
- ◆ Integrating biological and landscape diversity considerations into sectoral policies;
- ◆ Building up environmental development capacity in the Central and Eastern Europe and in the Newly Independent States;
- ◆ Providing information and enhancing communication;
- ◆ Developing the Pan-European Ecological Network;
- ◆ Carrying out reviews and assessments, and monitoring, reporting and funding of the Pan-European Strategy.

1.4. Pan European Ecological Network

The Pan-European Ecological Network (PEEN) is a physical network through which eco-systems, habitats, species, landscapes and other natural features of Pan-European importance are conserved and also a co-ordinating mechanism through which the partners in the Strategy can develop and implement co-operative actions. A characteristic feature of such a network is its function to conserve larger natural areas and to prevent fragmentation or to restore connectivity.

¹ Source: Council of Europe (1998).

The various initiatives that have been developed since 1991 are crucial steps in the thinking and developing process.

PEEN was endorsed in Sofia in 1995 and additionally in 1996 the Council of Europe initiated establishment of the Emerald Network under the Bern Convention (Council of Europe 1979b).

The PEEN will consist of:

- ◆ core areas to conserve eco-systems, habitats, species and landscapes
- ◆ biological corridors to improve the coherence of natural systems
- ◆ restoration areas to repair or restore damaged elements of eco-systems, habitats and landscapes of European importance and
- ◆ buffer zones to support and protect the network from adverse external influences.

Four priority actions have been designed to ensure the implementation of the physical network:

1. elaboration of criteria to be used for identifying the network of core areas, corridors, restoration areas and buffer zones
2. selection of eco-systems, habitat types, species and landscapes of Pan-European importance
3. identification of the specific sites and corridors to be conserved and, where appropriate, enhanced or restored and
4. preparation of the guidelines ensuring that actions taken to create the Network are as consistent and effective as possible.

1.5. The Emerald Network

The establishment of the Emerald Network of Areas of Special Conservation Interest (ASCI) to Europe supports the implementation of the *Convention on the Conservation of European Wildlife and Natural Habitats* known as the Bern Convention 1979 (Council of Europe 1997).

In Recommendation No. 16 (1989) "*on Areas of Special Conservation Interest*" (ASCIs), the Standing Committee to the Bern Convention recommended Parties to "*take steps to designate Areas of Special Conservation Interest to ensure that the necessary and appropriate conservation measures are taken for each area situated within their territory*"

By January 1996 a sufficient number of countries from Central and Eastern Europe had become Parties to the Convention and were requesting the development of the ASCI network. Noting that Natura 2000 was well advanced, the Standing Committee, realised this wish by resolving to

"set up a network (Emerald Network) which would include the Areas of Special Conservation Interest designated following its Recommendation No. 16" (Resolution No. 3 (1996); and furthermore "encouraged Contracting Parties and observer states to designate ASCIs and to notify them to the Secretariat".

The implementation phase of the EMERALD Network started in 1999 with pilot projects in Bulgaria, Russian Federation, Slovakia, Slovenia and Turkey.

Albania signed the *Convention on the Conservation of European Wildlife and Natural Habitats (Bern, 1979)* on 31st of October 1995 and ratified it on 13th of January 1999. In 2001 the Council of Europe invited Albania to start the EMERALD Network pilot project. The project started in April 2002, according to the contract signed in 25th of February 2002 between the Ministry of the Environment of Albania and the Council of Europe.

Six pilot sites were selected as ASCIs to be included in the EMERALD Network. Those sites are: Llogora National Park, Tomorri National Park, Divjaka National Park, Butrinti National Park, Prespa National Park and Allamani area (proposed as a Strict Nature Reserve).

Overall objective and outcomes of EMERALD Pilot Project in Albania

The overall objective of the EMERALD Network pilot projects was to develop a pilot database, containing the fair proportion of the ASCIs and submit a proposal for the selected sites designation to the Standing Committee of the Bern Convention. The pilot projects phase is only a starting point that lays a basis for the development of EMERALD Network at the national level.

The main outcomes of the EMERALD Network pilot phase in Albania were the followings:

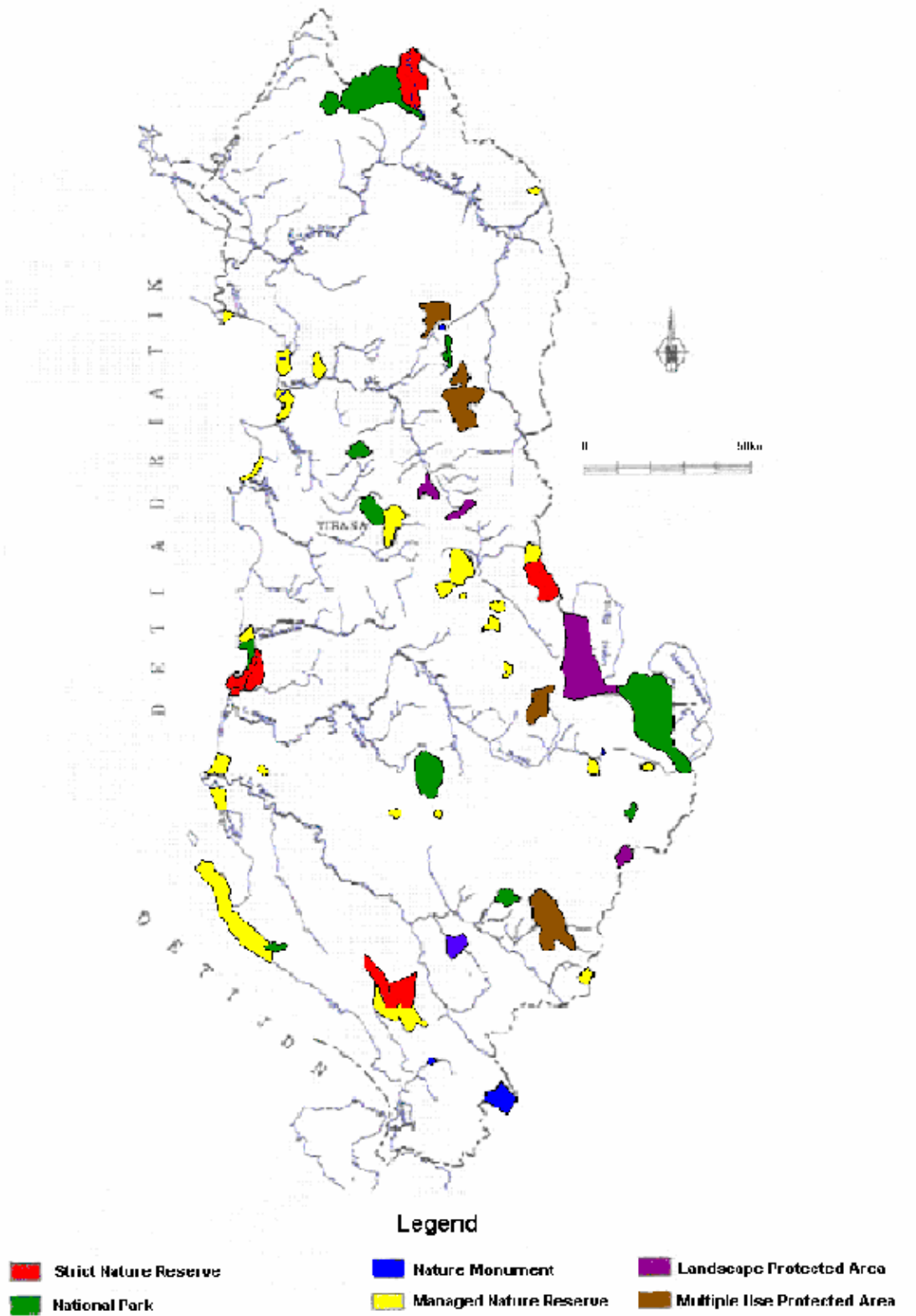
- Methodology for building up the EMERALD Network.
- Installation of the EMERALD software. The software provides the tools to convert the data direct from CORINE Biotopes datafiles to EMERALD database.
- Completed EMARALD database for the six selected CORINE sites to be designated as ASCIs and included in the EMERALD Network.

Albania, after the implementation of the pilot phase of the EMERALD Network has a green light to proceed further developing of the national list of potential ASCIs. Vjose-Narta wetland complex is already a potential ASCI to be part of the EMERALD Network.

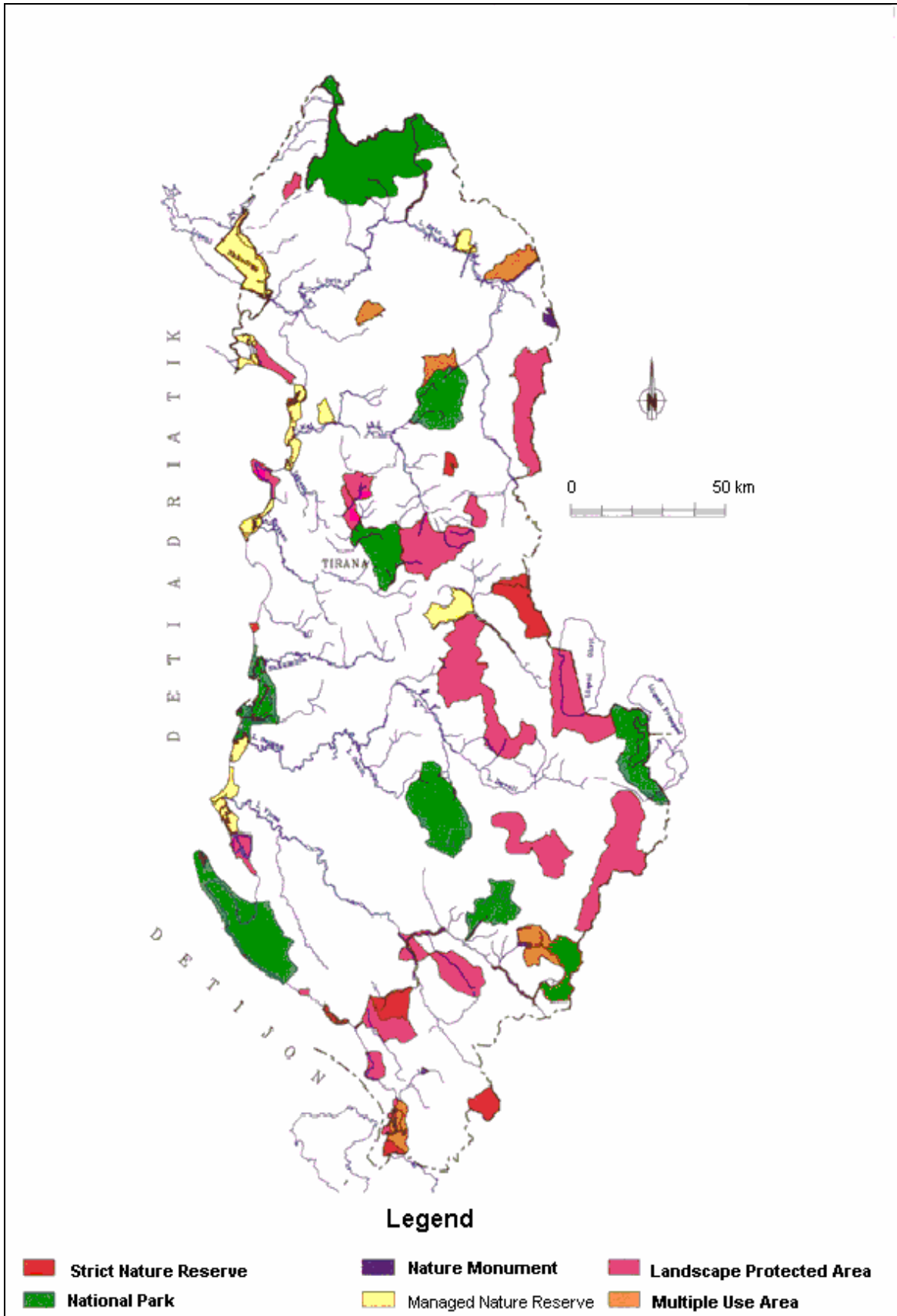
1.6. National Context for Nature Conservation

The existing network of protected areas in Albania currently is covering an area of circa 165,455 hectares and equal to 5.8% of the total land cover. According to the National Biodiversity Strategy and Action Plan this area is set to expand to 25% of Albanian land territory by 2020 and plans to achieve this have been set in place.

Map 1. Existing Protected Areas in Albania



Map 2. Proposed Protected Areas in Albania



In November 1999 the National Biodiversity Strategy and Action Plan (NBSAP) was published. This document provides the main policy framework and action plan for the conservation of biodiversity, a fundamental component of the plan are proposals for the development of Albania's protected area network that will serve as a basis for the building up the country's ecological network. A map of the existing and proposed protected area network is produced in the NBSAP.

In 2002 the Albanian Parliament approved two important laws that together have created a new legal structure for protected areas. These are law no. 8934 dated 05.09.2002 "For the Protection of Environment" which is based within the concept of sustainable development and law no. 8906 dated 06.06.2002, "For the Protected Areas". This law lays down the framework for the proclamation, administration, management and sustainable use of protected zones and natural biological resources. The law also provides the basis for the development and mitigation of 'environmental tourism' and other economic benefits and for the provision of information and education to the general public.

The primary goal of the law "For the Protected Areas" is to provide special protection of the most important components of natural reserves, biodiversity and in general nature, through the implementation of a protected areas network based on the IUCN categories system (Box XXX). The law defines the priorities and strategic objectives for the management of each category of protected areas.

Box xxx: IUCN/CNPPA Management Categories for Protected Areas ²

I Strict protection (i.e. Strict Nature Reserve / Wilderness Area)

Area of land and/or sea possessing some outstanding or representative eco-systems, geological or physiological features and/or species, available primarily for scientific research and/or environmental monitoring.

II Eco-system conservation and recreation (i.e. NP)

Natural area of land and/or sea, designated to (a) protect the ecological integrity of one or more eco-systems for present and future generations, (b) exclude exploitation or occupation inimical to the purposes of designation of the area and (c) provide a foundation for spiritual, scientific, educational, recreational and visitor opportunities, all of which must be environmentally and culturally compatible.

III Conservation of natural features (i.e. Natural Monument)

Area containing one, or more, specific natural or natural/cultural features which is of outstanding or unique value because of its inherent rarity, representative or aesthetic qualities or cultural significance.

IV Conservation through active management (i.e. Habitat/Species Management Area)

Area of land and/or sea subject to active intervention for management purposes so as to ensure the maintenance of habitats and/or to meet the requirements of specific species.

V Landscape/seascape conservation and recreation (i.e. Protected Landscape/Seascape)

Area of land, with coast and sea as appropriate, where the interaction of people and nature over time has produced an area of distinct character with significant aesthetic, ecological and/or cultural value, and often with high biological diversity. Safeguarding the integrity of this traditional interaction is vital to the protection, maintenance and evolution of such an area.

VI Sustainable use of natural eco-systems (i.e. Managed Resource Protected Area)

Area containing predominantly unmodified natural systems, managed to ensure long term protection and maintenance of biological diversity, while providing at the same time a sustainable flow of natural products and services to meet community needs.

SOURCE: IUCN (1994b)

The Strategy of the Forests and Pastures published in November 2003 supports the overall aims of the policy framework for nature conservation by setting its main objectives :

- ◆ Conservation and rehabilitation of forest and pastures eco-systems;
- ◆ Sustainable management of forest and pasture resources,
- ◆ Fair and equitable sharing of benefits arising out from the utilization of forest and pasture resources
- ◆ Restoration of environmental and ecological integrity of the forests and pastures in Albania.

Based on the law: “For the protection of Environment” the local governments compile action plans conforming to the priorities and requests of national environmental strategies. During the

² Categories agreed at the 19th Session of the IUCN General Assembly, Buenos Aires, January 1994.

composition and the approbation of environmental plans and programs, local governments engage the public and NGOs.

Vjose-Narta Wetland Complex is one of the most important sites in Albania, destined for the development of eco-tourism and recreation. Recently, several projects and master plans have been designed for the tourism development of the area. Such important activities are undertaken in order to increase the tourist values of the Site.

1.7. Regulatory Framework for the Management of PAs

PAs in Albania have been for the most part considered as forest areas and they have historically been administered by the GDFP within the Ministry of Agriculture and Forestry. Within the law nr 8906 /2002 “For the Protected Areas”, the Ministry of Environment has been given the primary supervisory role for protected areas in Albania and is responsible for:

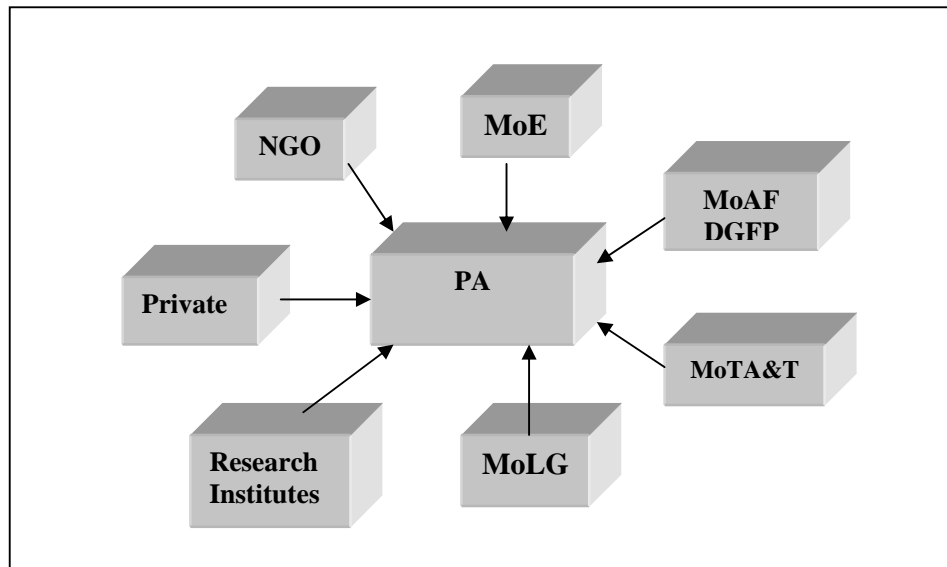
- Proposing areas to be protected.
- Preparing the legal and managerial procedures to propose and declare a protected area.
- Compile management plans for protected areas.
- On going monitoring / regulation of management.

The law “For the Protected Areas” states that whilst the primary administrative role lies with the Ministry of Environment and GDFP, the interests of other Government Ministries have to be taken into account.

Working in close collaboration with the Ministry of Environment, the responsibility for the management of protected areas (classes II and IV) has been vested in the GDFP under the D.C.M. no 266 dated 24.04.03.

Provision was made in the law ‘On Protected Areas’ 2002 that each PA would have a Management Committee including of a range of stakeholder groups to oversee the management and monitoring of the Park.

Figure 1. Stakeholder Groups and the NP



1.9 Using the Plan

The Management Plan has to be adopted and used firstly by the Government of Albania through its Ministries and government agencies who are responsible for the development of protected area policy and policy implementation at national, regional and local level. Secondly, the MP is the primary guidance document for the Management Committee of the site. It provides the Committee with a detailed framework in the decision making process. Thirdly, the MP is the working plan for the site administration who manages the area on a day to day basis under the guidance of the Management Committee and with the support of various land managers, community leaders, conservation NGOs etc. Its success may be assured if all stakeholders support the plan and work together in partnership to implement the policies and actions laid out in it.

This plan contains a framework of planning policies for the sustainable management of the Vjose-Narta Wetland Complex in order to protect and enhance the ecological attributes of the area, whilst encouraging improvement of social conditions through sustainable land use activities and related tertiary activities.

Ultimately the value of this MP will only be realized if the managers concerned refer to it on a daily basis and promote its contents to the overall spectrum of landowners, stakeholders and user groups who are active in the plan area.

1.10. Plan Review

Management plans are not static instruments, but change with prevailing economic and technological conditions. It is therefore recommended that the MP is appraised every year in order that new information and opportunities can be taken into account. Considering the intensive changes (*described below*) in Vjose-Narta area it is thought that a first full plan review has to be undertaken after three years. Where necessary, amendments to the plan should be made as needed during this time period, but these should not affect the overall planning aims and objectives, and where necessary, a public consultation process should be implemented before a change is made.

1.11 Public Consultation

This Management Plan was prepared with the full co-operation of the residents of the site, local businesses and other interested bodies and persons. The planning approach was made using established participatory planning methods. A number of consultations with various stakeholders and user-groups of the site were planned and organized. Their views and concerns regarding the designation and management of site were collected and shared, and their contribution was integrated in the current Management Plan document.

It is considered of critical importance that the inhabitants and all local user groups of the site are recognized as important stakeholders at all times and are included in the decision making process, for without the overall support of the people who live inside the area the implementation of this MP will be put in risk.

Part 1. Site description

2.1. General Information

2.1.1. Site location and boundaries

Country : Albania

District : Vlora

Commune: Novosela Commune & Qendra Commune

Narta Wetland Site: 40°35'N and 19°23'E

Vjosa-Narta Landscape Protected Area (IV IUCN Category) is a wetland complex located in Vlora District. The Site covers an area of 19,412 hectares. The altitude of the wetland site varies between 0 - 246 m. The highest elevation is reached between Hoshtima and Llakatundi villages.

The Protected AreaIt comprises land from two communes: Qendra Commune in the south and Novosela Commune in the north. The project area includes 18 villages (Zverrnec, Narte, Panaja, Oshtime, Kerkove, Bestrove, Aliban, Poro, Novosele, Mifol, Cerkovine, Skrofotine, Fitore, Trevllazer, Akerni, Bishan, Delisuf, Dellinje) with a total population of 24,000 inhabitants. The nearest town is Vlora, one of the largest cities of Albania, with 106,000 inhabitants.

The main habitats of Narta include wetlands, agricultural land, forests and urban areas (Table XXX).

Table . Land use in Vjose-Narte Landscape Protected Area

Main Habitats	Surface (in ha)
Wetlands	10,210
Forests	1,167
Agricultural land	7,798
Urban areas	277
Airport	286
Total	19738 ha

Wetland habitats occupy 37 % of the total surface. The other main habitat (circa 33%) is agricultural land. Forests compose the third main habitat covering only 6% of the territory. The core wetland is Narta lagoon, a shallow marshland of 2,900 hectares surrounded by hills in the southern and western part, salinas and agriculture land in the north, and two shallow wetlands in the north-west.

Map 3. The Landscape Protected Area of Vjose-Narta

The boundaries of Narta Wetland Complex (see map 3) are as follows:

North – Vjosa River until Mifoli village

East – The line linking the peaks of “Mishikarta”, “Cecai”, “Ciplaku”, “Kisha”, “Mutreva” and “Babica e Vogel”.

South – the line linking the village of Narta with the Zverrneci village (Pusi i Mezinit – Fusha e Kripores – Pylli i Sodes)

West – Adriatic Sea (Vjosa -Treporti).

The main subarea inside the complex are: Narta lagoon and saltpans, Pisha-Poro Reserve, Kallenga lagoons and Panaja hills

Narta lagoon

Narta is the main water surface of the area. The northern part of it has been transformed in saltpans that cover now a surface of 1,500 ha. The saltpans and the lagoon are divided by a dike of 13.8 km².

Narta Lagoon (2,900 ha) is separated from the sea through a sandy bar, covered mostly by Pine forest. The lagoon communicates with the sea through two artificial channels. The southern channel is 200 m long, 6 - 48 m wide and 0.2 -1.8 m deep. The northern channel is 800 m long, 11-60 m wide and 0.3-0.5 m deep. The channel discharge is about 2.2 – 4.3 m³/s. Both channels are often silted due to sedimentation

The lagoon has an average depth of 1.26 m. The highest level is 2.08 m while the lowest 1.08 m. The water regime is largely influenced by winds. South winds reduce the level by 20-25 cm while north winds increase the level with 15-20 cm.

The lagoon is hypersaline especially during summer with salinity up to 78.0 ‰. In winter salinity decreases to 36 ‰ and is similar to the Adriatic Sea. The eastern part of the lagoon which is less influenced by sea water, shows high oscillations of salinity.

Lagoon waters are slightly alkaline (pH 8.4-8.8). The content of dissolved oxygen oscillates between 5-10 mg/l.

When the amount of entering freshwater is very reduced (more specifically in summer) and when the communication channels are blocked, than circa 1,000 ha become dry while another surface of 800 ha is less than 10 cm deep. This drought is very harmful for the lagoon biota.

Pisha-Poro

Pishe-Poro, a former Nature Managed Reserve represents very well developed sand dunes (up to 6-8 m high) as well as psamophyte, hygrophyte and halophyte vegetation. The bulk of the reserve is covered by Mediterranean pine forest.

A part of sand dunes is destroyed due to sand extraction for construction purposes.

Despite the upper-mentioned damages the Nature Managed Reserve is still in good shape. Its degraded parts could well recover if management interventions are undertaken.

Kallenga

Kallenga is a shallow coastal lagoon of 450 ha. It is artificially linked with the sea through a communication channel that has been opened recently. It has been used for fishing with nets while recently a fishtrap at the communication channel has been constructed.

Panaja Hills

Panaja hills cover the south and western part of the complex. The highest peak is about 246 m and it is located between Trevllazeri and Llakatundi. The former Mediterranean maquis and oak forest has been replaced nowadays by oliveyards.

Salinas

Includes the former northern part of Narta lagoon transformed in Salinas in the early 1950s'. The actual surface is about 1,400 hectares. It is composed by many shallow ponds complimented with islets and dikes that make the area particularly interesting for nesting waterbirds.

Akernia plain

It is situated north of Narta lagoon and saltpans. Formerly a marshland, the plain is now replaced by agricultural land. Marshlands were drained and Vjosa River was diverted and diked. The land was used for crop production. During communist times, an irrigation and drainage network was still in place.

After the 90' the irrigation and drainage network was partly destroyed. A large amount of the agricultural land is either abandoned or used as pastureland.

2.1.2. Legal and land tenure context

2.1.2.1. Land tenure status

The majority of land, circa 68%, is under state ownership. The remaining part is private. The state ownership includes sandy beaches, forest and pastures, wetlands (lagoons, small reservoirs, rivers, etc), salt pans, major part of arable land, airport etc.

Private land includes arable land comprising oliveyards, vineyards, fruit trees as well as residences

2.1.2.2. Rights and servitudes

Different institutions are directly implicated in the territory of the wetland site. They belong to Central Government, Local Government, Regional authorities, NGOs, Development Agencies, Local users etc. A detailed overlook on their rights and servitudes is presented in Table ..., while a more general overview is given in the following.

A. Central Government

The Ministry of Agriculture and Food (MoAF) is the main executing authority in the site, through Directorate General for Forests and Pastures (DGFP) and its District Forest Service (DFS), Fishery Directorate (FD), Water Directorate (WD) and Agriculture and Food Directorate (AFD). DGFP and DFS is the administrator of Forest and Pasture resources, including Nature Managed Reserve. They issue licences for forest harvesting and pasture use. FD is responsible for administration of fishery activities, and issues licenses for fishery and aquaculture activities. WD is responsible for administration of water resources used for irrigation and issues licences to water user associations to use those resources for irrigation purposes. AFD is responsible for agricultural politics in the area.

Ministry of Territory Adjustment and Tourism (MoTA&T) is responsible for preparing Master Plans for any physical or territorial planning, including Urban and Tourism development. These Plans are approved by the **Council of Territorial Adjustment of Albanian Republic (CTAAR)**. MoTA&T issues licenses to Tourism operators in case they want to build up tourism infrastructure and facilities in areas identified for tourism development. The coastal area from

Vjosa to Zverrneci has been identified as priority zone for tourism development by the newly approved National Strategy for Tourism Development.

Ministry of Environment (MoE) issues and supervises environmental permissions or licenses to various economical activities (including mining, tourism, transport) that do have their impacts on environment.

Ministry of Defense exerts its rights over a small territory (considered as a future military airport). For the moment the area is fenced and guarded by military forces.

B. Local Government

Local authorities (Qendra and Novosela Commune) still do not perceive themselves at the position to protect and to have a real influence in the area. They complain about lack of funds and competencies to influence the resource use of the area. General Directorate of Forestry and Pastures, Directorates of Fishing, and Directorate of Waters as central government branches were mentioned by them as the main stakeholders influencing most of the development in the area.

However, municipality and commune can influence licensing of all activities under their jurisdiction. In addition despite the fact that lagoons and forests are not under communes and municipality administration, they are asked to exert their authority and influence for solving many problems or play an intermediary role with the communities living nearby. As such the communes of Qender and Novesela can play an important role through putting pressure on illegal activities and people trying to break the law.

Based on the Law on Organization and Functioning of Local Government (2000) extensive rights are reserved to the local level. However, the decentralization is still far from being a reality especially in small communes as Qendra and Novesela. According to the above mentioned law each local government has full discretion to exercise initiatives in the interest of the local community to any matter which is not exclusively granted by law to any other government organ. The communes may exercise its powers by issuing decrees and ordinances. In addition, it is extremely important that within the framework of the MedWetCoast project, the administrative units in the project area are assisted to explore all possibilities created by the new law in order to make the best use of their rights as written below:

Right of governance: Local governments can create administrative structures to carry out their functions and exercise powers; establish economic units and other institutions under their authority; create committees, boards, commissions as it deems necessary for exercising specific functions; create any administrative-territorial sub-division within its jurisdiction to perform its governing functions.

Property rights: Local governments may exercise property rights, including the right to purchase, sell or rent its movable and immovable property or use its property;

Right to fiscal autonomy: Local governments may obtain revenues and make expenditures related to the execution of their functions (this is specifically important in respect of using “entrance fees” or any other local taxes in favor of local development).

Economic development rights: Municipalities and communes have the right to undertake any initiative for economic development in the interest of their residents, provided that these activities do not contradict the fundamental government policies.

Right of collaboration: To carry out specific functions in the benefit of their inhabitants, two or more municipalities or communes may exercise any competence given to them by law, through implementation of mutual agreements or contracts, delegation of specific competencies to one or the other, or contracting a third party.

Rights as a juridical person: Local governments are juridical persons and may exercise all the rights set forth in the Civil Code of the Republic of Albania.

C. Region

The project area is part of Vlora Region. In the present situation their main influence is expressed through formulating and approving development policies such as the plan for the tourism development and coast protection in the area of Vjosa River Delta and Narta Lagoon, as well as other land use and development general policies and guidelines. According to the Law on Organization and Functioning of Local Government, a Region is an administrative-territorial entity that comprises several municipalities that have geographical, traditional, economic and social ties and joint interests. The main function of Region as the second level of local government is to develop and implement regional policies and harmonize these with national policies at the regional level. The Region may perform any functions that could be assigned to it

by one or more communes or municipalities within the region, according to an agreement between the parties. However, much need to be done in this respect.

Region is the most appropriate level to explore the possibilities of cooperation between communes and municipalities in the project areas in respect to the management of environment resources and maintenance. According to the Law on Organization and Functioning of Local Government, for special purposes, such as water shade management or other natural resource management, as well as planning and development of transportation systems or any other reasons aiming the efficient provision of regional policies, the respective local governments have the right to reorganize the boundaries according to the interests serving the special purposes in the benefit of the local communities. In this case Joint Power Authorities could be established (Articles 8(5) and 14).

D. Prefecture

Prefecture controls legal conformity of the decisions taken the communes of Qendra and Novesela. The influence of the prefecture to the project is important especially related to issues such as illegal constructions, fires, flooding, or putting pressure on other institutions to increase control for reducing illegal activities.

E. Regional Associations & Users

1. Drainage and Water Boards

It is expected that this board will play an important role in administering drainage problems and distributing investment funds. In addition, through this board local communities have a higher influence in the decision-making process related to irrigation and drainage problems. They also appoint the director of Vlora Water Directorate a local branch of Water Directorate. The interest of this board is to secure users' rights, to obtain access to decision-making, to obtain access to credit, donations funds, government grants and new technologies, and to resolve conflicts and any obstacles to development.

One of the areas that could be positively influenced by this board is the maintenance of the drainage canals that furnish Narta Lagoon with fresh water. They can also influence the commitment of specific funds for the reconstruction and maintenance of these canals.

2. Pastures' and agricultural land Owners

They claim the land which currently lays in the project areas (pastures, agricultural land, or forests). In addition, they aim to benefit from the tourism development in Vlora region.

This group represents the interests of local population that perceive themselves to be excluded by the government from the benefits of the tourism development in Vlora Region. They also concern that if their areas will be classified as “special protected areas” (besides this of “priority area for tourism development”) restrictions imposed by central government will make very difficult the use of the natural resources by local population. Given this fact, efforts to involve this group in the project are crucial. In the present situation their influence is quite reduced, however, unless this group will be taken seriously their “informal” influence will heavily damage the environment. One of the areas where their influence is most evident is the “improvement of pastures” and the enlargement of the pasturing area through burning. These two informal activities were considered by experts as a very high risk environment hazard.

3. Vlora Hunters and Fishermen Association

The main problem for this association is the uncontrolled hunting and the decrease of migratory birds because of the exploitation of the temporary marshlands for fishing. Their main interest is to protect and rehabilitate the habitat for the normal life of the fauna in the area. In this respect they are interested to set e rules and to pursue stricter controls in order to reduce or stop illegal hunting and fishing. They are a very important player for the success of the project; however, their influence so far is quite reduced.

4. NGOs

At least six NGOs are involved in the project area : Narta Lagoon, Adriatic, Kristo Papajani, Mema Natyre, Local Fishermen, Hunters Association and Water use Association. The last three associations have a higher influence in the area since their activity has also a economic impact. The other NGOs exert their influence mostly through awareness raising activities; however, their field of activity is relatively reduced so far.

5. Development Agents

The importance of the stakeholders in this area ranges from very reduced importance (fish traders), to some importance (Vivaldi SHPK, tourist operators), moderate importance (Salinast, two fish farms at the communication channels, fish farm at former outlet of Vjosa, Llanaj “Agrobiznesi”, construction and consulting companies, priest of Zvernec and Orthodox church), and very important (shepherds, summer tourists in the area, unlicensed fishermen and hunters). The last subgroup is very important because their informal influence on the natural resources is

quite high while the degree of the influence they exert through formal institutions is very limited. This subgroup worth special attention to be considered while formulating management plans because almost all their interests are negatively affected by the project. There are other subgroups which one or more interests are going to be negatively affected, such as salt plant in Narta which will experience some limitations related to water extraction from the lagoon (some further exploration is needed in order to understand if this is for subsistence or maximizing commercial benefits); two fish farms that may lose some monopoly on the area; tourist operators in respect to the number of tourists in the area or fees they may need to pay; consulting and construction companies that want to increase the volume of constructions in the area; and the church that should install appropriate equipment in the camping areas.

Table . Principal stakeholders and their interests in relation to MedWetCoast project

Main Groups	Stakeholder groups	Interest at stake in relation to project
CENTRAL GOVERNMENT	Ministry of Environment	<ul style="list-style-type: none"> ▪ fulfill the obligations of international treaties ▪ prepare legislation ▪ set standards for sustainable development and monitor
	Regional Environment Agency	<ul style="list-style-type: none"> ▪ Monitor the environment quality
	Fishing Directorate	<ul style="list-style-type: none"> ▪ maintain the communication canals between the lagoon and the sea ▪ Fishing licenses
	General Directorate of Forestry and Pastures	<ul style="list-style-type: none"> ▪ maintain forests and pastures
	Directorate of Waters	<ul style="list-style-type: none"> ▪ maintain the drainage canals which furnish lagoon with fresh water
	Ministry of Territorial Adjustment and Tourism	<ul style="list-style-type: none"> ▪ administer the development process according to established targets
	Ministry of Defense	<ul style="list-style-type: none"> ▪ ensure security in the military areas
LOCAL GOVERNMENT Municipality and Communes are the first level of local government Regions are the second level of local government.	Communes of Qendra & Novesela	<ul style="list-style-type: none"> ▪ support initiatives in the interest of the local community ▪ issue decrees, ordinances and orders to support initiatives
	Vlora Region	<ul style="list-style-type: none"> ▪ develop and implement regional policies ▪ harmonize development at the regional level with national policies
	Vlora Prefecture	<ul style="list-style-type: none"> ▪ control legal conformity of the decisions taken by the municipality
REGIONAL ASSOCIATIONS & USERS	Drainage & Water Boards	<ul style="list-style-type: none"> ▪ coordinate drainage problems and investments ▪ participate in decision making ▪ reduce conflicts
	Pastures' and agricultural land Owners	<ul style="list-style-type: none"> ▪ claim land ownership ▪ improve pastures & increase pasturing area ▪ benefit from tourism development

	Hunters and Fishermen Association	<ul style="list-style-type: none"> ▪ stop hunting and fishing out of the hunting and fishing season ▪ limit unlicensed hunting and fishing ▪ improve the habitat of the area
DEVELOPMENT AGENTS / NGOs	NGOs <ul style="list-style-type: none"> ▪ Narta Lagoon, ▪ Adriatik, ▪ Kristo Papajani, ▪ Mema Natyre” 	<ul style="list-style-type: none"> ▪ community sensitization ▪ target the school level ▪ compete and implement projects
		<ul style="list-style-type: none"> ▪ community sensitization ▪ compete for projects
		<ul style="list-style-type: none"> ▪ community sensitization ▪ compete for projects
	Local Fishermen Association	<ul style="list-style-type: none"> ▪ promote rules to protect fauna ▪ equal rights to all licensed fisherman ▪ stop illegal fishing ▪ increase fish harvest
	Local Hunters Association	<ul style="list-style-type: none"> ▪ promote rules to protect fauna ▪ stop illegal hunting ▪ improve the habitat of the area
	Water user association in Novesela	<ul style="list-style-type: none"> ▪ Administer and coordinate water problems in the area
OTHER PRIVATE OR INDIVIDUAL USERS	Salt plant in Narta	<ul style="list-style-type: none"> ▪ use water from Narta lagoon with less cost (maximize profit) ▪ increase production
	Llanaj shpk “Agrobiznesi”	<ul style="list-style-type: none"> ▪ Maximize the use of land for agricultural purposes ▪ improve irrigation and drainage situation ▪ promote organic agriculture and improve land fertility through traditional farming ▪ increase variety of agricultural products in the area
	Fish farms at Narta lagoon communication channels	<ul style="list-style-type: none"> ▪ protect their own rights of fishing in Narta Lagoon
	Fish farms at Old Vjosa River	<ul style="list-style-type: none"> ▪ minimize the activity of other private companies (licensed or not) to operate in lagoon ▪ maintain communication channels ▪ continuously increase fish harvest ▪ protect fauna in the area ▪ use traditional fishing techniques
	Fisherman operating in Kallenga	<ul style="list-style-type: none"> ▪ connect temporary marshland with the see ▪ increase fishing harvest
	Tourist operators	<ul style="list-style-type: none"> ▪ continuously increase number of tourists in the area ▪ include Vlorë and Narta area in tour itineraries (promote local tourism)
	“Vivaldi” sh.p.k.	<ul style="list-style-type: none"> ▪ protect their own rights (for frogs) ▪ continuously increase harvest
	Architecture and urban design consulting & construction companies	<ul style="list-style-type: none"> ▪ design areas development plans ▪ increase the volume of construction in the area
	Zverrneci and the Orthodox church	<ul style="list-style-type: none"> ▪ increase their influence in the area ▪ organize summer camps and visits in the area
	Shepherds	<ul style="list-style-type: none"> ▪ improve pastures ▪ enlarge pasturing area
	Fish traders	<ul style="list-style-type: none"> ▪ sell products and maximize their profit

	Summer tourists	<ul style="list-style-type: none"> ▪ use the beach area for recreation ▪ use infrastructure and service facilities in the area (pollution)
	Unlicensed fishermen	<ul style="list-style-type: none"> ▪ maximize their profit without following common rules
	Unlicensed hunters	<ul style="list-style-type: none"> ▪ maximize their profit without following common rules
	Poor individuals	<ul style="list-style-type: none"> ▪ Tree cutting for heating ▪ Tree cutting for construction
	Other groups of inhabitants	<ul style="list-style-type: none"> ▪ Property claims (Pishe-Poro) ▪ Protect their lands from Vjosa erosion ▪ Benefit from the tourism development

2.1.2.3. Site legal status

The whole area has been designated in 2004 (Council of Ministers Decision Nr. 680, dt. 22/10/2004) as Landscape Protected Area. It covers a surface of 19,738 Ha..

Inside the Landscape Protected Area occur five Nature Monuments (Table X). Narta complex is also one of the major Important Bird Areas of Albania.

Table . Nationally Protected Areas in Vjose-Narta Complex

Nr.	Nature Monuments
1	Mifoli Platan
2	Mifoli Elms
3	Laguna Limopua
4	Dunat e Nartes
5	Zverrneci island (7 ha)

2.1.2.4. Other planning documents

Vjosa-Narta wetland complex is part of different proposals that are not necessarily complementary.

B. Industrial park

A proposal for the construction of an Industrial Park has been approved recently by CTAAR. It includes the construction of at least two Thermal Generation Facilities and numerous large oil deposits just south of Narta village. As it is, the industrial park represents a very high potential

risks for both social and natural environment. The Environmental Strategic Assessment has been avoided. The EIA has been conducted only for one of the Termo Power Station. According to the EIA study the planned facility meets all the international standards and will have a positive impact on the local economy without stressing the local infrastructure and services.

EIA on oil deposits has not been finished yet. The industrial park will certainly jeopardize the ecotourism perspective of the area and it will put it under high risk of pollution.

D. Urban Study

On 2003, an Urban Study has been approved by the Council of Territorial Adjustment of Vlora with the Decision Nr 6/2 on 10/10/2003. The same plan is now under discussion among governmental institutions that have to express their opinion on this study in future meetings of the Council of Territorial Adjustment of the Albanian Republic (CTAAR).

The study proposes:

- Two tourist resorts of about 10 ha each which will be the most significant intervention in the area (see fig. 1). The villas will be 1-2 stories high and the hotels 2-3 stories high. Other activities that will be included in the area are the following: bars, restaurants, night club, swimming pools, sports grounds, etc. – marked in figure 1 as the development area 1;
- Wooden houses / residential areas (1-2 stories high) – marked in figure 1 as the development area 2;
- Hotels located in dominant landscape areas (2-3 stories high);
- Service structures in the beach areas (temporary buildings near the seashore sand area);
- Sport and recreation area (horse riding, etc.) near Vjosa River;
- Agro-tourist centers near the agricultural land;
- Observation stations;
- Reception centers for visitors, picnic areas, etc.
- Anchoring for aquatic sports and tour boats.
- Potential airports in Vlora and Pishë-Poro

The study states that tourist development in the coastal area complies with the following four categories: A, areas where concentrated capacities are allowed; B, less concentrated capacities; C, massive recreation areas; D, tourist protected areas. The proposed development in the project area is in accordance with type B and D above. However, no reference is made to the source and legal status of these four categories; either is shown in the map the areas belonging to each category. In addition, the study states that the tourist development of Treport area is done in

accordance with the carrying capacity (type B); however, no further details are provided by the study. A summary of the main potential issues and risks rising from the development concept proposed by this study in regard to the environmental protection and conflicts with the MWC Project proposals is described in the second part of this report.

In case of approval, the Urban Study will certainly have a huge impact over nature conservation planning.

E. Coastal Zone Management Plan

Coastal Zone Management Plan (CZMP) was conducted in Albania as part of Coastal Area Management Programme of the Mediterranean Action Plan (MAP), United Nations Environmental Programme (UNEP), and Priority Actions Programme/Regional Activity Centre (PAP/RAC). The final document of this policy document was prepared in 1996 and submitted for endorsement to the Government of Albania. The overall goals of the CZMP are the following:

- ❖ to preserve ecological integrity through establishing ecological sustainable limits for resource use;
- ❖ to renew or rehabilitate damaged resources;
- ❖ to ensure that natural resources are equitable between generations;
- ❖ to encourage complementary rather than competitive activities;
- ❖ to preserve and promote social equity and introduce the participatory approach, and
- ❖ to provide a mechanism for capacity building and planning.

This CZMP had a focus on the central coast, that's the region of Durrresi-Vlora, and all sites of the MWC project in Albania has been identified as priority sites for biodiversity conservation, while the Orikumi lagoon as an Environmentally Sensitive Area (ESA).

Unfortunately, the CAMP/CZMP of Albania could not get endorsed on time by the Government of Albania due to unrest situation of 1996-1997 caused by the collapse of the pyramid schemes and lack of political will. Although there is a need for revision and updating of the CZMP, its strategic objectives and a number of recommended actions are still valid and need to be implemented. The Management Plan for Vjosa-Narta Wetland complex is based upon the strategic orientation of the CZMP.

2.1.3. Organization of the management

2.1.3.1. Legal and institutional framework

The functional jurisdiction over the wetland complex is divided between different institutions. Wetland sites are usually considered as a political/administrative unit rather than as an ecological one. The so-called management is done according to different sectorial politics.

Table . Institutions responsible for the management of Narta Wetland Complex

Sectors	Institutions
Forests and Pastures, Protected Areas	General Directorate of Forests and Pastures (Ministry of Agriculture and Food)
Arable land	Private owners, Ministry of Agriculture and Food
Fishing	General Directorate of Fisheries (Ministry of Agriculture and Food)
Tourism and Water Strategies	Ministry of Tourism and Territorial Adjustment
Environmental Legislation and Protected Areas	Ministry of Environment
Territorial Planning	Council of Territorial Adjustment (Vlora and Albania)
Waters	National Water Council, NUK
Archaeology, Monument conservation	Ministry of Culture, Youth and Sport (MCYS) Institute of Archaeology (Academy of Sciences) Institute of Monuments, (MCYS)
Salt production, Mining	Salt SHPA, Ministry of Economy

Different Albanian institutions are directly implicated in the activities concerning the actual administration of the wetland site. Forests and pastures are managed by the General Directorate of Forests and Pastures. Pasturing activity depends on the licensing from this same Directorate. Fishing is under the supervision of General Directorate of Fisheries who is also licencing fishing rights over water surfaces. Both institutions depend from the Ministry of Agriculture and Food.

The Ministry of Environment is the main public institution responsible for environmental protection and takes responsibility for protective legislation.

The National Tourism Agency is responsible for tourism strategies.

The highest consultative body at local level is the Council of Territorial Planning of Vlora District while the (KRT) while at national level is the Council of Territorial Planning of Albanian Republic chaired by the Prime Minister of Albania.

In fact, up to now, there is an absence of integrated management and lack of cooperation between different institutions. Despite the designation of Vjose-Narta in the network of Protected Areas, there is room for common planning development strategies.

2.1.3.2. Management structures

As mentioned before, actually there is no proper management structure over the project site of Narta.

Forest and pastures are managed by the Forestry Service of Vlora (GDFFP). Salinas are managed by Kripa SH.A (Ministry of Economy). Lagoon waters are managed by Fishery enterprises licensed by the Fishery Directorate.

As stated above, there is no proper communication among different sectors resulting in lack of integrated management.

So far there has been no management plan ever prepared for the area. This document is the first management plan for Narta. It has been prepared by a team of Experts working under the supervision of the PIU of MedWetCoast Project. The experts are members of different institutions that deal with different aspects of the site management.

The draft of the Management Plan will go through discussions with different local stakeholders, experts, RFU, PIU of MedWetCoast Project in Albania and officials from the Albanian Ministry of Environment.

After this first discussion, the Management Plan document will go through further debates with local communities of Vjosa-Narta in order to take their final input on the Management Plan. The inclusion of local stakeholders' input is considered as a very important step of Management Planning process in order to insure its future/successful implementation. Finally, the management plan has to be approved by the Ministry of Environment and the General Directorate of Forestry and Pastures.

2.1.3.3. Responsibilities and personnel

As explained earlier, the DGFP through its District Forest Service of Vlora (DFS) is responsible for the administration and management of protected areas. Forestry service is organized in two sectors: Nature Protection Sector and the Qendra Forestry Sector. Personnel is limited in number (two forest engineers and 6 forest technicians serving as rangers and about 10 other persons employed seasonally) and not well trained and qualified to conduct conservation management activities. They are trying just to protect the area from any damages caused to forest, but not able to execute other jobs, such as research and monitoring, data collection and information

management, public relation and education, accompanying visitors or tourist guide and so on. The forest personel is equipped with communication, transport means and logistics but a lot more is needed in order to improve their logistic and their role in the area.

A detailed Regulation for the administration of the designated area will be further defined in the future by the General Directorate of Forestry and Pastures in cooperation with MedWetCoast Project Offices and the Ministry of Environment.

The working plan of the Administrative body as well as the implementation of the Management Plan will be under the supervision of the Management Board of the designated area. Its structure, functions and responsibilities will be again defined by a Decision of the Council of Ministers. A draft regulation is presented in Annexe 1. The draft regulation specifies : (i) the functions and rights of the administration of the Protected Area, (ii) the administration structure, (iii) conservation activities and the (iv) sanctions.

2.1.3.4. Buildings (Administration)

Actually there are no administration facilities on the site. Only a former building that was used as a hidrological monitoring station is still in place but unfortunately not at all equiped and as a result not functional.

2.1.3.5. Management infrastructure

a. Roads

The automobilist road network in Vlora region has an extension of about 200 km. Its extension is favorable for the development of tourism, but its quality isn't very good. It is foreseen that in those roads may pass about 4,000 cars/day and in summer time, especially during the week-end, about 5000 cars/day. Transport between Vlora and Narta is carried out by busses.

b. Water supplies

Novosela commune and a part of Qendra Commune (Trevllazen, Panaja, Oshetima) are supplied by Novosela pumping station. The water is taken from 6 different wells with a capacity of 25 l/sec each. Qendra Commune is supplied from the springs of "Uji i Ftohte" through the station No. 4 with a capacity of 5 l/sec. It has running water for 24 hours.

Despite the high water resources, the water supply is still a concern in Novosela. Instead of the foreseen quota of 150 l/person, the actual furniture is only 90 l/person. Apparently the defficiency is due to ammortisation of the water distribution network, misuse, electric power

deficiency, etc. Renovation plans are already present. They will secure the 24 hours supply for the entire commune area.

c. Irrigation

The irrigation is based in waters from Vjosa river as well as water reservoirs (Panaja). The irrigation system of Novosela commune takes its waters from Vjosa River. The irrigation infrastructure consists in one water station based at Mifoli village bringing about 4000 l/sec. The final destination of this irrigation system is the agricultural land of Akernia and the fishery ponds of Narta (Gorrice). The irrigated land is today about 1,100 ha (Table xx).

Table . Irrigation capacity (in ha)

Communes	Potential capacity	Actual capacity	Factic irrigated land
Novosela	4290	3800	1104
Qendra	2755	1500	300

The agricultural land of Qendra commune is furnished by the artificial reservoir of Panaja with a capacity of 1.4 million m³ irrigating an area of 300 ha.

The factic irrigated land is much less than the station capacities. That difference is caused by the partial destruction and amortisation of the irrigating system.

d. Drainage

The site has several hydrostations and some channels of free discharge. The hydrostation of Vlora is located in the southern borders of the wetland complex. It drains a surface of 1000 ha. Its pumping capacity is about 16,000 l/sec. The water is discharged directly to the sea.

The hydrostation of Akerni (Novosela) with a pumping capacity of 11000 l/sec drains 6500 ha. It is located in the western side of the wetland complex. The bulk of water is discharged into the sea. A small portion enters also in Narta lagoon.

Gorrice hydrostation is located in the eastern side of Narta lagoon. It drains a surface of 1000 ha. Its pumping capacity is about 16,000 l/sec. The water is discharged directly to the lagoon.

The wetland complex is also under the influence of some free flowing channels that pour their waters in Narta lagoon as well as in the sea :

During the last 15 years the investments in the drainage sector have been very low bringing to the siltation of second and third category channels. As a result the drainage capacity has been largely reduced.

e. Railways

The area has two railway stations : Mifoli and Narta. Nevertheless this kind of transport as well as in other areas of Albania, is in needs of big investments.

f. Electric power furniture

Novosela commune is furnished from the station of Kafaraj. Qendra commune is furnished by Soda station in Vlora. Cerkovina and Panaja are furnished from the station of Xhyherina. The area faces severe shortage of electricity. There is again a need of investments such as the reconstruction of substations, rehabilitation of electric lines etc.

Hydrographyc network

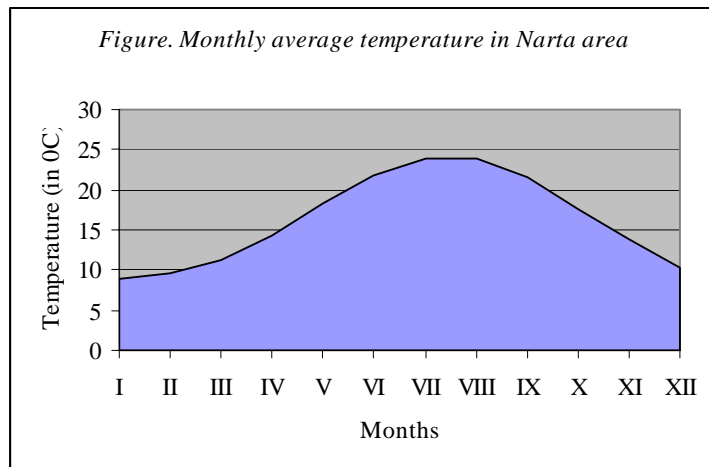
2.2. Physical characteristics

2.2.1. Climate

The area under the study is situated in the coastal plateau, which according climate regionalisation of Albania, belongs to the Central Mediterranean field climate. It is characterized by mild winters with abundant precipitation and hot-dry summers. Precipitations are mainly in the rain form, while the snowlayer is of very short duration.

Solar radiation, as one of the principal factor of climate, is very uniform over the area under the study. The annual solar radiation for the area is about 1540 kwh/m². The highest value is observed in July (216.5 kwh/m²) and the smallest one in December (52.1 kwh/m²).

The annual average of air temperature variates from 15.4 °C in Llakatundi up to 16.3 °C in the Vlora. The maximal air temperature is reached in July/August with 30.0 °C and the minimal in January with 4.8 °C (Fig X).



Air humidity is regularly linked with air temperature. Monthly mean of the relative humidity in this zone variate from 62 to 69 %, while the annual mean is 66 %.

Wind is mainly represented by sea breeze. The sea breeze phenomenon here is very evident especially during the summer. Winter is dominated by eastern winds with an average speed of 3.5 m/s. The predominant direction is that of east (24.4 %) followed by the north-east. Summer is dominated by sea breeze which is a western wind. The most frequent direction is north-west

(17.6 %) and the second one is the west direction with 9.4 %. The mean velocity is respectively 4.4 m/s and 5.2 m/s.

Due to its limited water depth, the thermal regime of lagoon waters is similar to the air temperature regime. The seawater that penetrates in lagoons has a great influence on its thermal regime, particularly near the communication channels.

The lowest water temperatures in the lagoon are in December-January period and highest in July-August period. The average annual temperature is 14.9 °C.

The average precipitation of the lagoon catchment area is 892 mm, 80% of which is during the wet period (October-May) and 20% is during the dry period (Fig X).

The annual evaporation is 1173 mm (56% of water evaporates during dry period). That figure is apparently higher than the precipitation level. That difference shows clearly that the ecosystem is in need of other water resources.

2.2.2. Geology, geomorphology and soils

The mountains of Albania, based on lithologic and tectonic relationships, are divided into two main geologic subdivisions, the Inner and Outer Albanides. The Inner Albanides are dominated by ophiolitic nappes while the Outer Albanides consist of four semi-parallel thrust zones : the Krasta-Cukali Zone, the Kruja Zone, the Ionian Zone and the Sazani Zone.

Vjosa-Narta Wetland Complex is located within Ionian and Sazani zones. The coastal portion from Vlora to Poro consists of quaternary marine sands and gravels of tertiary molasses headlands. The molasses were deposited in the Peri-Adriatic Depressions, which overlies older carbonate sediments. Molasses also constitute the central hilly portion of the area. Molasses are composed by sandstones, siltstones, shales and marls. Gypsum crops out near Narta where a small abandoned quarry is located. Quaternary marshy deposits of clayey silts and sand are found at the northern end of Narta lagoon. Quaternary and recent alluvium is also found in Vjosa rivers. These sediments consist mainly of coarse sand and limestone pebbles.

The western part of Vlora and the plain area bordering the Adriatic Sea are part of the Narta syncline. The hilly area to the east is a part of the Trevllazeri anticline. The Narta syncline is made up of Neogene and Quaternary deposits. In general, the Neogene deposits consist in clay, clay stone, sandstone and conglomerate.

2.2.3. Hydrology

2.2.3.1. Groundwater

The complex is generally poor in groundwater resources. Groundwater does accumulate in shallow sandy deposits. However this water is typically of poor quality and low volume. Nonetheless, groundwater is occasionally extracted using hand-dug wells. The depth of the groundwater level varies between 1-10 m. The primary groundwater flow is west towards the Adriatic Sea.

2.2.3.2. Surface water: irrigation and drainage

The primary surface water drainages in the project zone are the Vjosa River, which drains into the Adriatic Sea north of Narta Lagoon and the Shushica River, which is tributary to Vjosa River. The low hills to the east of the complex are associated with the northernmost extension of Kurveleshi mountains.

a. Irrigation

The whole agricultural land is covered by a dense network of irrigation channels. But a number of them have been destroyed and only a small part of land is actually under irrigation.

b. Drainage

The site has three hydrostations and some channels of free discharge. The drainage system is malfunctioning due to siltation of drainage channels, malfunctioning of draining pumping stations, electricity shortage etc. During heavy rains, large areas remain flooded for several weeks.

2.3. Ecological characteristics

2.3.1. Natural habitats

The wetland complex includes different types of ecological units classified according to descriptive and functional criteria such as water presence/absence, salinity and vegetation physiognomy.

2.3.1.1. Aquatic habitats

Aquatic habitats are themselves composed by numerous subhabitats such as semi-permanent aquatic habitats, drainage and irrigation channels, marshes (saltmarshes and lagoons), fresh water reservoirs and riverbeds covered by alluvial forests.

a. Marshes

Marshes are distinguished here in temporary marshes and permanent marshes

1. Temporary marshes

Temporary marshes are shallow depressions without run off waters that dry each year. Vegetation varies according flood pressure, salinity and grazing pressure.

Salinity is usually low during winter accompanied by high precipitations. Zones with low salinity levels are dominated by *Ranunculus spp*, *Callitriche truncata* as well as *Chara spp.* and *Tolypella spp.* In more saline sites, less species occur. Among them the most common are *Chara canescens*, *Chara galioides*, *Ruppia maritima* and *Zannichellia pedunculata*.

During summer accompanied with long drought periods, temporary marshes are covered by *Suaeda maritima*, *Suaeda splendens*.

Some of the locations that are under grazing pressure develop communities of *Scirpus spp.* that are replaced in a few places by *Phragmites communis*.

2. Permanent marshes

Permanent marshes are represented by Narta and Kallenga lagoons. The bottom of such areas is inhabited by *Zostera noltii* and *Ruppia cirrhosa*. *Zostera* is the dominant species covering 30-40 % of the total surface. Both species, as well as species of algae represent for the Narta Lagoon one of the most important biocenosis.

3. Salt Marshes

This type of habitat is very widely distributed in the natural ecosystems of Narta (around the coastline of Narta Lagoon, south of Vjosa River).

Salt marshes consist of number of plant communities in different level of tolerance to salinity. Some of the species that occur in the area are *Salicornia spp.*, *Arthrocnemum spp.*, *Salsola soda*, *Limonium spp.* With the reduction of salinity, the species composition becomes increasingly more complex and variable. These communities are composed of species as *Arthrocnemum fruticosum*, *A. perenne*, *A. glaucum*, *salicornia europea*, *Salsola soda*, *Juncus acutus*, *Juncus maritimus*, *Inula crithmoides*, *Limonium vulgare*, *Artemisia coerulescens*, *Halimione portucaloides* etc.

b. Irrigation and drainage channels

Irrigation and drainage channels as well as water reservoirs, in dependence from water depth and its salinity, shelter complex vegetation, a mixture of different types of vegetation usually present in permanent and temporary marshes.

Among those types of vegetation the dominant one is the halophytic-hygrophilic vegetation represented mainly by *Phragmites australis*, *Typha angustifolia*, *Typha latifolia*, *Scirpus lacustris*, *Scirpus maritimus*, etc. Other types of vegetation include floating algae such as *Lemna minor*, *Lemna minuta*, *Spyrodela polyrhiza* etc.

e. Water reservoirs

The vegetation of such habitats is very much the same as irrigation and drainage channels. It is usually dominated by *Phragmites australis*, *Typha angustifolia*, *Typha latifolia*, *Scirpus maritimus* and *Scirpus lacustris*. Actually they do compose a valuable habitat because they compose the only fresh water resource for a wide range of animal species.

f. Alluvional forests

The vegetation of such habitats is divided in two different floors. The first floor is generally represented by reeds and other species closely related to water. The quantity and cover of the second floor depends on flood level.

1. The main type of vegetation in the first floor is represented by the class of *Phragmitetalia*, where the main association is the one with reedbeds *Phragmites australis*. Such an association shows a very high ecological plasticity occurring from the river itself to also some remote areas. It is located alongside the main irrigation channel and its branches, in several drainage channels in the plain and in some parts of Vjosa River where the current is not so strong. In some places green algae of *Lemna minor* are developed.

The ecological plasticity is stressed also by the floristic composition of the class including *Typha angustifolia* (the dominant species), *Lythrum salicaria*, *Polygonum hydropiper*, *Polygonum lapathifolium*, *Sium latifolium*, *Gratiola officinalis*, *Cladium mariscus*, *Alisma plantago-aquatica*, *Sparganium erectum* etj.

2. The second floor usually includes riverine forests belonging to the class *Alno-Populetea* and *Salicetea purpurea*. The main species of such classes are *Populus alba*,

Populus nigra, *Salix alba*, *Salix purpurea*, *Salix amplexicaulis*, *Salix elaeagnos* subsp. *angustifolia*, *Alnus glutinosa*, *Alnus incana*, *Platanus orientalis*, *Ulmus minor*, *Ulmus glabra*, *Fraxinus angustifolia*, etc. The grassland vegetation is generally poor. The most common species are *Equisetum telmateia*, *Equisetum ramosissimum*, *Prunella vulgaris* etc.

In some parts of the river with stronger currents and gravel substrates, the trees are replaced by scrub species of Willow *Salix* associated with tree species of *Platanus orientalis*, *Salix elaeagnos*, *Salix alba*, *Salix purpurea*, *Tamarix parviflora*, etc.

In the lower part of the river, where the current is lower and the substrate is composed mainly by sand and clay, the vegetation is dominated by *Alnus glutinosa*, *Fraxinus angustifolia*, *Ulmus minor*, *Quercus robur* (very few and sparse individuals), *Populus alba* etc.

2.3.1.2. Sand dunes

Narta wetland complex is famous for its coastal sand dunes with some of them reaching 6-8 meters.

The sand dunes and the sandy belt along the coastline are bare of vegetation to a length sometimes extending up to 30 m. Phanerogam species are the first to appear after this 30 m belt. Pioneer species include *Cakile maritima*, *Xanthium strumarium* subsp. *italicum*, *Salsola kali* and the typical dune species of *Ammophila arenaria* subsp. *arundinaceae*, *Elymus farctus*, *Echinophora spinosa* etc.

2.3.1.3. Pine Forests

These forests occupy around 1,200 ha, a considerable part of the Narta area, extending parallel with dune systems of this area. They have been planted some 30-40 years ago in order to stabilize the shoreline.

The physiognomy of this formation is presented by Pine species such as *Pinus maritima*, *P. pinea* and *P. pinaster*.

The shrub layer is represented by typical Mediterranean species such as *Pistacia lentiscus*, *Erica manipuliflora*, *Myrtus communis* etc, characteristic species of the Class *Quercetea ilicis*. (covering 40-50 % of total area, shrub < 2 m).

Between these plant communities (sandy dunes vegetation and Mediterranean Pine forests), there are some cultivated belts, dominated by the introduced species of *Acacia saligna* (a large part of

this belt was burned last year, near of Vjosa delta river), *Agave americana* (about 200 m at Zverneci beach)

2.3.1.4. Zverneci Islet Vegetation

Zverneci islet, located in the southern part of the lagoon, is covered by evergreen forest of *Cupressus sempervirens* in association with *Quercus ilex*, *Quercus pubescens* and *Pinus spp.* The vegetation cover is very dense reaching up to 90-100 % of total surface with about 8-10 m high trees. The shrub layer is dominated by the species such as: *Myrtus communis*, *Pistacia lentiscus*, *Laurus nobilis*, *Rubus spp.*, *Phillyrea angustifolia*, *Olea olaster*, etc. The shrub vegetation cover is 50 – 60 % with 1 – 2 m height.

The herb layer is generally rare with representative species as: *Chrysopogon gryllus*, *Asparagus acutifolius*, *Dactylis glomerata*, *Desmazieria rigida* etc.

2.3.2. Flora

Vjose-Narta wetland complex is an important area wellknown for its special flora and the diversity of habitats. All these plant species make up a great national asset with economic and scientific values. Some plants are extremely rare, some others have scientific values and a good number of them compose widely used economic groups such as the medicinal, aromatic, industrial alimentary and decorative plants.

The region of Vlora shelters some 1400 vascular plant species, representing 42% of the total flora of Albania. Detailed data on the project area are still not available.

Class Zosteretea

- Order *Zosteretalia*
 - Alliance *Zosterion*
 - Ass. *Zosteretum noltii*

Class Ruppiaetea

- Order *Ruppiaetalia*
 - Ass. *Ruppion maritimae*
 - Ass. *Ruppium cirrhosae*
 - Alliance *Posidonium oceanicae*
 - Ass. *Posidionetum oceanicae*
 - Alliance *Cymodoceion nodosae*
 - Ass. *Cymodocetum nodosae*

Class Phragmitetea

- Order *Phragmitetalia*
 - Alliance *Phragmition australis*
 - Ass. *Phragmitetum australis*
 - Ass. *Typhetum angustifoliae*
 - Ass. *Cladietum marisci*
 - Ass. *Scirpetum lacustris*

Class Umbilico – Cheilanthetea

- Order *Ptilostematalia chamaepeuces*
 - Alliance *Capparo – Putorion*

Class Thero – Salicornietea

- Order *Thero – Salicornietalia*
 - Alliance *Thero – Salicornion*
 - Ass. *Salicornietum – fruticosae*
 - Ass. *Arthrocnemetum glauci*
 - Ass. *Salicornietum europeae*
- Class *Juncetea maritimi***
 - Order *Juncetalia maritimi*
 - Alliance *Juncion maritimi*
 - Ass. *Juncetum maritimi –acuti*
- Class *Thero – Brachypodietea***
 - Order *Thero – Brachypodietalia*
 - Alliance *Echio – Galactition*
 - Ass. *Ditrichietum – viscosae*
- Class *Cymbopogoni- Brachypodietalia***
 - Order *Chrysopogon – Saturion*
 - Alliance *Asphodelo – Chrysopogonetum grylli*
 - Ass. *Brachypodietum ramosi*
 - Alliance *Chrysopogono – Phlometum fruticosae*
- Class *Quercetea ilicis***
 - Order *Quercetalia ilicis*
 - Quercion ilicis*
 - Alliance *Orno – Quercetum ilicis*
 - Ass. *Quercetum cocciferii*
 - Alliance *Arbutus unedo – Erica aeborea*
 - Ass. *Ericetum manipuliflorae*
 - Ass. *Quercetum macrolepis*
 - Alliance *Pistacio – Pinetum halepensis*
 - Alliance *Pistacio – Euphorbitum dendroides.*
 - Ass. *Quercetea pubescentis*
 - Ass. *Quercetalia pubescentis*
 - Ass. *Quercion pubescentis*
 - Ass. *Quercetum frainetto – cerris*
 - Alliance *Ostryo- Carpinion orientalis*
 - Alliance *Seslerio – Ostryetum*

2.3.3. Fauna

The wetland complex of Vjosa-Narta is an important distribution area for a high number of animals including insects, fish, amphibians, reptiles, mammals and especially birds. According to former studies (Site Diagnosis Report) the wetland complex shelter at least 747 species of animals of vertebrates (Tab.).

Table . Animals species present in the wetland complex of Vjose-Narta

Group of species	Nb. f species
Molluscs	32
Insects (Lepid & Coleopt)	287
Crustaceans	61
Echinoderms	6
Fish	90
Amphibians	9
Reptiles	26
Birds	194
Mammals	32
Total	741

The area is particularly important for the groups of birds and mammals as well as for fish and reptiles.

2.3.3.1. Invertebrates

Research on invertebrates has been based on Site Diagnosis as well as other publications. According to former studies the area of Narta holds at least 390 species of invertebrates comprising Molluscs, Butterflies, Beetles, Crustaceans and Echinoderms.

The most common butterflies include Swallow-tail, Cleopatra, Hairstreaks and Blues. In addition some large and small Orthopterans, Longhorn Beetles and Ant-lions occurred in abundance in the drier habitats.

Studies on mollusks (Beqiraj 2003) have shown that Narta holds 32 species of aquatic molluscs belonging to Families of Gastropoda and Bivalvia.

2.3.3.2. Fish

Narta area is an important site for fish species. Former studies including all types of habitats (sea, brackish and fresh waters) concluded that the site is inhabited by at least 102 species of fish (see Annex XXX for a species checklist). The main species of Narta lagoon are : Eel (*Anguilla anguilla*), Sea bream (*Sparus aurata*), Sea bass (*Dicentrarchus labrax*), European eel (*Anguilla anguilla*), Grey mullet (*Mugil cephalus*) and sand smelt (*Aterina* sp.).

2.3.3.3. Amphibians and Reptiles

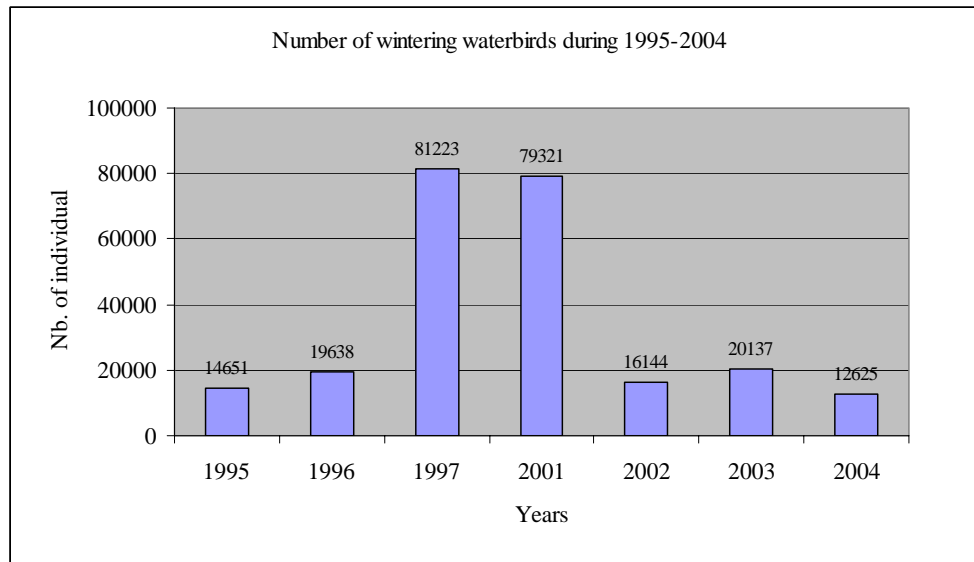
Narta shelters 9 species of amphibians and 26 species of reptiles. The most common amphibians include *Rana balcanica*, *Hyla arborea*, *Triturus vulgaris* etc (Annex XXX)

Among reptiles is worth mentioning *Natrix natrix*, *Elaphe quatuorlineata*, *Malpolon monspensulanum*, *Testudo hermanni* etc.

2.3.3.4. Birds

The wetland complex is an important wintering and breeding site for 192 species of birds and more particularly for waterbirds.

Winter censuses undertaken during 1995-2004 registered 12,600-81,200 individuals of waterbirds with an annual average of 34,800 individuals (Fig. XXX). The majority of wintering birds (circa 91% of them) is located in lagoon waters. The most common birds are Ducks and Coots.



During breeding season, Narta becomes the nesting site 630-830 pairs of waterbirds. The bulk of nesting birds (circa 88 % of them) is concentrated in Narta salt pans.

2.3.3.5. Mammals

The wetland complex registers 32 species of mammals (from 71 species observed in Albania). The mammal community is dominated by rodents followed by bats and carnivorous species.

Table . *Composition of the Mammalofauna of Albania and that of the Narta site*

Taxa/Order	No. of species
Insectivora	5
Chiroptera	8
Rodentia	9
Lagomorpha	1
Carnivora/Fissipedia	6
Artidactyla	0
Cetacea/Odontoceti	3
Pinnipedia	0
Total	32

2.4. Socio-economic characteristics

2.4.1. Demographic trends and population distribution

The area of is inhabited by a population of 24,000 inhabitants (Table XXX) distributed in 5,440 families, with average of 4-5 members per family, and settled in 18 different urban areas. The average number of inhabitants in settlements varies from 573 inhabitants in the village of Skrofotine to 3,693 inhabitants in the village of Narte.

Table XXX. Population of Qendra and Novosela commune

Administrative Units	Pop. 2004	Fam. 2004
Novosela Commune	15,218	3,436
Qendra Commune	8,437	2,004
Total	24,155	5,440

Population density in Novosela is 108 inhabitants/km² whereas within the urban areas of the commune the density is 35,5 inhabitants/km².

Population density in Qendra is 189 inhabitants/km², whereas within the urban area the density is 49 inhabitants/km².

During the 90's the average births rate for Qendra Commune was 17.4/1000 inhabitants while in Novosela 14.2 /1000 inhabitants

The population growth rate during 1989-1999 was about 13%. The average annual growth of 360 persons per year is one of the highest growth rates in Albania.

The future trend foresees a further growth in the number of families and a reduction in the number of members per family.

2.4.2. Household structure

The local community in the area is organized in families mainly compounded by 4 members. The relations among individuals don't exceed in clan pattern or social life organization.

2.4.3. Employment

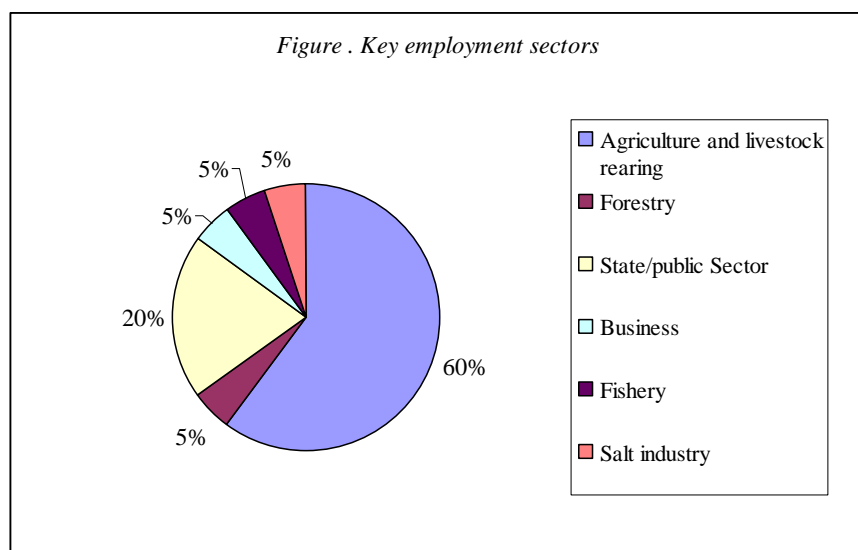
The situation of employment in the area has followed the general social changes in Albania and especially in Vlora region. The democratic changes after 1990 caused the destruction of former

cooperatives, state farms and almost all state enterprises. The corresponding decrease of employment rate was accompanied by the external migration phenomenon.

Communes	Employment Status	
	Employment	Unemployment
Novosela	3 718	465
Qendra	3 208	807

According to Llanaj (2004), Novosela commune shows the highest number of employed people (Tab. XXX). In total, the number of 6,926 employed persons is relatively high compared with other communes in Albania.

Private sector provides 90% of the employment while the public sector the remaining 10%. Agriculture and farming activities are the main source of income for most of the resident population despite lack of farm mechanisation, the limited land area suitable for farming and the difficult market access. Other employment sectors include forestry, fishery, salt industry as well as public sectors.



2.4.4. Migration

Since the political change of the early 1990s there has been an increase in the mobility of the population as a whole. Migration in the area is characterised by (i) Migration from the area to

neighbouring countries and (ii) Migration of the inhabitants towards other urban areas, seeking new opportunities in or close to the city.

Actually, the young population is migrating towards Greece and Italy as well as country's large urban areas. That migration has decreased the labor force in the area with several traditional activities in the brink of extinction.

3,500 inhabitants from Qendra commune have emigrated to Greece (86%), Italy etc. 73% of the emigrants are male. The majority of emigrants (34 %) belong to the age of 27 years.

According to interviews with local people undertaken by the MedWet Coast project in 2002, more than 60 % of inhabitants indicated that they would be willing to leave if the opportunity arose for a better job elsewhere. Most of those questioned who wanted to remain in the area were over the age of 55 years.

2.4.5. Religion

The local population differs in terms of religion. The majority (or 60% of the population) belongs to the Christian orthodox religion while the remaining is Muslim. Five churches and three mosques occur in the area. No signs of conflict have ever been observed between Christian and Muslim communities.

2.4.6. Uses and production systems

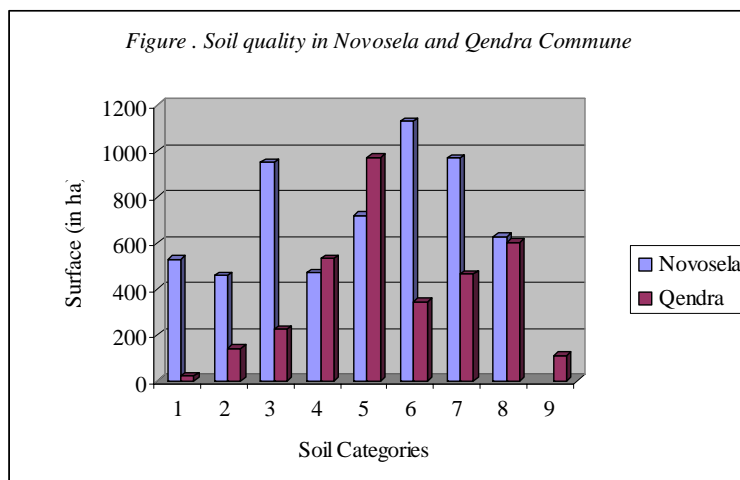
The wetland complex has a diversity of natural resources that are used for the development of several economical activities such as tourism, forestry, fishing and hunting, salt production, medicinal herbs, agriculture and stock breeding, etc.

2.4.6.1. Agriculture and livestock

Agriculture

Agriculture is based in moderate soil quality (Figure XXX) ranging in classes 1-3.. For Novosela commune the soil belongs mainly to the 6th, 7th and 3rd category. The majority of agricultural land in Qendra Commune belongs to the 5th, 8th and 4th category.

Novosela commune has the majority of the agricultural land.



In 2003, the arable land was used for different agricultural activities such as fodder, crops vegetables and fruits. The majority of the agricultural land is used for fodder, wheat and vegetables (Tab. XXX).

Table XXX. Agricultural production in Qendra Commune

Products	Novosela		Qendra	
	Surface	Production (in kv)	Surface	Production (in kv)
Wheat	940	32,110	43	940
Maize	20	695	32	960
Vegetables	334	63,950	108	14250
Dry vegetables	60	1,605	57	52
Water melon	140	40,000	12	2020
Patatoes	41	2,105	39	2600
Beans	429	2,910	17	134
Fodder	173	3,010	35	470
Fodder Maize	1,957	278,600	128	24190

During the recent years the amount of agricultural land used for cereal production has been reduced in favour of vegetables. A part of the agricultural area has been transformed into green houses used mainly for tomatoes and cucumber production.

Despite its current local importance, farming activity is suffering from the absence of organized agricultural marketing, lack of transport infrastructure, low profile of agro-industry, absence of bank crediting system for local farmers, low profile agronomic services, etc.

2.4.7.3. Fruit bearing

Fruit bearing, based in good pedological, geomorphological, climatic conditions as well as the tradition, have made this type of activity an important economical source of the site. Fruit bearing in Qendra commune gives 21% of the total agricultural production while in Novosela is only 8.4% of it.

Qendra commune has 118,000 olive trees covering 60% of the total olive production of Vlora district.

In recent years, there is an increasing interest for the vineyards or grapes used either for wine or raki production. Every year, an area of 8 ha of land is planted with vineyards in Qendra Commune and 5-6 ha in Novosela commune.

2.4.7.4. Livestock

Stockbreeding is an economic activity that brings quite high incomes. In Qendra commune, the stock breeding activity provides 34% of the total income while in Novosela this activity is even more important, providing 57% of the total income.

The majority of stockbreeding is composed by sheep and followed by cows, goats and pigs (Tab. XXX).

Table XXX. Stock breeding in Novosela and Qendra Commune during 2003 (acc. Harizaj)

Stock Breeding	Novosela	Qendra	Total
Cows	3,510	600	4,110
Sheep	21,060	4,150	25,210
Goats	1,830	450	2,280
Pigs	1,000	590	1,590
Horses/donkeys/mules	630	101	731
Hens	38,720	2,210	60,930
Bee halves	537	253	790

Every village famile has in average a 1 cow, two sheep and some hens for their own family needs. Some of the villagers have started to establish small breeding farms for meet, milk, eggs and honey production.

The main destination of the stock raising production (Tab. XXX) is the national trade market as well as subsistence use.

Table XXX. Stock raising products in Novosela and Qendra Commune during 2003

Items	Novosela	Qendra	Total
Milk (in kv)	81,951	12,216	94,167
Cows (in kv)	73,150	9,830	82,980
Sheep (in kv)	7,416	2,105	9,521
Goats (in kv)	1,385	281	1,666
Meat (in kv)	11,861	4,234	16,095
Cows (in kv)	4,715	1,000	5,715
Sheep & Goats (in kv)	5,070	1,560	6,630
Volaille (in kv)	1,328	14	1,342
Pigs (in kv)	748	1,660	2,408
Eggs	13,462,000	257,000	13,719,000
Honey (in kv)	112	22	134

During 1995-2000, there is no significant trend either in increase or decrease of stock raising products in both communes (Tab. XXX).

Table XXX. The evolution of stock raising products in Novosela and Qendra Commune

Viti	Novosela			Qendra		
	Meat (in kv)	Milk (in kv)	Eggs	Meat (in kv)	Milk (in kv)	Eggs
1995	913	2,890	1,928	478	1,630	1,849
1996	11,381	8,404	1,826	561	7,549	1,855
1997	729	3,432	2,312	505	4,248	1,427
1998	732	8,000	3,014	314	7,102	1,972
1999	704	8,300	1,468	306	4,152	1,826
2000	678	9,697	1,164	282	4,656	1,114
Average	2,522	6,787	1,952	408	4,889	1,673

Despite its current local importance, livestock raising activity is suffering from the absence of organized marketing, lack of transport infrastructure, low profile of agro-industry, absence of bank crediting system, low profile of veterinary services, etc.

2.4.7.5. Agro-industry

Agro-industry is not very much developed despite the diversity of the agricultural and stock breeding productions. There is increasing market interest on local products but infrastructure and logistic has become a handycap.

A few processing plants have been built in the area. The product consists of cheese, olives oil, industrial plants, alcoholic and fresh drinks warns, salami production warns, leather and wool processing warns etc.

Table . Agroindustry in the project site

Commune	Flavor plant	Cheese dairy	Olive factory	Bread bakes
Novosela	4	2	1	2
Qendra	1	1	5	1

The modernization and further investments in the agroindustry it will certainly change it in a very effective support of tourism industry. Two species of frogs represent an important source of economic activities. A local enterprise is collecting both species since 30 years. During the last 10 years the average amount collected is about 2700 kv/year. The enterprise is employing every year (seasonally) circa 60 persons.

2.4.7.6. Forestry

The forestry fund covers an area of 2,345 ha. 1,770 ha belong to the Nature Managed Reserve of Pisha-Poro, 7 ha belong to the Nature Monument of Zverneci Island and 568 ha to other forested areas whose function varies from river bed protection, stabilization of dune systems, coastal protection from strong winds as well as recreation.

2.4.7.8. Tourism and leisure activities

The area presents a wide variety of physic, climatic, economic and social elements, which all together create interesting conditions for the development of tourism.

Despite the demand, tourism is still not very much developed because of lack of good infrastructure and absence of appropriate urban development plans. Besides, the Albanian Government has no clear strategy about tourism development in Vlora Area. The last governmental decisions such as oil exploration activities and industrial park development do jeopardise the tourism development expectations.

However, Novesela commune practices more the daily tourism. During summer time, the number of daily tourists during the weekend is about 250-270 persons. The peak number of tourist is reached in 15th of July - 15th of August. Family tourism is still in its first steps. Circa 150 families are coming for balnear tourism each year.

2.4.7.9. Hunting

Vlora district has circa 5000 hunters. Only 200 belong to hunting associations. Reliable statistic data on hunting activity in communes of Qendra and Novosela is lacking. Nevertheless, some informal information has been provided in meetings during the consultation process in Novosela. According to local hunters met, the area of Novosela commune is used by circa 1500 hunters, of which 1400 are illegal and do not pay any fee to state authorities.

Members of hunting associations in Novosela complain about the lack of law enforcement and lack of management in hunting areas. Illegal hunting remains a very difficult obstacle.

Furthermore, interventions in coastal lagoons of Kallenga and Limopua have contributed in the deterioration of such environments causing also the departure of wintering and nesting birds.

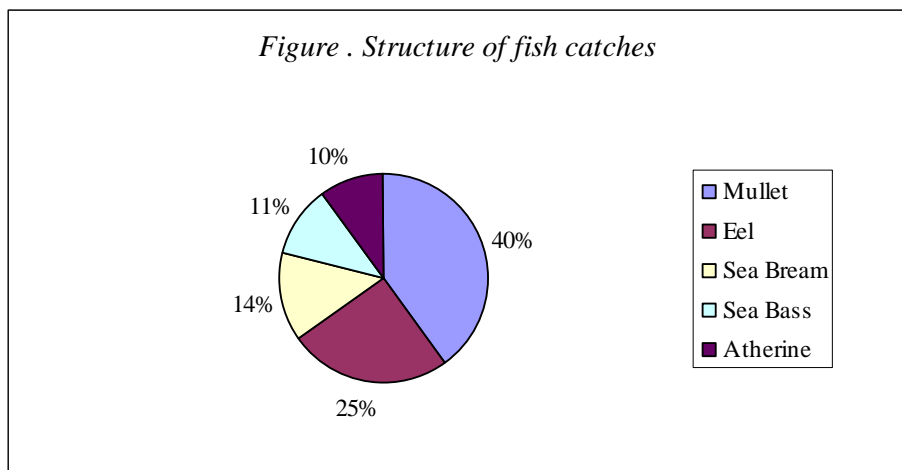
2.4.7.10. Fishery

During 1975-1990 the annual fish catches were about 55 kg/ha (i.e. 1590 kv/year) with a peak of 70 kg/ha (2023 kv/year) during 1980-87. Circa 30% of the annual production was composed by crabs (*Carcinus aestuarii*). According the last data the mean annual production during 1996-2002 has been around 1,340 kv/year (Tab. XXX).

Table XXX. Data on fishery statistics during 1996-2002 (acc. to Flloko 2004)

Year	Ilegal fishermen	Legal fishermen	N. of boats	Annual Yield (in kv)
1996		90	15	1,300
1997		70	15	1,100
1998		41	13	1,340
1999	30	41	13	1,400
2000	30	41	13	1,450
2001	30	41	13	1,500
2002	20	50	15	1,650
2003	20	50	15	1,600

The main species of fish belong to Mullet (four different species), Eel, Sea Bream, Sea Bass and Atherine. The fish structure is dominated by mullet (Fig. XXX) which has a low market value. Species of high market value as Sea bass and Sea Bream compose only 25 % of catches. Such quantities are 2-4 times lower than the catches of the same species in other coastal wetlands of Albania.



Today fishing employs 50-100 people. Fishing grounds include Narta lagoon, Limopua, former river of Vjosa and Kallenga lagoon, Vjosa River as well as the littoral.

Fishing is organised in different fishing subject using either fish traps at the channels outlet (2 groups with 8 and 6 fishermen each) or with different sorts of fishnets (10 licensed groups with 3 fishermen each). Apart from legal fishermen, the lagoon is used for fishing by circa 30 ilegal fishermen that do not pay any taxes to state authorities. The fish is sold mainly to restorants of Vlora, Fieri. A small part is used for familiar consumption.

Fish catches are considered as limited due to several factors either human induced or natural. As stated before Narta lagoon is suffering from hyper eutrophication which is the result of lack of communication with sea, excesive water extraction from salinas, lack of fresh water entrances, entrance of sewage waters, entrance of industrial organic pollutants etc. Besides, illegal fishing is a common phenomenon. The mesh size of fish net is often too small catching thus even juveniles. Fishing is occurring even in forbiden areas such as Shamodura, north-western side of Narta Lagoon. Large fishing boats fish illegally in very shallow coastal waters area destroying thus the fish stocks prepared to enter in the lagoon.

2.4.7.11. Mining (*quarries, inert exploitation from the river beds*)

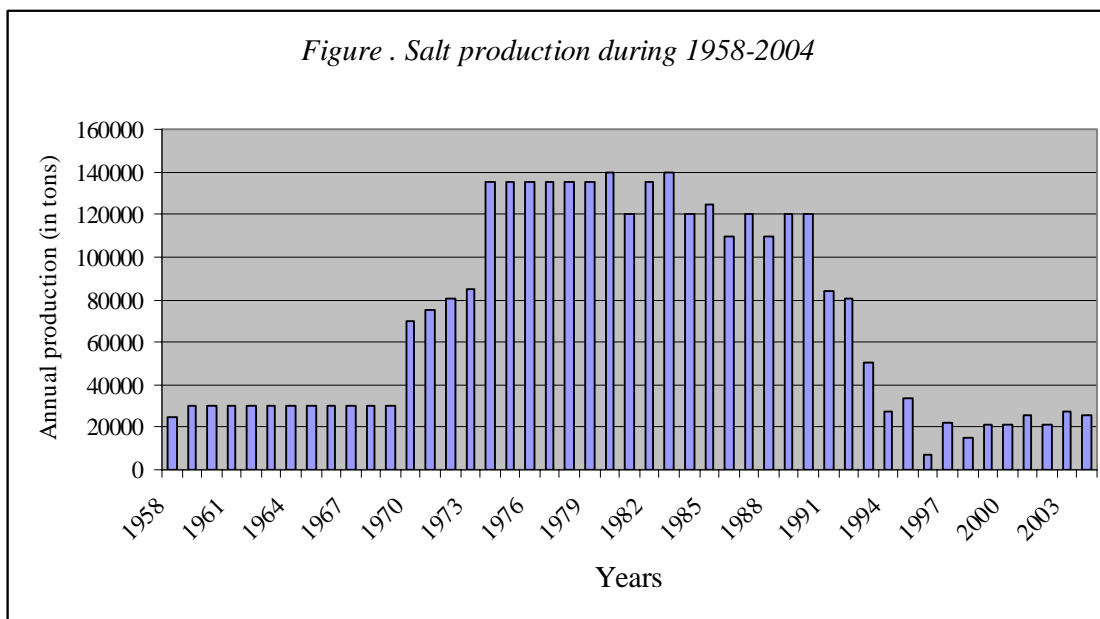
In the past, a location in the southeastern site of Nart was used for gypsum quarry. Since two years, the quarry has been abandoned. Its unsustainable exploitation has caused some erosion problems.

Two other sand quarries are located in Vjosa River, not far from Mifoli Village. Both quarries have a negative impact on environment by destroying the riverine vegetation and speeding up the erosion process of Vjosa River.

Sand extraction near Mifoli bridge is an issue of concern since it is causing the bridge erosion.

2.4.7.12. Salt production

Salinas cover actually an area of 1,472 ha. Salt production has started in 1958. During the first years the salinas produced about 25-30,000 tons/year and employed circa 250 people coming from the local villages and Vlora city. Salt production increased in 1970 with 70,000 tons and employing up to 800 persons. In 1975, the saltpans started to produce Iodic Salt with a capacity of 5,000 tons/year. The production peak of 140,000 tons were reached during 1975-1985. At that time the enterprise employed circa 1250 persons.



The production started to fall in the beginning of '90s with the lowest level of 7,200 tons in 1996. During the last years the annual yield has fluctuated between 20-27,00 ton. In 2004 the production is foreseen to be 25,500 ton. The number of persons actually employed is 205 persons.

Salt has been used mainly for internal consumption in industry, roads and in lesser amount for food consumption. In 1980, salt started to be exported to Macedonia and Monte Negro. Kosovo has been included during the last years.

2.4.7.13. Education, demonstration and research

Novosela commune has 11 elementary schools and one high school. The number of pupils in both levels together is about 2000 pupils.

Qendra commune has 10 elementary schools. The number of pupils is around 1800.

The nearest university is based in Vlora. Vlora University is mainly specialised in ...

3.3.8. Stakeholder analysis

People still do not feel to be part of the development processes in their area. It was clearly expressed by local authorities that local population pretend to be part of discussions or any decision-making that may affect their land ownership or their rights of use. This is the only way how to avoid informal influence which is highly dangerous from the resource management point of view.

As shown in Table XXX, XXX, XXX, XXX and XXX) the importance of the stakeholders in this area ranges from very reduced (fish traders), to some importance (Vivaldi ShPK, tourist operators), moderate importance (salt plant, two fish farms at the communication canals, fish farm in Vjosa River, “Llanaj Agrobusiness”, consulting and constructing companies, priest of Zverec and Orthodox church), and very important (fishermen operating in temporary marshes, stock breeders, summer tourists in the area, unlicensed fishermen and hunters).

The last subgroup has been considered as very important because their informal influence on the natural resources is quite high while the degree of the influence they exert through formal institutions is very little. It was explained already the influence of unlicensed hunters and fishermen; stock breeders with regard to pasture improving or enlarging pasturing areas; and summer tourists that create high pollution along the coast and settle on the dune areas that are a very fragile system. This subgroup worth special attention to be considered while formulating management plans because almost all their interests are negatively affected by the project.

There are other subgroups which one or more interests are going to be negatively affected, such as salt plant in Narta which will experience some limitations related to water extraction from the lagoon (some further exploration is needed in order to understand if this is for subsistence or maximizing commercial benefits); fish farms that may loose some monopoly on the area; tourist operators in respect to the number of tourists in the area or fees they may need to pay; consulting and construction companies that want to increase the volume of constructions in the area; and the church that should install appropriate equipment in the camping areas.

In addition, when claims about rights or property are still relevant, the management becomes problematic because of a lack of confidence in whether decisions made by either party will be agreed to follow. This subgroup worth special attention to be considered while formulating management plans because almost all their interests are negatively affected by the project. Formal communication bridges should be settled between these subgroups and local authorities

in order to increase the degree of influence they can exert through formal institutions. There are some important issues to be taken in consideration while analyzing the stakeholders in these areas:

Some present conflicts could affect the implementation of the management plan :

- Conflicting interest between central and local level in the resource use expressed in the local population concerns related to their ownership rights and reluctance towards government decision to include project areas under the status of special protected areas.
- Conflicting interests between business and local population: salt plant and fishermen, fishermen organized in associations and individual fishermen, fishermen using the former marshlands and farmers;
- Conflicting interests between business and central or local government branches: malfunction of the communication canals between the seawater and the lagoon, variation of the hydric cycle of the lagoon, reduction of the drainage capacity and the fresh water influx to the lagoon (supposed to be maintained by Fishing Directorate, water directorate, etc. in the Ministry of Agriculture and Food)
- Conflicting interests amongst various individuals or groups of users: fishermen and hunters, wetland and wood ecosystem reduction to increase the arable land, use of pesticide and fertilizers Vs organic agriculture, urban waists discharges to lagoon, tourist influx, etc.
- Conflicting interests between illegal activities: tree cutting, forest fires, fishing with explosives, solid material removal (Novesela)

Table XXX. Stakeholders in Narta and Zvermec – Central Government, Local Government, Regional Associations and Users

Main Groups	Stakeholder Groups	Interests at stake in relation to project	Effect of Project on Interests	Importance of Stakeholder for success of Project	Degree of influence of Stakeholder over project		
CENTRAL GOVERNMENT	Ministry of Environment	fulfill the obligations of international treaties	+	5	5		
		prepare legislation	+				
		set standards for sustainable development and monitor	+				
	Regional Environment Agency	Monitor the environment quality	+	4	4		
	Fishing Directorate (Ministry of Agriculture and Food MOAF)	maintain the communication canals between the lagoon and the see	+	5	5		
		Fishing licenses	+				
	General Directorate of Forestry and Pastures (MAF)	maintain forests and pastures	+	5	5		
	Directorate of waters (MAF)	maintain the drainage canals which furnish lagoon with fresh water	+	5	5		
	Ministry of Territorial Adjustment and Tourism	administer the development process according to established targets	+	4	4		
Ministry of Defense	ensure security in the military areas	-	3	3			
LOCAL GOVERNMENT	Qendra Commune	support initiatives in the interest of the local community	+	5	4		
	Novesela Commune	issue decrees, ordinances and orders to support initiatives	+				
		Vlora Region	develop and implement regional policies			+	
	Vlora Region	harmonize development at the regional level with national policies	+			5	4
		Vlora Prefecture	control legal conformity of the decisions taken by the municipality				
REGIONAL ASSOCIATIONS & USERS	Drainage & Water Boards	coordinate drainage problems and investments	+	4	4		
		participate in decision making	0				
		reduce conflicts	+				
	Shepherds and	claim land ownership	-				

	agricultural land Owners	improve pastures & increase pasturing area	+	5	2
		benefit from tourism development	- ³		
	Hunters and Fishermen Association	stop hunting and fishing out of the hunting and fishing season	+	4	2
		limit unlicensed hunting and fishing	+		
		improve the habitat of the area	+		

Table XXX. Stakeholders in Narta and Zvernec - NGOs / development agents and other private or individual users

Main Groups	Stakeholder Groups	Interests at stake in relation to project	Effect of Project on Interests	Importance of Stakeholder for success of Project	Degree of influence of Stakeholder over project
DEVELOPMENT AGENTS / NGOs	"Narta Lagoon"	community sensitization	+	3	3
		target the school level	+		
	"Adriatik"	compete and implement projects	+	3	2
		"Kristo Papajani"	community sensitization		
	"Mema Natyre"	compete for projects	+	3	2
		community sensitization	+		
	Local Fishermen Association	promote rules to protect fauna	+	4	1
		equal rights to all licensed fisherman	+		
		stop illegal fishing	+		
		increase fish harvest	-		
	Local Hunters Association	promote rules to protect fauna	+	4	1
		stop illegal hunting	+		
improve the habitat of the area		+			
OTHER PRIVATE	Salt plant in Narta	use water from Narta lagoon with less cost (maximize profit)	-	3	2
		increase production	-		

³ The PA status will set rules/limitations on tourism development

OR INDIVIDUAL USERS	Two fish farms (at the communication canals)	protect their own rights of fishing in Narta Lagoon	0	3	2
		minimize the activity of other private companies (licensed or not) to operate in lagoon	-		
		maintain communication canals between lagoon and sea	+		
		continuously increase fish harvest	-		
		protect fauna in the area	+		
	Tourist operators	continuously increase number of tourists in the area	-	2	1
		include Vlora and Narta area in tour itineraries (promote local tourism)	+ to 0		
	Architecture and urban design consulting & construction companies	design areas development plans	+ to 0	3	2
		increase the volume of construction in the area	-		
	Priest of Zverneci and the Orthodox church	increase their influence in the area	+ to 0	3	2
		organize summer camps and visits in the area	-		
	Shepherds	improve pastures	+ (-) ⁴	4	2
		Enlarge pasturing area	- to + ⁵		
	Fish traders	sell products and maximize their profit	-	1	1
	Summer tourists	use the beach area for recreation	-	4	1
		use infrastructure and service facilities in the area (pollution)	-		
	Unlicensed fishermen	maximize their profit without following common rules	-	4	1
Unlicensed hunters	maximize their profit without following common rules	-	4	1	

⁴ Improve through burning

⁵ Pasturing capacity is not enough for the number of livestock in the area, consequently local inhabitants continuously try to enlarge the pasturing area through burning the forests. This is especially true for the new comers.

Table XXX. Importance of activity to stakeholders in narta-Zverrneci area
Narta & Zverrneci - IMPORTANCE OF ACTIVITY TO STAKEHOLDER

INFLUENCE OF STAKEHOLDER	Un kno wn	Little / No importance 1	Some importance 2	Moderate importance 3	Much importance 4	Critical player 5
Unknown						
Little / No importance 1			Fish traders Summer tourists	Tourist operators	Local Fishermen & hunters	Unlicensed fishermen Unlicensed hunters
Some importance 2		Salt Plant in Narta	Pastures' and agricultural land owners	“Adriatik” “Kristo Papajani” “Mema Natyre” Architecture & urban design consulting companies Priest of the area and Orthodox church	Vlora Hunters and Fishermen Association	Two fish farms ate the communication canals Pastors
Moderate importance 3				“Narta Lagoon”		
Much importance 4			Drainage & Water Board		Ministry of Territorial Adjustment and Tourism Vlora Prefecture Regional Environment Agency	Commune Qender (villages of Narta, Zverrneci, and Panaja) Vlora Region
Critical player 5						Ministry of Environment Fishing Directorate (MAF) General Directorate of Forestry and Pastures (MAF) Directorate of waters (MAF)

Table XXX . Stakeholders in Vjosa River Delta and Pisha Poro - NGOs / development agents and other private or individual users

Main Groups	Stakeholder Groups	Interests at stake in relation to project	Effect of Project on Interests	Importance of Stakeholder for success of Project	Degree of influence of Stakeholder over project
DEVELOPMENT AGENTS / NGOs	"Adriatik"	community sensitization	+	3	3
		target the school level	+		
		Compete for projects	+		
	"Kristo Papajani"	community sensitization	+	3	2
		Compete for projects	+		
	Local Fishermen Association	Promote rules to protect fauna	+	4	1
		equal rights to all licensed fisherman	+		
		Stop illegal fishing	+		
		Increase fish harvest	-		
	Local Hunters Association	Promote rules to protect fauna	+	4	1
		stop illegal hunting	+		
		Improve the habitat of the area	+	4	1
		minimize the negative effects on the wild life caused by the connection of the former marshland with the see	+		
Water user association in Novesela	Administer and coordinate water problems in the area	+	4	2	
OTHER PRIVATE OR INDIVIDUAL USERS	Llanaj shpk "Agrobiznesi"	Maximize the use of land for agricultural purposes	+	3	2
		improve irrigation and drainage situation	+		
		promote organic agriculture and improve land fertility through traditional farming	+		
		increase variety of agricultural products in the area	+		
	Fish farm at the former Vjosa River Branch ("dead river")	protect their own rights of fishing	0	3	1
		minimize the activity of other private associations (licensed or not) to operate in lagoon	-		
		maintain communication canals between the river branch and the see	+		
		continuously increase fish harvest	-		
		use traditional fishing techniques	+		
	"Vivaldi" sh.p.k.	protect their own rights (for frogs)	0		

		continuously increase harvest	-	2	1
Tourist operators		continuously increase number of tourists in the area	-	2	1
		include Vlora and Narta area in tour itineraries (promote local tourism)	+ to 0		
Architecture and urban design consulting & construction companies		design areas development plans	+ to 0	3	2
		increase the volume of construction in the area	-		
Fisherman operating in Kallenga		connect temporary marshland with the see	-	4	1
		increase fishing harvest	-		
Shepherds		Improve pastures	+ (-)	4	2
		enlarge pasturing area	- to +		
Fish traders		sell products and maximize their profit	-	1	1
Summer tourists		use the beach area for recreation	-	4	1
		use infrastructure and service facilities in the area (pollution)	-		
Unlicensed fishermen		maximize their profit without following common rules	-	4	1
Unlicensed hunters		maximize their profit without following common rules	-	4	1
Poor individuals		Tree cutting for heating	-	4	1
		Tree cutting for construction	-		
Other groups of inhabitants		Property claims (Pishe-Poro)	-	5	1
		Protect their lands from Vjosa erosion	+		
		Benefit from the tourism development	+		

Table XXX. Importance of activity to stakeholders in Vjosa-Poro area

Vjosa & Poro - IMPORTANCE OF ACTIVITY TO STAKEHOLDER						
INFLUENCE OF STAKEHOLDER	Unkno wn	Little / No importance 1	Some importance 2	Moderate importance 3	Much importance 4	Critical 5
Unknown						
Little / No importance 1			Fish traders Summer tourists	Tourist operators Vivaldi sh.p.k.	Local Fishermen & hunters	Unlicensed fishermen Unlicensed hunters Fish farm at the former Vjosa river branch Fisherman operating in “pellgace” Poor individuals & other groups of inhabitants
Some importance 2			Pastures’ and agricultural land Owners	“Adriatik” “Kristo Papajani” Arch. & urban design consulting & construction	Vlora Hunters and Fishermen Association Llanaj sh.p.k. Agrobiznesi	Two fish farms ate the communication canals Pastors
Moderate importance 3						
Much importance 4			Drainage & Water Board Water user association		Ministry of Territorial Adjustment and Tourism Vlora Prefecture Regional Environment Agency	Commune Novesele (villages of Aliban, Akerni, Mbifol, Pische-Poro, Bishan, Dellinj dhe Delisuf) Vlora Region
Critical player 5						Ministry of Environment Fishing Directorate (MAF) General Directorate of Forestry and Pastures (MAF) Directorate of waters (MAF)

Part 2. Assessment and Objectives

3.1 Assessment

3.1.1. Extend and situation of the ecological unit, including its catchment's area

The proposed Protected Area includes not only the wetland sites but also the hill range that serves a catchment basin. As such the site could easily maintain its ecological integrity if conservation measures foreseen inside of it are successfully implemented.

Different ecological units of the project site show signs of ecological deterioration. Narta lagoon suffers from eutrofication, pollution from industrial and urban activities overfishing, overhunting, water disbalance, absence of fresh water entrances etc. Kallenga and Limopua suffer from uncontrolled interventions in relation with sea water entrance. Dune systems are facing degradation and destruction from sand extractors. Pische-Poro suffers from fires, logging, degradation from grazing, overhunting etc. Agricultural land is in need of an appropriate irrigation and drainage system while salinas suffer from the absence of key investments related to sea water entrances, water balance and dike erosion.

3.1.2. Biodiversity

The whole area is distinguished for its diversity of habitats and its richness in flora and fauna species. Many of them are of have a conservation concern at international, national and regional level. A wide range of habitats, typical to wetland sites, occur in the project area : mediterranean shrubs and maquis in the hill range, alluvial forests bordering Vjosa River, fresh water bodies at Zverrneci or Panaja hills, coastal lagoons of Narta and Kallenga, saltmarshes of Akernia etc. The richness of habitats explains the presence of numerous species of vertebrates and invertebrates such as birds, mammals, reptiles, insect and fish.

3.1.2.1. Flora

Flora and vegetation is impressively rich and interesting. Some 1,400 vascular plant species (equal to 42.4% of the flora of Albania) are known for the site. All these plant species make up a

great national asset. Some of them are extremely rare, some others have scientific values, a number of them is used as medicinal, aromatic, industrial alimentary and decorative plants.

Narta are shelters four taxons wellknown for their medicinal values (Tab. XXX). Orchis species (*Orchis albanica* & *Orchis x paparisti*) occur all over the area. For three others, the distribution range is limited to mediterranean maquis and forests.

Table . Medicinal plants occurring in Vjose-Narta area

Taxon	Threat Status	Distribution
<i>Origanum vulgare</i>	EN	In mediterranean maquis and forests
<i>Orchis sp</i>	EN	Whole area
<i>Olea europea var. sylvestris</i>	VU	In mediterranean maquis and forests
<i>Ceratonia siliqua</i>	EN	In mediterranean maquis and forests

About 25 plant species or 7.5% of the total number of threatened plant species of Albania are encountered in the wetland complex. Among them, 9 species are threatened also locally while two species are endemic to Albania.

Table . Plant Species Threatened Nationally and Locally

No.	Latin Name	Threatened	Location
1	<i>Agrimonia eupatoria</i> L.	E	
2	<i>Ammophila arenaria</i> (L.) Lb.	E	
3	<i>Anacamptis pyramidalis</i> (L.) Rich.	E	
4	<i>Baldellia ranunculoides</i> (L.) Parl.	V, R	
5	<i>Butomus umbellatus</i> L.	V	
6	<i>Cladium mariscus</i> (L.) Pol.	V	
7	<i>Desmazeria marina</i> (L.) Drude.	E, R	Vjosa –Treport
8	<i>Elymus farctus</i> P.B.	E	
9	<i>Ephedra distachya</i> L.	E, R	Vjosa -Treport
10	<i>Hydrocotyle vulgaris</i> L.	E	
11	<i>Hypericum perforatum</i> L.	E	
12	<i>Marsilea quadrifolia</i> L.	V, R	Zvernec
13	<i>Narcissus poeticus</i> L.	R	
14	<i>Nuphar lutea</i> (L.) Sibth. & Sm.	V, R	Old Vjosa
15	<i>Nymphaea alba</i> L.	V, R	Old Vjosa
16	<i>Nymphoides peltata</i> O.Kuntze.	V, R	
17	<i>Orchis albanica</i> Goelz & Reinhard.	E, End	Poro
18	<i>Orchis coriophora</i> L.	E	
19	<i>Orchis x paparisti</i> Goelz & Reinhard	E, End	Poro
20	<i>Origanum vulgare</i> L.	E	
21	<i>Pancreatium maritimum</i> L.	E, R	Zvernec
22	<i>Quercus robur</i> L.	Ex?	Poro
23	<i>Serapias lingua</i> L.	E	
24	<i>Spiranthes spiralis</i> Koch.	E	
25	<i>Stachys maritima</i> L.	E	

E -Endangered, V- Vulnerable, R – Rare. End- Endemic

Of special interest is the presence two endemic species : *Orchis albanica* and the hybrid form *Orchis x paparisti*.

68 species of plants (see Annex XXX) are considered as noteworthy species in Narta area either for their economical values or of scientific interest.

3.1.2.2. Fauna

As stated above, the wetland complex of Vjosa-Narta is an important distribution area for a high number of animals including molluscs, insects, fish, amphibians, reptiles, mammals and especially birds. According to former studies (Site Diagnosis Report) the wetland complex shelter at least 741 species of animals of vertebrates (Tab.).

Table . Animals species present in the wetland complex of Vjose-Narta

Group of species	Nat. Threatened	Glob. Threatened	Protection Status	Nb. F species
Molluscs	12	-		> 32
Insects (Lepid & Coleopt)	57	1	28	> 287
Crustaceans	9	-		> 61
Echinoderms	6	-		> 6
Fish	16	5	1	90
Amphibians	9	2	5	9
Reptiles	23	5	20	26
Birds	43	4	52	194
Mammals	14	9	12	32
Total	189	26	118	737

For certain groups of species such as amphibians, reptiles, birds and mammals, the data are quite complete. For other groups, especially mollusks, crustaceans, insects and echinoderms, further scientific surveys are needed.

A good number of species belong to categories threatened either nationally or internationally. Narta shelters 26 Globally Threatened species (Tab. XXX and XXX) and it is thus a site whose conservation represents a world wide interest. Furthermore the complex registers 174 species of National Conservation Concern deserving the national effort towards the site conservation. The site's importance is shown also by the presence of 118 species protected nationally and internationally. Narta is a stronghold of biodiversity in Albania.

Table XXX. Globally Threatened Species in Vjose-Narta area

Nr.	Species	Globally Threatened Category
1	<i>Lycaena ottomanus</i>	VU
2	<i>Acipenser sturio</i>	EN
3	<i>Alosa fallax nilotica</i>	DD
4	<i>Aphanius fasciatus</i>	DD
5	<i>Atherina boyeri</i>	DD
6	<i>Gambusia affinis</i>	EN
7	<i>Hyla arborea</i>	LR/nt
8	<i>Triturus cristatus</i>	LR/cd
9	<i>Caretta caretta</i>	EN
10	<i>Dermochelys coriacea</i>	CR
11	<i>Elaphe situla</i>	DD
12	<i>Emys orbicularis</i>	LR/nt
13	<i>Testudo hermani</i>	LR/nt
14	<i>Pelecanus crispus</i>	LR/cd
15	<i>Haliaeetus albicilla</i>	LR/nt
16	<i>Aquila clanga</i>	VU
17	<i>Falco naumanni</i>	VU
18	<i>Rhinolophus blasii</i>	LR/nt
19	<i>Rhinolophus euryale</i>	VU
20	<i>Rhinolophus ferrumequinum</i>	LR/cd
21	<i>Myotis myotis</i>	LR/nt
22	<i>Microtus (Pitymys) felteni</i>	LR/nt
23	<i>Microtus (Pitymys) thomasi</i>	LR/nt
24	<i>Mus spicilegus (abbotti)</i>	LR/nt
25	<i>Lutra lutra</i>	VU
26	<i>Stenella coeruleoalba</i>	LR/cd

Ex - Extinct; **CR** - Critically Endangered; **EN** - Engangered; **VU** – Vulnerable; **DD** - Data Defficient; **LR/cd** - Lesser Risk conservation dependent; **LRnt** - Lesser Risk near threatened;

Amphibians and Reptiles

Some of the species are threatened nationally or internationally. It is worth mentioning the presence of Globally Threatened Species of European Tree Frog *Hyla arborea*, Loggerhead *Caretta caretta*, Herman’s Tortoise *Testudo hermanni*

Birds

The data of the last years pointed Narta as the second most important site for waterbirds in Albania, with Karavasta being the first one. In winter more than 23% of all Albanian waterbirds find refuge in the area. For more than 35 species the area holds more than 6% of national effective (Table XXX). For Flamingos *Phoenicopterus ruber roseus*, Shelduck *Tadorna tadorna*, Pintail *Anas acuta*, Goldeneye *Bucephala clangula*, Kentish Plover *Charadrius alexandrinus* and Golden Plover *Pluvialis squatarola*, Narta is the main wintering site of

Albania. It is worth mentioning the presence of the Dalmatian Pelican *Pelecanus crispus* (9%) and Audouini's Gull *Larus audouinii* (100%), both considered as Globally Endangered Species.

Table . National importance of Narta for wintering waterbirds

Proportions of national figures (Bino unpublished)

Species	National %
<i>Podiceps cristatus</i>	15.40
<i>Phalacrocorax carbo</i>	19.02
<i>Pelecanus crispus</i>	8.97
<i>Ardea cinerea</i>	14.29
<i>Phoenicopterus ruber roseus</i>	50.85
<i>Anser albifrons</i>	31.58
<i>Tadorna tadorna</i>	41.18
<i>Anas penelope</i>	35.10
<i>Anas crecca</i>	29.57
<i>Anas platyrhynchos</i>	20.60
<i>Anas acuta</i>	42.16
<i>Anas clypeata</i>	17.30
<i>Aythya ferina</i>	8.50
<i>Bucephala clangula</i>	42.34
<i>Mergus albellus</i>	16.67
<i>Mergus serrator</i>	16.15
<i>Fulica atra</i>	21.96
<i>Haematopus ostralegus</i>	21.62
<i>Vanellus vanellus</i>	21.73
<i>Charadrius hiaticula</i>	14.29
<i>Charadrius alexandrinus</i>	53.68
<i>Pluvialis apricaria</i>	66.59
<i>Pluvialis squatarola</i>	35.66
<i>Calidris minuta</i>	41.73
<i>Calidris alpina</i>	41.72
<i>Numenius arquata</i>	7.76
<i>Tringa erythropus</i>	9.03
<i>Tringa totanus</i>	31.57
<i>Tringa nebularia</i>	13.56
<i>Tringa ochropus</i>	26.47
<i>Actitis hypoleucos</i>	6.45
<i>Larus melanocephalus</i>	12.09
<i>Larus ridibundus</i>	28.37
<i>Larus genei</i>	16.41
<i>Larus audouinii</i>	100.00
Total species	23.50

For three breeding species (Tab. XXX), Kentish Plover *Charadrius alexandrinus*, Black-winged Stilt *Himantopus himantopus* and Avocet *Recurvirostra avosetta*, Narta is Albania's most important sites. For the other remaining species, Narta is the second most important site of the country.

Table XXX. National importance of Narta for nesting waterbirds
Proportions of national figures according to Tempelman & Defos du Rau 1998

Species	National %
<i>Charadrius alexandrinus</i>	50
<i>Himantopus himantopus</i>	100
<i>Recurvirostra avosetta</i>	60
<i>Burhinus oedicnemus</i>	30
<i>Glareola pratincola</i>	25
<i>Sterna hirundo</i>	10
<i>Sterna albifrons</i>	40

International Importance

Narta is also a site of international importance. The area fulfills the Ramsar criteria (Wetlands of International Importance) for the total number of wintering waterbirds with more than 34,000 individuals (20000 individuals being the Ramsar criteria). For three species the area holds more than 1% of the regional population (Table XXX).

Table XXX. International importance of Narta for wintering and nesting waterbirds
Proportions of regional populations according to Rose & Scott 1997

Species	Population	Regional %
<i>Anas penelope</i> (WI)	West Siberia/North-East Europe Black Sea/Mediterranean	2,2%
<i>Himantopus himantopus</i> (BR)	Black Sea/Mediterranean	1.24%
<i>Charadrius alexandrinus</i> (BR)	Europe	0.64%
<i>Sterna albifrons</i> (BR)	Black Sea/Mediterranean	1.2%

WI- wintering; BR - breeding

Those figures are sufficient for enlisting Narta as one of the most important sites for birds in Albania and in the Eastern Mediterranean Region. 92 species of birds belong to the group of noteworthy species (Annex X). This fact stresses the importance of management activities in the improvement of socio-economic conditions of local inhabitants.

Mammals

The site of Narta is, after the Karavasta, the second most important in the lowland coast of Albania in terms of Biodiversity interest in general, including its mammal logical values. The site is hosting a variety of habitats that on their side are being used by a great number of mammals of international, national and regional importance. Four species of small mammals, respectively two insectivores (*Talpa caeca* and *Talpa stankovici*) and two rodents (*Pitymys*

thomasi and *P. felteni*) endemic of Western Balkans or Mediterranean Region have a part of their distribution range inside the area.

Four rare species are resident or visitor to the site, such as *Rhinolophus blasii*, *Myotis myotis*, *Mus spicilegus (abboti)* and *Stenella coeruleoalba*. The site is important for noteworthy species, in particular. At least, some ten mammal species, respectively: 2 insectivores, 4 bats, 1 hare species, 2 carnivores and 1 dolphin species are considered as species of special interest for the site. Importance of the site becomes high when assessing the role it plays in respect to safeguard and ensure long-term survival of threatened species, such as *Rhinolophus euryale*, *Canis aureus*, *Lutra lutra*, *Meles meles*, and *Mustela putorius*.

3.1.3. Naturalness degrees of the site

The project area has been heavily impacted by humans. Natural habitats occur only in very small locations. They consist in sand dune systems of Vjosa outlet and south of Kallenga lagoon. The only seminatural habitat is represented by Vjosa River where the human interventions have been not so heavy. The largest habitat type of project site, the coastal lagoons, belongs to the modified and artificial category. Narta lagoon has been heavily modified. A part of it was drained and changed in agricultural land while 1,300 ha became salinas. Kallenga lagoon was linked artificially with the sea through a channel. Such an intervention changed its ecological character.

The pine belt of Pisha-Poro has originally been artificial although today it could be considered as seminatural. Agricultural landscape (Akernia plain and Panaja hills) are considered as man-made or totally artificial.

3.1.4. Rarity

The project site is an important area for flora and especially fauna. Narta is the second largest coastal wetland of Albania. It supports a high number of species, especially wintering birds. Narta lagoon is the second most important wintering and breeding site for waterbirds in Albania.

<i>Taxons</i>	<i>Nb. of species</i>
<i>Plants</i>	9
<i>Insects</i>	30
<i>Molluscs</i>	10
<i>Amphibians</i>	3
<i>Reptiles</i>	17
<i>Birds</i>	31
<i>Mammals</i>	4
<i>Total</i>	104

A total of 104 species occurring in the site are considered as being rare in Albania (Table)

As mentioned before, the wetland complex shelters two endemic species for Albania: *Orchis albanica* and *Orchis x paparisti*.

At least three species (one insectivore and two rodents) are considered endemic either to Western Balkan or Mediterranean. Narta is also nationally recognized for its unique sand dunes with some of them reaching 4-5 m high. Such a unique habitat deserves recognition and strong conservation measures.

3.1.5. Fragility and Vulnerability.

Different habitats present in the project area show signs of fragility and are sensitive to different acting factors.

A. Narta Lagoon

That coastal lagoon suffers eutrophication/pollution induced by :

- Lack of fresh water entrances
- Siltation of lagoon communication channels (with the sea)
- Urban pollution (sewage waters and solid waste from Vlora)
- Industrial pollution (former and present)
- Water extraction from the salinas

The site is heavily disturbed by men activities. Poaching is still very common.

B. Kallenga lagoon

This small lagoon is controlled by a fishery association which has also opened a channel linking the lagoon with the sea. Such an intervention changed its natural character through increasing the salinity and changing it from brackish to salted. Hydrological changes were also expressed in changes of vegetation structure.

C. Salinas

Diking system in salinas is suffering from erosion. That phenomenon has brought to the reduction of its industrial capacities as well as its importance for breeding birds.

Poaching and human disturbance is also a common event.

D. Vjosa river

Human activity has damaged and degraded part of alluvial forests along river and in the surroundings of river delta. Vjosa river is causing now erosion problems with pasturing areas already lost by the last floods.

Also high disturbance has been observed. Illegal activities as poisoning and dynamite use for fishing are still consistent.

E. Agricultural land

Overgrazing and consistent human disturbance heavily influence its use from birds.

F. Sand dunes

This unique habitat is really endangered because of human interventions such as sand extraction and unsustainable tourism development.

E. Pine forest

About 400 ha have been burned in 1998. Different parts of the forest are heavily damaged by logging. As other parts of the wetland complex, this habitat is threatened by planned/occasional development of tourism.

Hydrological interventions in Kallenga lagoon has increased the water salinity that is now influencing the Pine forest. According to some foresters, Pine trees have shown signs of degradation due to salinity increase. The Pine forest shows clear signs of overgrazing . More than 15 dairy-huts occur now in the forest.

F. Olive yards

In the recent years, some parts of this typical mediterranean landscape have been degraded or destroyed either for woodcutting or from fires.

G. Irrigation and drainage channels

Part of the irrigation and drainage channels are used as damping sites by villagers. Such a phenomenon has a negative impact in the water quality as well as landscape.

3.1.6. Typicality

Among numerous habitats composing the project site, is worth stressing the presence of three habitats typical for the region : (i) the sand dunes and (ii) the lagoon of Narta and (iii) the salinas of Narta.

(i) In former times, sand dunes were widely distributed in coastal Albania but most of them were destroyed for sand extraction. Actually, the sand dunes of Vjose-Narta wetland complex, constitute the last remaining old dunes of coastal Albania.

(ii) Narta lagoon is the second largest coastal lagoon of Albania. This particular habitat is very wellknown in Albania for its great biodiversity values.

(iii) Narta salinas constitute also a typical habitat considering that other salinas in Albania do not exist any more. Although a semi-industrial habitat, salinas are important for their biodiversity values especially for breeding and migrating birds.

3.1.7 Historical and archeological values of the site

Historical and archeological values of the sites, as earlier mentioned, are quite unique and make it a worth visit.

St. Marie Church

It is located in Zverrneci island, in the southern part of Narta lagoon. It is a Cultural Monument dating from the 13th Century. The church is well known for its wall paintings as well as wood carves showing flowers and several animals. The church is nowadays restored and used as cult place. Festivities are organized each 15th of August.

Triporti

It is located in the west of Narta lagoon, near to Zverrneci village. Archaeological excavations have shown that the site has antique buildings dating from greek-roman period. Triporti has been an important harbour linking the city with other important antique cities as Aulona, Apollonia, Oriku and Amantia.

Spinarica.

According to documents strating in the 12th Century, Spinarica was one of the medieval cities in the Adriatic Sea. It was located nearby narta lagoon, in the outlet of Vjosa River. Spinarica was an important trade center especially for wheat, stock breeding, wood and iron. After the 15th Century, the city loses its importance and it is no more mentioned by historical records. The remains of the city are still not discovered due to natural changes of the coastal area.

Cultural and historical monuments in the area



3.1.8. Potential for improvement and development

The project area presents great potentials for improvement of ecological and socio-economical conditions. Some of the habitats still are in a good natural or seminatural shape. Typical sand dunes are still unspoiled and others could easily be rehabilitated if conservation measures are undertaken. Forest regeneration is high and it is expected that in few years, the former degraded parts would recover. Oliveyards are attractive to numerous visitors and this characteristic could be strengthened if ecotourism becomes a priority for the area.

According to recent studies, the air and water pollution is not an issue in the area. Seawater and inland natural resources are quite rich to support further developments in the area, especially tourism and leisure activities.

3.1.9. Aesthetic, cultural, religious and landscape

Aesthetic and landscape values, the presence of six Natural Monuments as well the archeological site of Treporti together with the Cultural Monument of Zverrneci, give the whole area quite additional values in the cultural and eco-tourist aspects, making it locally and nationally important.

An important cultural event are the Carnivals of Narta, a cultural event that was revived in XXth of May 2004 after many years of interruption. It collected hundreds of people that enjoyed the start of the spring season. Carnivals were accompanied with puppet shows, concerts, sportiv events etc. Such event should be furtherly promoted as a cultural activity that would attract numerous site visitors.

3.1.10. Socio-economic values

3.1.10.1. Erosion control

Although in a limited scale, erosion is a natural phenomenon in the study area, provided the geological, physical characteristics and climate conditions of the site. It is mailny observed in the hilly range which constitutes the eastern border of the project site.

Erosion is a recent phenomenon induced by human interventions such as overcutting, overgrazing and fires. It is for sure an issue to be adressed by the management plan.

The rehabilitation of the degraded habitats would certainly prevent erosion becoming a common phenomenon in the area.

3.1.10.2. Maintenance of water quality and pollution reduction

The site is rich in water resources, especially ground waters that are vital for the water supply of the area and econimocal development of the site. Although water pollution is not an issue at present, it will sooner or latter become so, due to projected developments, especially those coming from communication, transport and tourism industry. Thus the conservation of the natural habitats is an important concern that should be stressed by this management plan.

3.1.10.3. Grazing and livestock

As mentioned earlier, livestock is one of the main economical activities of the site. In total the site shelter 4,100 cattle, 25,200 sheep. Any improvement in pasture quality and water supply for livestock would certainly increase sush an activity as well as its future economical importance.

3.1.10.4. Forestry

Forest areas are used for grazing, firewood and fodder collection. Timber exploitation is not an issue at the present time. Some of the activities mentioned earlier need nevertheless a kind of control in order to prevent further degradation of the forests and scrublands.

3.1.10.5. Agriculture

Farming

It is for sure the main economical activity in the project area based in large surface of agricultural land and especially oliveyards. A large amount of arable land is nowadays abandoned from agricultural practices due to the absence of a descent drainage and irrigation network. In case of rehabilitation of such a network, agriculture could become again the most promising economical activity in the area.

Horticulture

It is not very much developed although recent initiatives, especially in Bishani and Narta have increased its weight in the local economy.

Fishery

As stated earlier, fishing is one of the main economical activities employing directly circa 70 people including both legal and illegal fishermen.

Agrobusiness

Although not very well developed, agrobusiness has good potentials, based on agricultural products and the potential development of organic farming.

Medicinal plants

Detailed information on medicinal plants (presence, quantities and their use) is not available. However, according former research, several medicinal plants occur in the area. Their quantity is rather limited and not very useful for trade mark. Their collection is apparently not a very important economic activity for the area.

3.1.10.6. Contribution to climate stability

Sand dunes, forests and wetlands do have an influence over the local climate. Forests and dunes reduce the impact of wind in inner parts of the complex. Wetlands serve for the reduction of air temperatures.

3.1.11. Education and public awareness

The site is distinguished for its ecological historical and archeological values, diversity habitats and mosaic landscape. At the same time, it provides examples of good and bad human behaviour towards nature and wildlife. The site has great potentials for a sustainable development and prosperity. Noteworthy species and habitats make the site very attractive for education and public awareness of school children, students, general public and even decision makers.

3.1.12. Leisure activities and tourism

The project area offers great potentials for tourism and leisure activities. As mentioned earlier tourism activities could be based in a well developed infrastructure as well as foreseen accomodation facilities. The site is has great naturqal and cultural assets, sufficient to sustain numerous ecotouristic activities such as hiking (Kallenga and Nature Managed Resources of Poro) birdwatching (in Narta lagoon and salinas) and cultural tourism (in historical sites of Zverrneci and Treporti).

Unfortunately, so far very little has been done to develop ecologically cound tourism. Some of the existing leisure activities area not controlled, causing pollution and disturbance to wildlife.

3.1.13. Research and studies

Vjosa-Narta area has been and still is a center of research for numerous scientific and education institutions such as Vlora University, Tirana University, Institute of Hydraulics, Institute of Hydrology and Meteorology, Institute of Biological Research, Institute of Soils Sciences etc. The scientific fields covered by those institutions include hydraulics, hydrology, geomorphology, socio-economics and biology (zoology and botanics)

* * *

3.1.14. Summary of the most important features

A summary of the earlier assessments of the most important features of the site is provided by the table xx.

Table. XX. Assessment of most importance features of the project site

	Site features	Importance			
		International	National	Regional	Local
1	Geology and Geomorphology ◆ Special geological phenomena	Low	Low	Low	Average
2	Biodiversity ◆ Species diversity ◆ Habitat diversity	High Low	High High	High High	High High
3	Typicality or presence of best examples of particular biotopes ◆ Dune systems ◆ Narta lagoon ◆ Salinas	Low Low Low	High High High	High High High	High High High
4	Rarity ◆ Rare species and plant associations	Low	Average	High	High
5	Endemic species ◆ 2 endemic plant species of Albania	Average	High	High	High
6	Historical and archeological values	Low	Average	High	High
7	Aesthetic, cultural, religious and landscape	Average	High	High	High
8	Erosion control				Average
9	Maintenance of water quality and pollution reduction			Average	High
10	Maintenance of surface water and ground water			Average	High
11	Grazing and livestock			Average	High
12	Forestry				Average
13	Agriculture/farming		Average	High	High
14	Fishery and acquculture		Average	High	High
15	Contribution to climate stability			Low	Average
16	Education and public awareness			Average	High
17	Leisure activities and tourism		Low	Average	High
18	Research and studies	Average	High	High	High

3.2. Ideal Management Objectives

In long term, this management plan would aim:

To stop and reverse the loss, fragmentation and further degradation of habitats in order to increase biodiversity values of Vjose-Narta wetland complex through :

1. Maintenance of favourable conditions for habitats and species of international, national, regional and local concern
2. Enhancement of economical and cultural values of the site
3. Improvement of nature resource management in the project area
4. Raise of public awareness and local community participation in protecting and managing ecological, economical and cultural values of the site;
5. Building and strengthening local capacities for planning, managing and monitoring the natural resources of the project area;
6. Development of further research and monitoring in support to management of the site

This general goal fits with the overall strategic aim of MedWetCoast Project in Albania as well as with the environmental politics of the Albanian Government and international institutions such as UNDP and the World Bank.

3.3. Factors influencing the implementation of Ideal/long-term management objectives

3.3.1. Natural factors of internal origin

The project site (diversity of habitats and species) is under the influence of some factors of internal origin that do have an impact over the long-term objectives identified earlier on. Such factors include natural vegetation successions, Siltation of lagoon communication channels, (Narta lagoon)/salinity increase/reduction of oxygen diluted in water, Erosion of dikes and islets in the salinas due to winds and storms, Eutrophication

a. Natural vegetation successions/habitat closure

Fresh water reservoirs, abandoned arable land and oliveyards show a tendency of vegetal successions that could close the habitats in absence of proper management measures.

Fresh water reservoir in Zverneci is now dominated by emerging plants such as *Phragmites communis*, *Typha angustifolia*, *Phylirea latifolia*. The water surface is largely reduced and the reservoir is not very suitable to wintering and migrating birds in need of fresh water resources.

The abandoned arable land is subject of vegetation succession that makes it less appropriate for wintering birds.

The undertree canopy is developing in a very dense scrubby layer not suitable for agriculture and landscape values.

b. Siltation of lagoon communication channels

The siltation of lagoon communication channels is a common phenomenon that increases the eutrophication risk of the lagoon through reduction of water levels of the lagoon, reduced amounts of entering diluted oxygen and increased salinity levels. Siltation has become nowadays a natural phenomenon but it has been firstly induced by past hydrological interventions over Vjosa River that used to pour its waters in the southern part of Narta lagoon.

By causing eutrophication, siltation contributes to a reduction of biodiversity values and economical activities based on natural wild life resources such as fishing and hunting.

c. Erosion of dikes and islets in the salinas due to winds and storms

The dikes and inner islets of the salinas have shown clear features of erosion due to wind and storms accompanied by strong wave movements. It is harmful not only to the economic interest of the salinas but it also reduces the availability of nesting sites for numerous birds threatened nationally, regionally and locally.

3.3.2. Artificial factors of internal origin

The project site is also under the influence of internal factors of artificial origin that do have an impact over the long-term objectives identified earlier on.

Invasion by exotic or alien species (Agave in Zverneci)

Agave americana has been planted in sand dunes of Zverneci area, The introduced species shows already signs of invasion over typical sand dune species. It is evident that the management plan should look on controlling its further distribution in the area.

Pollution from agriculture used pesticides

Pesticides are largely used in agriculture. According to studies undertaken during site diagnosis, the amount of pesticides per ha is XXX. This figure is considered as very high and it is very likely that pesticides could influence wildlife in both terrestrial and aquatic habitats.

Pollution from solid urban waste

Solid urban wastes are not properly managed and they are widely distributed in the landscape especially in the vicinity of urban areas. Apart from reducing the landscape beauty of the area and jeopardizing the tourism and ecotourism development, urban wastes could pollute drainage, irrigation and underground waters.

Water extraction from salinas

The sea pumping station not functional any more, salinas are extracting lagoon water. Circa 6 million m³ are pumped each year (circa 15 % of lagoon water volume) during a two month period considered as very critical by different sources (fishery report, hydrological report, etc). When the communication channels are blocked, salinas give a hint to the rapid drought of Narta lagoon.

Illegal fishing

In recent years, illegal-fishing (not licensed fishermen, mesh size, etc) is heavily damaging the fishing resources of Narta lagoon. Those methods are not selective and destroy the whole biota and food resources in general. According to local fishermen, coastal fishing by large boats in shallow sea depth is another illegal activity, destroying the coastal fish resources and influencing very negatively the entrance of fish in coastal lagoons.

Illegal hunting

As well as in other natural areas of Albania, the hunting pressure in Vjose-Narta area is quite high. As stated above, the majority of hunters circa 85% of them, are not licensed for hunting activity. Automatic guns are used, hunting season and hunting bags are not respected, and protected species are shot. The illegal hunting has seen an increase in the last years, having an increasing negative impacts on fauna. Hunting has also an indirect impact because of the noise and other stresses it causes. The group of animals suffering the most from illegal hunting is that of the birds of prey cause of their specific foraging strategy.

Human disturbance

Human disturbance is very high and is one of the factors responsible for reducing the biodiversity values. It is expressed through the overall presence of men in every habitat. It has largely increased in the recent years by the development of uncontrolled tourism and other activities including agriculture, hunting and fishing etc.

Deforestation

Several cuttings, extirpations, overgrazing and successive burning are noted especially in Pisha-Poro and Panaja hills. Artificial fires are a new cause of destruction in the recent years. They are usually initiated by shepherds for creating of new pastures, amelioration of the structure of soil and grassland to them. This negative practice damages not only the flora and fauna but also diminishes the soil quality and increases the soil erosion.

Urban planning - uncontrolled development

The geographical position, the climatic, the very attractive landscape, archeological and historical sights offer high conditions for tourism and recreation to the national and foreign visitors. But the construction of new tourist settlements in ecologically sensitive areas represents a great risk for several threatened species and habitats.

A new urban study for the coastal area of the project site has been proposed for approval nearby Council of territorial Adjustment of Albanian Republic (CTAAR). As mentioned earlier,

the approval of this urban study could put under risk several habitats and species including sand dunes, pine forest, reptiles, wintering and breeding birds, mammals and amphibians.

The construction of new tourist settlements in ecologically sensitive areas is a great risk for many species of conservation concern.

Hidrological interventions in Limopua, Kallenga and Narta

All the coastal lagoons have been linked with sea through communication channels. While the lagoon channels at Narta have been opened since more than 30 years ago, Kallenga and Limopua have been linked only recently. Such intervention brought changes of water parameters and induced an impact over flora and fauna inhabiting the area. Both wetlands have nowadays very few birds.

Airport construction

A new airport has been planned for construction in Akernia plain. No EIA has been undertaken so far. The airport construction and its later functioning could increase disturbance

Land reclamation and agriculture

Land reclamation covered a surface of more than XXX ha and was completed in XXX. Wetlands of Akernia (north of Narta salt pans) were subject of drainage works. Vjosa changed its course and stopped discharging its waters in Narta lagoon. Draining channels were opened everywhere. Dikes were built to prevent floods from rivers and the sea.

However, the land obtained, had a high concentration of salt. As a consequence the process of un-salting started and after 20 years of efforts only the eastern part of Akernia plain became useful for crop production.

After the '90s the plains were left uncultivated. Now they are used only as wintering pastures. The former irrigation and drainage system has been partly damaged.

Today the agriculture and arboriculture, although less intensive than in the past, still remains an important economic activity for the local population. Stock raising and grazing represent one of the main economic activities of the area. This activity is mainly based on the farming of sheep, goats and cows. It is increasing every year. Overgrazing pressure is very high. The impact of this activity on the biological richness of the area has also increased. The extension of herds and the overall grazing and almost along the whole year has critically damaged the terrestrial habitats of the area by impoverishing the plant community and all the biota related with it.

Eutrophication

Narta lagoon is considered as a eutrophicated wetland. The amount of diluted oxygen is heavily reduced during summer and induces a rapid eutrophication of the lagoon. Eutrophication is caused from reduced fresh water entrances, entrance of sewage waters together with other organic and inorganic pollutants in the south-western part of the lagoon and absence of seawater entrances from lagoon communication channels.

As above, eutrophication decreases the diversity of flora and fauna and limits the natural resources to be exploited by local communities.

Erosion

It is observed in the Vjosa River banks as well as along the coast. Vjosa River in some parts of it has heavily eroded the river banks causing also the loss of pasturing land.

Coast erosion has been observed in Vjosa outlet as well as Trepoti area. Typical and natural sand dunes have been partly destroyed. If uncontrolled, other sand dunes will disappear in the next years.

Low local research capacities

Local research institutions are very scarce and their capacities are still weak. Vlora University is the only important research and education institution in the area. It is specialised in subjects such as . naval engineering, hydrology, jurisprudence, ... Funds devoted to research are very limited and there is no research subject carried out in the project area.

Low environmental awareness

The area as well, as the whole Albania, has inherited a low level of environmental awareness. Small efforts have been undertaken in recent years but the environmental awareness is still in its early stages. Actually, school education programmes are not at all focused on nature conservation. Several environmental NGOs cover the area but their activity has been quite sporadic and almost non-existent in very recent years.

Absence of irrigation infrastructure

The irrigation infrastructure is partly damaged and a large part of the agricultural land is not at all irrigated. As a result, has either been abandoned or is rented to shepherds. In the abandoned parts, the vegetation is recovering and it is closing the habitats. Grazing pressure in the remaining part is very high, showing clear signs of overgrazing.

3.3.3. Natural factor of external origin

The only natural factor of external origin that is having and will certainly have an impact over the project area is the climate change. It is evident that climate changes will bring changes in the

- vegetation dynamics and related flora and faunan in the project area
- sea level changes and their effects on hydrological regime of Narta and Kallenga lagoon as well as its biota and important fish and shellfish resources
- Increase of erosion pressure in the coastline
- catchment basin of Vjosa River

Unfortunately such a factor should be controlled by means that overpass this Management Plan.

3.3.4. Artificial factor of external origin

As mentioned in Part I of this Management Plan, the area is/will certainly be under the impact of activities that are happening/planned to happen in the surroundings of the project area.

Inappropriate institutional framework

There is an open conflict between the General Directorate of Forestry and Pastures and Ministry of Environment on the rights to manage Protected Areas. During recent years, MoE has shown an increasing interest to take under its responsibility the management of some pilot Protected Areas. Such a request has been continuously refused by the GDFP, which is also the actual manager of Protected Areas and other forestry areas.

Industrial park and Termo generation facilities

The industrial park and the termo generation facility, planned for construction south of the project site, could have an impact over the fulfilment of long-term objectives since it would increase disturbance, increased traffic in the area, pollution. Overall, the industrial park goes agians the objectives of ecotourism development in the area of Zverrneci.

Pollution from harbouring ships

South of project area is located a harbour known as “Porti i Ri”. Several ships anchor in this harbour facilities. Oil pollution is frequent and could even have an impact over biota of the project area.

Pollution from industry, urban sewage waters, agriculture used pesticides

The project area has inherited a high pollution from former activites developped in the vicinity such as PVC factory of Vlora. Actually, a new beer factory (Birra Norga) has been built nearby

and according to studies on water chemistry, the factory is pouring its wastes in a channels that run to Narta lagoon. According to the same study, the factory is the main pollution contributor for Narta lagoon.

Futhermore, sewage waters from a part of Vlora city and Qendra commune are running without any treatment directly to Narta laggon causing a lot of organic and inorganic pollution and serious health concerns.

Deforestation in Vjosa catchment basin/erosion in Vjosa catchment

Deforestation in Vjosa chatchment basin will increase erosion and sedimentation in Vjosa River. Increased sedimentation will reflect changes in the coastline of the project are such as channels siltation etc.

Diking of Vjosa River

A new hydropower station has been planned to be built over Vjosa River. Such a construction, accompanied by a large damm, will reduce sedimentation in Vjosa outlet and in the coastline of project area. As a result, the whole coastal line will be under erosion effects that could destroy several important habitats as sand dunes, pine belt, etc.

Gravel mining

Uncontrolled gravel mining reduces sedimentation proces in the coastline. As such, the coastline is more fragile towards erosion. Several habitats mentioned earlier are in risk of extinction.

Infrastructure works

The rehabilitation of Fier-Vlora road will increase traphic and other activities linked with infrastructure improvement. Such an infrastructure improvement is usually associated with increased human disturbance and landscape changes. The area under impact is the hilly range of Panaja. The EIA for the road rehabilitation shopuld certainly foresee the presence of the project area and try to conserve the natural resources of the area.

Low central research capacitites

Numerous research institutions are implicated (in the past) either in monitoring or research subjects devoted to the area. Several studies have been undertaken on hydrology, hydrochemistry, biodiversity, hydraulics etc. Nevertheless, during recent years there has been a budget shortage among research institutions and as a result the research activity has been quite limited.

3.3.5. Factors inherent to legislation or traditions

Legal and/or customary rights for grazing, hunting, fishing, wood harvesting

The area has been traditionally used for agriculture, grazing, fishing and fruit bearing. Such activities were developed in a friendly coexistence with natural resources.

Legal obligations of the GoA resulting from international, national and local laws

The Albanian Government and the Albanian Parliament has signed a number of Treaties or Conventions that imply its contribution towards the protection of biodiversity, soil, water quality, air quality, etc. Such a framework is a good basis for the implementation of long-term objectives.

Lack of environmental awareness

As well as in other wetlands of Albania, the protection of biodiversity faces the lack of public awareness in the environmental field. In many actions taken by men, habitats and species are destroyed without taking in account their importance in future tourist developments of the area. Those facts speak clearly about the absence of any environmental education.

Local celebrations

Local celebrations, such as Narta Carnivals, attract many visitors and do serve as good touristic activities. If such activities are well organized, they would certainly contribute to the development of traditional values, local products and will make the area more attractive to foreign visitors.

3.3.6. Physical considerations

The area has physical characteristics that favorise the implementation of long-term objectives. Broken and steep terrains are missing and the overall area is of easy access, favourable to the development of ecotouristic activities.

Due to physical characteristics, it is easy to control erosion, to improve pastures, to control fires as well as to manage different other habitats.

3.3.7 Human and financial resources

Human local resources for executing and implementing the management plan are scarce. The same for financial resources at national and regional level. Nevertheless, initiatives on economic activities environmentally sound (ecotourism, organic agriculture, cultural events etc) are supported by local agencies such as AULEDA (Aulona Local Economic Development Agency).

3.4. Second Evaluation

The purpose of the second evaluation is to measure the effects of the identified constraints and modifiers on the ideal objectives and to arrive at a set of practically achievable objectives. These objectives will be moderated by the existing or likely resources, available expertise and technology and within the local social, economic and political situation. These objectives are called operational objectives (see section XXX below).

The second evaluation should address the following questions:

- What effects do constraints and modifiers have upon ideal objectives?
- How fast are the effects of the constraints and modifiers happening?
- To what extents are the effects of the constraints and modifiers taking place?
- Can the constraints and modifiers be changed and if so what action is needed to do this?

Some factors, such as international, national and local legislation, may be beyond the ability of local managers to modify.

One approach to the second evaluation is to consider the effect of each constraint and modifier as it is listed. Another approach is to have a separate section of evaluation. Scoring systems can provide an element of objectivity.

1. Natural factors of internal origin

Table. Impact evaluation of constraints over the implementation of ideal objectives

		Ideal objectives					
		1 to maintain habitats and species	2 to enhance economic and cultural values	3 to improve nature resource management	4 to raise awareness and participation	5 to strengthen local capacities	6 to develop monitoring and research
Constraints	Habitat closure	-2	-2	0	0	0	0
		<i>Comment: Water surface needs management and reopening</i>	<i>Comment: Loss of pastures</i>	<i>Comments : Cattle grazing could be allowed</i>			<i>Comments: Management success monitored by locals</i>
	Siltation of lagoon channels	-3	-3	0	0	0	0
		<i>Comment: Increases eutrophication risks</i>	<i>Comment: Less fish in Narta Lagoon</i>		<i>Comments : re-opening through participation of local fishermen</i>		<i>Comments; Management success monitored by locals</i>
	Erosion of dikes and islets in salinas	-3	-3	0	0	0	0
		<i>Comment: Less available habitats for birds</i>	<i>Comment: Reduction of salt production</i>	<i>Comments: Action Plan in accordance with Kripa ShPK</i>	<i>Comments : Action Plan in accordance with Kripa ShPK</i>		

2. Artificial factors of internal origin

Table. Impact evaluation of constraints over the implementation of ideal objectives

		Ideal objectives					
		1 to maintain habitats and species	2 to enhance economic and cultural values	3 to improve nature resource management	4 to raise awareness and participation	5 to strengthen local capacities	6 to develop monitoring and research
Constraints	Allien species	-1	0	0	0	0	0
		<i>Comment: Native species under risk of extinction</i>					<i>Comment : Monitor expansion of introduced species</i>
	Agricultural pollution	-1	-1	0	0	0	0

of lagoon waters	<i>Comment: Eutrophication risk in wetlands</i>	<i>Comment: Less fish resources in wetlands</i>				<i>Comment : Monitoring water quality</i>
Solid urban waste	-1	-3	0	-3	0	0
	<i>Comment: Management actions in and out of the area</i>	<i>Comment: Negative impact over tourism initiatives</i>	<i>Comment : Removal is rather important</i>	<i>Comment: Negative influence over awareness</i>		
Sewage waters	-3	-3	0	-1	0	0
	<i>Comment : High eutrophication risk</i>	<i>Comment: Less fish resources in Narta Lagoon</i>	<i>Comment: Channel diversion imperative</i>	<i>Comment: Negative influence over awareness</i>		<i>Comment : Monitoring water quality</i>
Water extraction from salinas	-1 or +1	-3	0	0	0	0
	<i>Comment: a. Increases drought risk for Narta lagoon b. Reduces fish resources c. Facilitate entrance of sea water in Narta lagoon</i>	<i>Comment: Less fish resources in Narta Lagoon due to drought</i>	<i>Comment: Agreement with Kripa, MoE, MoEP</i>			<i>Comment : Monitor the impact of water extraction from Kripa SHPK</i>
Illegal fishing	-3	-3	0	-1	0	0
	<i>Comment: Destroys fish resources</i>	<i>Comment: Less fish resources in wetlands Lagoon</i>	<i>Comment : Should stop as soon as</i>	<i>Comment: Negative influence over awareness</i>		
Illegal hunting	-3	-2	0	-1	0	0
	<i>Comment: Diminish game and non-game species</i>	<i>Comment: Less game species and negative impact over tourism activities</i>	<i>Comment : Should stop as soon as</i>	<i>Comment: Negative influence over awareness</i>		
Human disturbance	-3	-3	0	0	0	0

		<i>Comment: Reduction of habitat availability for wildlife</i>	<i>Comment: Less biological diversity and negative impact over tourism</i>	<i>Comment : Should be reduced/stoped in priority areas</i>			
	Deforestation	-1	-3	0	-1	0	0
		<i>Comment: Less habitats available/Less species present</i>	<i>Comment: Negative impact over ecotourism</i>	<i>Comment : Should stop as soon as</i>	<i>Comment: Negative influence over awareness</i>		<i>Comment : Monitor reforestation efforts</i>
	Uncontrolled development	-3	-2	0	-1	0	0
		<i>Comment: Negative impact over priority conservation habitat and species</i>	<i>Comment: Economical values, short-term increase and long-term decrease</i>	<i>Comment : Sustainable development of tourism</i>	<i>Comment: Negative influence over awareness</i>		
	Hydrological intervention	-2	-1	0	0	0	0
		<i>Comment: Increase salinity in brackish wetlands</i>	<i>Comment: Unsuccessful interventions</i>	<i>Comment : habitats should be restored</i>			
	Land reclamation and agriculture	+1	-2	0	0	0	0
		<i>Comment: Keeps habitats open/Management neglect is a problem</i>	<i>Comment: Increases agricultural revenues</i>	<i>Comment : Habitat recovery initiatives should be encouraged</i>			
	Erosion	-2	-3	0	0	0	0
		<i>Comment: Destroys sand dunes</i>	<i>Comment: Loss of pastures, Negative impact on tourism</i>	<i>Comment : Habitat recovery initiatives should be encouraged</i>	<i>Comment: Negative influence over awareness</i>		
	Sand extraction	-3	-3	0	0	0	0
		<i>Comment: Sand dunes destroyed</i>	<i>Comment: Negative impact over tourism</i>	<i>Comment : Habitat recovery initiatives should be encouraged</i>	<i>Comment: Negative influence over awareness</i>		
	Limited funds for	-1	-1	-2	-2	-3	-3

	research	<i>Comment: Less analytical data</i>	<i>Comment: Less support on economically friendly activities</i>	<i>Comment : Less background for improved resource use</i>	<i>Comment : Less infrastructure for awareness activities</i>	<i>Comment: Low local capacities</i>	<i>Comment: Low local capacities</i>
	Irrigation infrastructure	-1	-1	0	0	0	0
		<i>Comment: Closure of habitats</i>	<i>Comment: Less agricultural production</i>	<i>Comment : Less fresh water entrances in Narta lagoon</i>			

3. Natural factor of external origin

Table. Impact evaluation of constraints over the implementation of ideal objectives

		Ideal objectives					
		1 to maintain habitats and species	2 to enhance economic and cultural values	3 to improve nature resource management	4 to raise awareness and participation	5 to strengthen local capacities	6 to develop monitoring and research
Constraints	Climate changes :	???	???	0	0	0	0
	Vegetation dynamics inside project area	<i>Comment: Could change the habitats range and diversity</i>	<i>Comment: Changes in size for agricultural land, forests, wetlands etc.</i>				
	Climate changes :	???	???	0	0	0	0
	Sea level changes	<i>Comment : Changes of salinity levels for different habitats and related flora and fauna</i>	<i>Comment : Changes in habitat size and related economical activities</i>				
	Climate changes :	-3	???	0	0	0	0
	Erosion	<i>Comment: Coastline under pressure</i>	<i>Comment : Changes in habitat size and related economical activities</i>				
	Climate changes :	???	???	0	0	0	0

	Vegetation dynamics in Vjosa watershed	<i>Comment: Changes in erosion and sedimentation levels</i>	<i>Comment : Changes in habitat size and related economical activities</i>				
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4. Artificial factors of internal origin

Table. Impact evaluation of constraints over the implementation of ideal objectives

		Ideal objectives					
		1 to maintain habitats and species	2 to enhance economic and cultural values	3 to improve nature resource management	4 to raise awareness and participation	5 to strengthen local capacities	6 to develop monitoring and research
Constraints	Inappropriate institutional framework	-3	-2	-3	-3	-2	-2
		<i>Comment: Management plan not implemented</i>	<i>Comment : Destruction of natural resources</i>	<i>Comment: Management plan not implemented</i>	<i>Comment: Management plan not implemented</i>	<i>Comment: Management plan not implemented</i>	<i>Comment: Management plan not implemented</i>
	Industrial park	-1	-2	0	0	0	0
		<i>Comment: Potential negative impact over biodiversity</i>	<i>Comment: a. Handicap for tourism development b. Potential destruction of natural resources</i>				
	Pollution from harbouring ships	-2	-3	0	-1	0	0
		<i>Comment: Potential negative impact over biodiversity</i>	<i>Comment : Destruction of aquatic biota</i>		<i>Comment: Negative influence over awareness activities</i>		
	Industrial pollution	-3	-3	0	-1	0	0
	<i>Comment : Negative impact over biodiversity</i>	<i>Comment : Destruction of aquatic biota</i>		<i>Comment: Negative influence over awareness activities</i>			
	Deforestation in Vjosa	+1 or -1	+1 or -1	0	0	0	0

watershed	<i>Comment :</i> <i>Increased erosion could enhance the sand dunes;</i> <i>Probable increase of siltation processes</i>	<i>Comment:</i> <i>a. Increased sand resources</i> <i>b. Less fish resources in Narta Lagoon due to siltation</i>				
Diking of Vjosa river	-1	+1 or -1	0	0	0	0
	<i>Comment:</i> <i>a. Erosion of sand dunes</i>	<i>Comment:</i> <i>a. Less siltation of lagoon channels</i> <i>b. Erosion of sand dunes</i>				
Gravel mining in Vjosa	-2	0	0	-1	0	0
	<i>Comment:</i> <i>a. Erosion of sand dunes</i> <i>b. Destruction of Vjosa River benthos</i>			<i>Comment:</i> <i>Negative influence over awareness activities</i>		
Infrastructure works	-3	+2	0	0	0	0
	<i>Comment:</i> <i>a. Increase disturbace during construction</i> <i>b. Increased traphic rate</i> <i>c. Increased risk of pollution,</i> <i>d. Increased human pressure over the area</i>	<i>Comment: More tourists in the area</i>				
Central research capacitites	???	0	-2	-2	0	0
	<i>Comment:</i> <i>Management not supported by reliable data</i>		<i>Comment:</i> <i>Less annalitical data for resource management</i>	<i>Comment: Less data for awareness activities</i>		

5. Factors inherent to legislation, traditions, physical features, human and financial resources

Table. Impact evaluation of constraints over the implementation of ideal objectives

		Ideal objectives					
		1 to maintain habitats and species	2 to enhance economic and cultural values	3 to improve nature resource management	4 to raise awareness and participation	5 to strengthen local capacities	6 to develop monitoring and research
Constraints	Traditional use of the area	+3	+3	+3	+3	0	0
		<i>Comment: Sustainable use of nature resources</i>	<i>Comment: Enhancement of local economy</i>	<i>Comment: Positive coexistence between traditional use and nature resources</i>	<i>Comment: Enhancement of awareness activities</i>		
	Legal obligations of GoA	+3	+3	+3	+3	+3	+3
		<i>Comment: A PA should be managed in accordance with biodiversity conservation</i>	<i>Comment: Strengthening of local economic activities</i>	<i>Comment: Improve the implementation framework</i>	<i>Comment: Enhancement of awareness activities</i>	<i>Comment: Strengthening of local capacities</i>	<i>Comment: Research development</i>
	Lack of environmental awareness	-3	-3	-2	-3	-2	0
		<i>Comment: Destruction of habitats and species</i>	<i>Comment: Unsustainable use of natural resources</i>	<i>Comment: Difficult implementation of management actions</i>	<i>Comment: More environmental awareness programs</i>	<i>Comment: Low local capacities</i>	
	Local celebrations	0	+3	0	+3	0	0
			<i>Comment: Support to the local economy</i>		<i>Comment: Enhancement of awareness activities</i>		
	Physical features	0	0	+3	+3	0	0

				<i>Comment: Easy site management</i>	<i>Comment: Enhancement of awareness activities</i>		<i>Comment: Low logistic demands for research development</i>
	Human and financial resources	-3	-3	-3	-3	-3	-3
		<i>Comment: Absence of funds devoted to nature conservation</i>	<i>Comment: Low funds available for supporting the local economy</i>	<i>Comment: Absence of funds devoted to resource management</i>	<i>Comment: Absence of funds devoted to awareness activities</i>	<i>Comment: Absence of funds for strengthening local capacities</i>	<i>Comment: Absence of funds devoted to research</i>

3.5. Operational Objectives

The operational objectives described below are the result of a detailed analysis facing long-term/ideal objectives and different factors having an impact over the implementation of ideal objectives. Thus the operational objectives intend to facilitate the implementation of ideal objectives through either resolving or avoiding the conflicting issues between ideal objectives and different factors.

The operational objectives are firstly classified in accordance with the ideal objectives they try to respond. The second classification is based in priority principles. Three scales of priority have been used in the classification of the operational objectives:

1 - Essential;

2 - Important and

3 - Less important.

This classification does not mean that objectives ordered as 3 will not be done. It is just an effort put the objectives in a hierarchic system.

Table . Hierarchic classification of management objectives

Ideal Objectives	Priority	Operational Objectives
1. Maintenance of favourable conditions for habitats and species of international, national, regional and local concern	1	<ul style="list-style-type: none"> ▪ Preserve and restore the sand dunes ▪ Ameliorate the hydrological conditions of wetlands (channels, fresh water, sewage water, organic pollutants) ▪ Maintain and increase the diversity and abundance of nesting waterbirds
	2	<ul style="list-style-type: none"> • Preserve and restore the woodland
2. Enhancement of economical and cultural values of the site	1	<ul style="list-style-type: none"> ▪ Increase the efficiency of fishery sector through appropriate investments
	2	<ul style="list-style-type: none"> ▪ Promote traditional use of natural resources (olive, vineyards, bioproducts, sapplings, etc.) ▪ Promote agro-bussineess schemes ▪ Protect and promote cultural and historical values of the site ▪ Clear and maintain the landscape free from solid urban waste (feasibility study on landfills) ▪ Develop environmentally friendly tourism and other forms of eco-development

3. Improvement of nature resource management in the project area	1	<ul style="list-style-type: none"> ▪ Set up the Appropriate Management Structure <ul style="list-style-type: none"> - Establish a Management Board - Set up a Management Authority - Define, approve and implement a Management Regulation for the LPA
	2	<ul style="list-style-type: none"> ▪ Involve local stakeholder in decision-making in the Protected Area ▪ Resolve conflicting interest between : <ul style="list-style-type: none"> - MoE and GDFP - Legal and illegal fishermen - Legal and illegal hunters - Fishermen and Salinas - Fishermen and hunters
4. Raise of public awareness and local community participation in protecting and managing ecological, economical and cultural values of the site	2	<ul style="list-style-type: none"> ▪ Raise public awareness towards the natural values of the area
5. Building and strengthening local capacities for planning, managing and monitoring the natural resources of the project area	1	<ul style="list-style-type: none"> ▪ Improve PA Administration capacity and qualification to conduct day to day management work ▪ Involve local stakeholders in the decision making for the management of nature resources
	2	<ul style="list-style-type: none"> ▪ Create local capacity in conducting research and monitoring activity in support to management plan implementation ▪ Undertake training on sustainable development
	3	<ul style="list-style-type: none"> ▪ Build up local capacity on information management (database and GIS) concerning conservation of wetland and coastal ecosystems
6. Development of further research and monitoring in support to management of the site	1	<ul style="list-style-type: none"> ▪ Support research and monitoring on biological diversity of the site ▪ Improve cooperation and co-ordination among research and academic institutions
	2	<ul style="list-style-type: none"> • Monitor nesting waterbirds and their breeding success • Inventory and monitoring of Globally Endangered Species • Monitoring of environmental variables • Studies on the aquatic vegetation and aquatic wildlife (insects, mollusks, crustaceans, and fish)

	3	<ul style="list-style-type: none"> • Habitat mapping/remote sensing • Inventory, monitoring and studies on the feeding ecology of species identified as bioindicators • Prepare and implement a monitoring programme for species identified as bioindicators • Continue inventory and monitoring of waterbirds
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Priorities from 1 to 3 : 1: essential, 2 : important 3 : less important

The fulfilment of project operational objectives will be realised through Integrated Programs that would be described more in details in XXXX.

Part Three. Management Action Plan

4.1. Site Zonation

4.1.1 Site limits

The boundaries of the site complex Vjose-Narta Wetland complex are those shown on the Map 1. The boundaries were defined in accordance with ecological, economical and social integrity of the project area.

4.1.2 Site zoning and goals

The landscape Protected Area of Vjose-Narta comprises Four Zones (Map XXX) :

- ◆ Core Zone
- ◆ Traditional Use Zone
- ◆ Sustainable Development Zone
- ◆ Tourism Development Zones

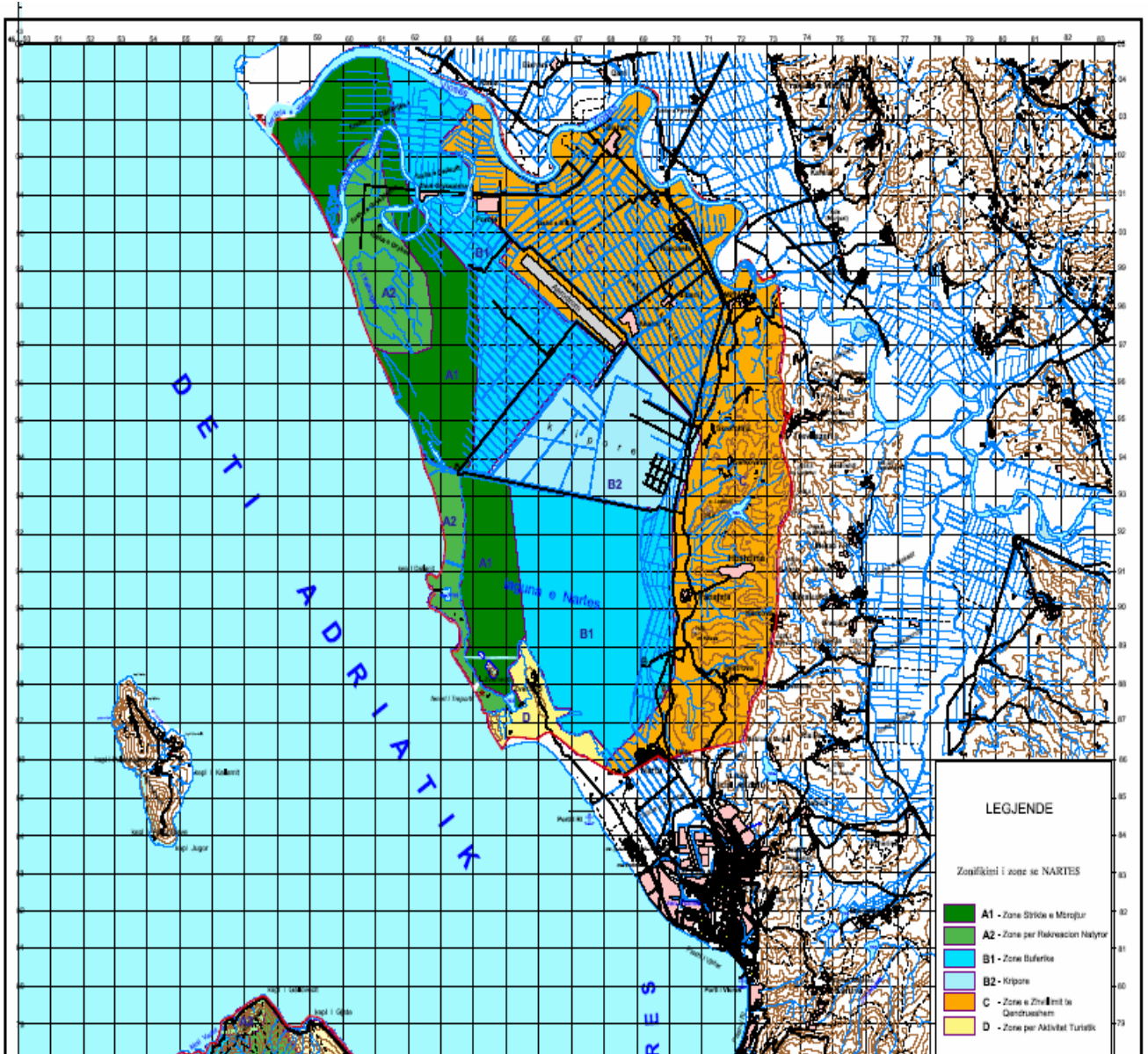
Box XXX. PA Management zone prescription

1. Core Zone (A1 & A2)	
<u>Purpose</u>	The purpose of the Core Zone is to provide a relatively undisturbed, natural reference area. It includes natural and sub-natural habitats, riverine and coastal forest, wetlands and coastal sands dunes. Key areas include the former Vjosa Outlet, Pishe-Poro Reserve, Kallenga Lagoons, a part of Narta lagoon (Shamodur), Zverneci island and Limopua lagoon as well as Natural Monuments.
<u>Management Options</u>	<p><u>A1 Special Preservation Sub Zone</u></p> <p>Emphasis is placed on minimum disturbance. Dispersed activities allowed providing experiences consistent with resource preservation.</p> <p><u>A2 Preservation Sub Zone</u></p> <p>Extensive areas that are good representations of natural habitats, which will be maintained in their natural state. Formal recreation use and limited low recreational density activities designed with minimum impact on the natural environment (i.e beach tourism in Zhuka).</p>
<u>Permitted Activities</u>	<p><u>A1 Special Preservation Sub Zone</u></p> <p>Access is organized and controlled by the Management Authority.</p>

	<p>Permitted activities include natural trails, flora and fauna watching and responsible fishing, scientific monitoring, essential management such as fire-fighting, removal of rubbish and maintenance of trails may be undertaken.</p> <p><u>A2 Preservation Sub-Zone</u></p> <p>Permitted activities as above. In difference from A1, light tourism structures are also allowed. Limited and controlled public access for education and nature based activities.</p>
<u>Incompatible Activities</u>	<p>Activities contrary to the purposes of the zone, including: hunting, destruction, or disturbance of indigenous fauna and flora, unauthorized habitat management, unauthorised access by any vehicle, storage, dumping or disposal of waste including untreated effluent; construction and operation of industrial facilities; construction of dwelling places; any use or application of chemicals (fertilisers, biocides, etc.) quarries, mining; removal of aggregates and introduction of non-native species.</p>
2. Traditional Use Zone (B1 & B2)	
<u>Purpose</u>	<p>Enables people residing within the LPA to maintain their livelihoods through traditional means. The Zone allows public access subject to respecting resident’s field boundaries and economic activities. The area includes agricultural land (Dellinja, Zhuka), Salinas and the Eastern side of Narta lagoon.</p>
<u>Management Options</u>	<p><u>B1. Agricultural Use Area</u></p> <p>Encourage development of agri-tourism activities, local home stay accommodation, village heritage centres and revival of traditional festivities.</p> <p><u>B2. Industrial Use Area</u></p> <p>Encourage traditional activities of salt extraction.</p>
<u>Permitted Activities</u>	<p><u>B1. Agricultural Use Area</u></p> <p>Livestock grazing, traditional farming and fishing to approved specific LPA management plan; access by any permitted vehicle (including by boat). Access is unrestricted.</p> <p><u>B2. Industrial Use Area</u></p> <p>Salt extraction. Limited access in accordance with the rules defined by the MP.</p>
<u>Incompatible Activities</u>	<p>Activities contrary to the purposes of the zone, including, harvesting, unauthorised collection, destruction, or disturbance of indigenous wild fauna and flora, commercial forestry operations, storage, dumping or disposal of waste including untreated effluent, construction and operation</p>

	of industrial facilities, mining and removal of aggregates (without EIA study and environmental license) and introduction of non-native species.
3. Sustainable Use Zone (C)	
<u>Purpose</u>	Enables sustainable existing and new economic activities. Provides an internal buffer function when adjacent to more intensive economic activities. Includes the plains of Bilbili, Akernia, Novosela, Skrofotina, Panaja and Narte as well as the hilly area of Trevllazer, Kerkove and Bestrove.
<u>Permitted Activities</u>	Allow current economic activities subject to compliance with all environmental and planning control regulations. Enforce clearance of waste materials and rubbish.
<u>Incompatible Activities</u>	Activities contrary to the purposes of the zone, including: unauthorised collection, destruction, or disturbance of indigenous wild fauna and flora, storage, dumping or disposal of waste including untreated effluent, mining, removal of aggregates, construction and operation of industrial facilities (without EIA study and environmental license) and introduction of non-native species.
4. Development Zone (D)	
<u>Purpose</u>	Subject to relevant permissions, enables development of new economic activities to take place, provided they are of a sustainable nature.
<u>Permitted Activities</u>	Allow the development of economic activities subject to compliance with all environmental and planning control regulations but discourage further development other than those related to the tourism industry.
<u>Incompatible Activities</u>	Activities contrary to the purposes of the zone, including: unauthorised collection, destruction, or disturbance of indigenous wild fauna and flora, storage, dumping or disposal of waste including untreated effluent, mining, removal of aggregates, construction and operation of industrial facilities and introduction of non-native species.

Map 4. Management Zones for Vjose-Narta LPA



Within the context of PA planning it is not intended that the management zones should necessarily remain fixed. But, it is not desirable that zone types or zone boundaries are changed frequently, not least because those carrying out management or economic activities within the zones need some degree of long-term certainty that the basis for management will not change unexpectedly. It is therefore recommended that in those areas of the PA where it is deemed necessary because of changing circumstances and this requires that a zone's function and effectiveness needs to be reviewed that this should take place during the 3 year review of the PA Management Plan.

4.2. Management Structure

4.2.1 Site Administration

As stated in earlier sections, Vjose-Narta area has been under the administration of different Central and Local Institutions. Nowadays, the responsibility for protected areas has been split between the GDFP and MoE. At the national level, provision has been made for a National Advisory Committee to be established in order to oversee the management of the various Albanian Protected Areas and to advise Government of policy implications.

Within the 2002 protected area law it is stipulated that a Management Committee comprising of a range of representatives drawn from the relevant ministries, local government levels, community and interested parties will administer each PA.

4.2.2. Site Management Committee

An important consideration in establishing the Site Management Committee will be the need to ensure that the broad range of interests which are evident in the site are represented at Board level, especially important is the representation of local community interests, since the Committee will effectively act as the 'official' point of contact between the sites's inhabitants and the protected area administration.

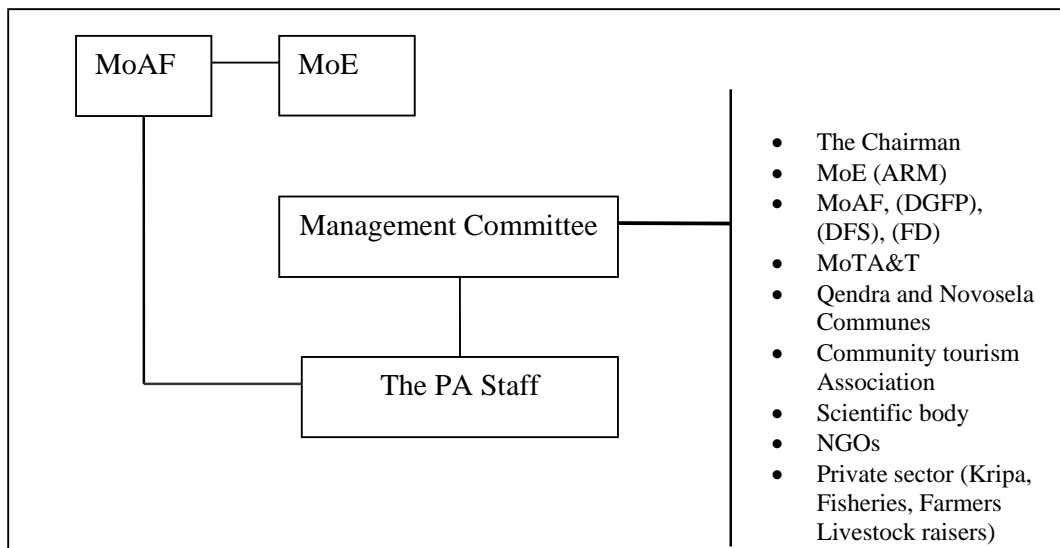
The structure of the Management Committee will also need to be balanced in that no one interest group becomes dominant. In order that balanced decisions can be made, it is recommended that an independent non political 'Chairperson' who has no financial interests in the PA is chosen to chair the committee. This appointment should be made on a biannual basis with the incumbent chairperson not being permitted to sit for two consecutive terms.

The responsibilities of the Site Management Committee should include:

- ◆ Responsibility for PAs financial matters regarding the income from PA entrance, services and activities.
- ◆ Determining at local level, the site's management policies and responsibility for their implementation and monitoring.
- ◆ Be responsible for the monitoring of the site activities.
- ◆ Be responsible for approving the work programmes and operation of the site (PA) administration.
- ◆ Have the power to make local legal regulations that concern the protection, conservation management and recreational management of the PA.
- ◆ Manage on a day-to-day basis land that falls directly within the ownership of the PA.
- ◆ Be responsible for the first level of development control activities in the site, reporting to the Ministry of Environment / Council for Territory Adjustment in accordance with the relevant legislation.
- ◆ Be responsible for appointing the PA Director and the Senior Managers.

To avoid criticism from the local community and other stakeholder groups, and to maintain transparency from the beginning, it is considered essential that the Management Committee is established immediately and prior to the appointment of the PA Director and his senior management team.

Figure XXX. Proposed Structure of the Management Committee for Vjose-Narta landscape Protected Area

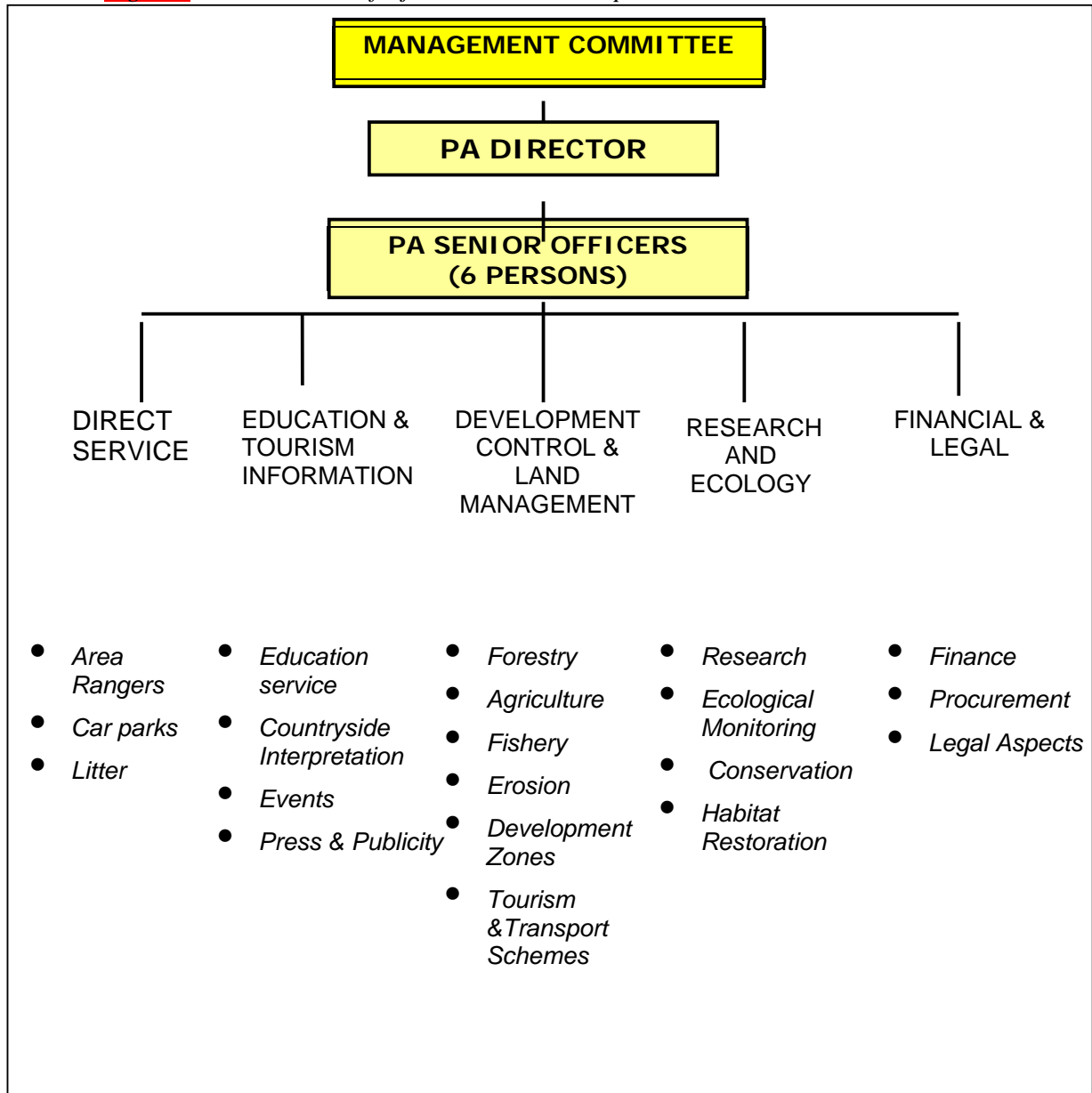


4.2.3. Staffing Structure and Duties

The PA administration of Vjose-Narta Area will be headed by a Director, who will report directly to the PA’s Management Committee. It is most important that the person appointed to this position be a progressive thinking environmental manager, who is able to accept new ideas and change.

The Director will be supported by six senior managers (Fig.) who will be responsible for, financial and legal matters pertaining to the PA, two ecologists responsible for terrestrial and wetland ecology, a land manager who will also be responsible for development control matters, tourism information and education manager, and a direct services manager. A number of 8 -12 park rangers will be fully or part-time employed to serve for the park.

Figure XXX. *Structure of Vjose-Narta Landscape Protected Area Administration*



4.2.4. Job Description for the Director of Vjose-narta LPA

Box xx. Job description for Director of the Vjose-Narta LPA

Job Designation: Director of the Vjose-Narta LPA

Date Effective From:

Grade / Salary:

Responsible to: The Site Management Committee

Job Purpose: *To assume overall responsibility for the proper and transparent administration of the affairs of Vjose-Narta LPA.*

Main Responsibilities:

- ◆ To be responsible for the day to day administration of the PA;
- ◆ To report directly to the Site Management Committee on all aspects of the functioning and operation of the PA.
- ◆ To ensure that annual budgets, annual and quarterly accounts, work plans and reports are submitted to the Management Committee on time.
- ◆ To ensure that the decisions and recommendations of the Management Committee are acted upon.
- ◆ To oversee the PA financial budget and accounts and ensure that effective audit functions are in place and working
- ◆ To supervise the senior management team and ensure that they are undertaking their tasks in an efficient and transparent manner.
- ◆ To liaise with the GDFP, Ministry of Agriculture and Forestry, Ministry of Environment, Ministry of Territorial Adjustment and other Ministry and Government bodies regarding issues which affect the NP.
- ◆ To liaise with institutions and agencies with an interest in the LPA.
- ◆ To liaise with donor agencies to secure funding for the development of the LPA.
- ◆ To liaise with business interests and secure sponsorship for LPA activities and development.
- ◆ To liaise with the press.
- ◆ To attend national and international conferences, symposiums and meetings in the capacity of both speaker and /or participant.

Person Specification:

- ◆ Should have a broad background in environmental and land use matters, backed up by relevant qualifications.
- ◆ Proven experience in managing a multidisciplinary organisation.
- ◆ Proven experience in securing high standards of performance and services to the public.
- ◆ Experience in preparing and implementing corporate strategies and policies.
- ◆ Must have strong interpersonal skills and be able to communicate at all levels.
- ◆ Must have second language skills in at least English and preferably one other language, and must be able to write coherent reports in English.

4.3 Programs and Work Plan

4.3.1. Programs

4.3.1.1. Supervision and control

Aim: Improve supervision and control of the project site to stop its further degradation

All activities and services within the Landscape Protected Area of Vjose-Narta should be under the administration of the Management Authority. PA Administration personnel will be qualified, trained and well equipped. Definition of fees and taxes as well as the creation of a special account for the park is imperative.

Foreseen Actions:

- Establishment of the Management Committee
- Preparation and implement of the LPA regulation
- Establishment of appropriate Management Authority staff/ Administration responsible for the implementation of the MP
- Provide in service training and equipment to PA Administration personnel to conduct day to day management work
- Control and regulate fishing activities
- Control and regulate hunting
- Control and regulate grazing
- Control and regulate water extraction from salinas
- Control and regulate fresh water entrances in the main wetland site
- Control fires in forest
- Control sand extraction
- Control and regulate hydrological interventions in coastal wetland sites
- Control and regulate infrastructure development
- Control tourism development
- Creation of a special LPA of Vjose-Narta created

Indicators:

- Management Committee established
- Director of the PA appointed

- Appropriate staff of PA increased
- Site borders well defined and demarkated
- Number of trainings received by the park administration
- Fees and taxes collected
- Activities regulated
- Special account for the park created by the year 2006

4.3.1.2. Conservation, management and habitat restoration

Aim: Protect, restore and enhance ecological integrity of the site through undertaking appropriate conservation and management actions to re-establish ecological conditions on degraded ecosystems and habitats.

Actions:

- Improvement of sea-lagoon communication channels in Narta lagoon,
- Improvement of fresh water entrances in Narta lagoon
- Deviate sewage waters from Narta lagoon,
- Restore Limopua from saline to brackish versus freshmarsh
- Restore former Soda dump as a fresh water reservoir
- Improve hidrological conditions of Lumi i Vdekur,
- Restore Zverrneci fresh water reservoir
- Open water surface in Zverrneci reservoir
- Rehabilitation of the degraded forests subject of recent fires,
- Implement measures preventing fire impact on Pische-Poro
- Rehabilitation of the degraded forests due to former agricultural interventions and overgrazing
- Conduct pilot interventions on pasture improvement (facilities providing food to livestock)
- Restore nesting sites for birds (Narta lagoon and Salinas)
- Restoration of dune systems in Zverrneci and Zhuka

Indicators:

- Hydrological conditions of Narta lagoon improved (linked with monitoring system)
- Narta Lagoon Communicaton channels reopened and enlarged
- Fresh water reserves created (Zverrneci reservoir, Limopua, Soda Dump)

- 10-15 ha of pine forest subject of recent fires replanted
- Mediterranean forests in Zverrneci hills rehabilitated
- Fire prevention infrastructure in place
- Sand dunes restores
- Fresh water reserves created (Zverrneci reservoir, Limopua, Soda Dump)
- Pilot pastures improved

4.3.1.3. Conservation, management and species restoration

Aim: Recover threatened and rare habitats and species

Actions:

- Identify threatened and rare habitats and species to be covered with recovery action plans
- Design and implement recovery plans for threatened and rare habitats
- Design and implement species recovery plans (endemic, rare and threatened plant and animal species)

Indicators:

- Number of habitats and species (endemic, rare, threatened) covered with recovery plans (project documents)
- Maps of distribution and demarcation
- Quantitative data gathered

4.3.1.4. Soil conservation and anti-erosion measures

Aim: Stop further land degradation and erosion

Actions⁶:

- Rehabilitation of Mediterranean maquis and forests
- Rehabilitation of Vjosa riverine forest
- Control grazing activity on the terrains poorly covered with vegetation,
- Stop gravel exploitation near Mifoli Bridge
- Stop sand extraction from sand dunes
- Rehabilitate the damaged sand dunes

Indicators:

- Mediterranean maquis and forests rehabilitated
- Vjosa riverine forest rehabilitated
- Gravel exploitation near Mifoli bridge stopped
- Sand extraction stopped
- Sand dunes rehabilitated

4.3.1.5. Conservation and management of water resources

Aim: Protect and ensure quality and sustainable use of water resources of the site

Indicators:

- Quality of water maintained (supported by monitoring data)
- Project design for biological treatment of sewage waters of Vlora city
- Irrigation system of Akernia plain rehabilitated
- Communication channels rehabilitated

Actions⁷

- *Promote methods and practices making the best use of available water resources for irrigation*
- *Support and undertake actions to rehabilitate the irrigation scheme in Akernia plain*
- *Promote the ecological treatment of sewage waters of Vlora through Constructed Treatment Wetlands*

4.3.1.6. Administration and regulations to improve management of visitors

Aim. Improve control and administration on the current leisure and recreational activities

⁶ Such actions are already foreseen by other programs. For that reason this section is not specifically illustrated with work plan tables.

⁷ Foreseen actions exceeds the capacities of the MA and MC

Actions.

- Establishment of parking places within recreational zones
- Defining and proper demarcation of areas open to active and natural recreation
- Planning and Construction of observation towers
- Producing guidebook and leaflets on natural values and ecotourist trails
- Organize guided visits
- Defining and proper demarcation of camping sites within recreational zones
- Control and regulate food and accommodation facilities inside the active recreation zones
- Agreement with local municipalities on waste management

Indicators:

- Parking places built in Zverneci and Poro
- Observation towers used by the public
- Visitor guide and leaflets edited
- Number of guided tours in the site
- Camping sites created
- Ecotourist trails defined and used by the public

4.3.1.7. Infrastructure and engineering works

Aim. Create a necessary infrastructure in support to integrated management of the site

Actions

- Improve the road from Narta to Zverneci and Lagoon channels
- Tracks (demarcation and improvement work)
- Signposts and notices (design and their production)
- Parking places (preparation work of the parking grounds)
- Equipment related to Administration building and visitor centres
- Waste management (related to management of visitors, and recreational activities)
- Electricity supply for PA Administration and visitor centres
- Water supply for Administration building and visitor centres
- Buildings (Administration, Visitor centres)

Indicators:

- Road from Narta to Zverneci and Lagoon channels improved and maintained
- Visitor centres at Zverneci and Poro build
- Observation towers built and maintained
- Ecotourist trails demarcated and maintained
- Signposts and notices constructed and maintained
- Administration building and visitor centres equipped and operational (including water supply, electricity, waste management)

4.3.1.8. Tourism and Ecotourism

Other forms of tourism should be promoted in the site, such as agro-tourism, ecotourism, cultural tourism, sport tourism and so on. Organical products produced locally by farmers will support such forms of tourism and contribute to improved livelihood of the locals.

Aim: Promote any form of environmental friendly tourism in the site. Nature, landscape and cultural values of the site should be promoted and enjoyed by visitors.

Actions

- Preparation of the Master Plan of territorial planning and tourism development in the site
- Prepare a strategy for ecotourism development in the site
- Promote potentials of the site for ecotourism and nature recreational activity.
- Promote potentials of the site for eco-developments (i.e. fishery, silvo-pastoralism, organic farming).
- Design and implement micro-projects in support to ecotourism, agrotourism and culture tourism development.
- Promote use of solar energy

Indicators:

- Master Plan of Territorial Planning and tourism development prepared and approved
- Strategy for ecotourism development prepared and approved
- Promotional materials (booklets, leaflets, posters) on eco-tourism and eco-developments (including use of solar energy)
- Microproject designs for eco-tourism, agrotourism and cultural tourism development

4.3.1.9. Organization of local communities (rural development, users associations, co operations)

Aim: Building up capacities and strengthening of local users associations and NGOs

Actions:

- Establish close relationships with local users and NGOs
- Organizing seminars and trainings on design of the business plan (local users)
- Organizing seminars and trainings on sustainable use of natural resources
- Organizing seminars and trainings on how to write and implement a project proposal (NGOs)
- Logistical support and providing tweneing opportunities with other NGOs of the Mediterranean region
- Assistance to create web-pages in the internet.

Indicators:

- Seminars and trainings received by users associations, groups and NGOs etc (pictures taken, training modules)
- Web-pages in the internet created for main users associations, groups and NGOs
- Increased number of projects proposed and implemented by environmental NGOs

4.3.1.10. Studies, research and monitoring

Aim. Conduct research and monitoring in support to sustainable management of the wetland and coastal ecosystems of the site.

Actions

- Research on poorly studied or unknown taxa (invertebrates)
- Mapping Corine biotopes of the site
- Further Research on endemic and endangered species. Delineation of the distribution areal of the endemic species *Orchis* sp.
- Monitoring of water quality (physical parameters and bio-indicators)
- Monitoring of medicinal plants
- Monitoring of species of economical use
- Monitoring of invasive species
- Monitoring of wintering waterbirds
- Monitoring of nesting waterbirds and their breeding success

- Monitoring of Loggerhead Turtle *Caretta caretta*
- Monitoring of Otter *Lutra lutra*
- Establishment of Database and GIS on wetland and coastal ecosystems of the site

Indicators

- Research conducted on unknown taxa
- Research conducted on endemic and endangered species
- Monitoring data collected and published
- Map of Corine Biotopes
- MEDWET Database and modest GIS operation established

4.3.1.11. Eco-Development

Aim. Rehabilitation and improvements of traditional practices through designing and implement demonstration projects in support to organic farming, sustainable silvo-pastoralism, responsible fishing as well as promoting and supporting the use of new technologies to ensure sustainable nature resource management.

Actions:

- Support development of Agrobusiness on milk processing and products
- Support horticulture development (fruit trees, vineyards, oliveyards)
- Support efforts to rehabilitate the irrigation scheme
- Support to organic farming and extension service
- Support to sustainable grazing and livestock
- Restore genetic constitution of the local/native breeds of sheep and goats
- Support creation of cattle farms
- Creation of mixed livestock farm
- Support creation of poultry farms
- Take evidence of pastures occupied by infestive plants not eaten by animals
- Undertaking pilot intervention of pasture improvement in selected areas through the involvement of local shepherds
- Monitoring effectiveness of the pasture improvement interventions in the pilot areas.
- Support to responsible fishery and aquaculture
- Construction of modern fish traps in accordance with Responsible Fishing Approach
- Improvement and maintenance of the communication channel between the lagoon and the sea (estimated costs at 270,000 USD).
- Support the organization of fishing groups
- Creation of a facilities (nearby the lagoon) for preserving the fish and shellfish products, equipped with refrigerators at the ground (estimated costs at 200 000 USD)
- Creation of wintering sitesbeds for fish inside the lagoon (estimated costs at 25 000 USD)
- Support to sustainable forestry

Indicators:

- Milk processing products available
- Horticulture products available
- Rehabilitation of irrigation and drainage scheme initiated
- Local producers of bioproducts received trainings
- Increased number of local breeds
- Creation of farms (Cattle, poultry)
- Pastures improved
- Communication channel between the sea and the Narta lagoon improved and maintained
- Fires infrastructure in place

4.3.1.12. Making use of natural and cultural heritage

Aim: Promoting sustainable use of nature, landscape and cultural heritage of the site

Actions:

- Conduct a full inventory and assessment of nature and culture monuments of the site
- Collect information on historical evolution of the area
- Produce booklet and leaflets on natural and cultural monuments of the site
- Design and implement pilot interventions to improve public access to selected natural and cultural monuments of the site (St. Marie Church, Triporti, Hills, etc)
- Promote restoration and rehabilitation of cultural heritage of the site
- Promote local festivities (St. Marie's day, Narta Carnivals)

Indicators:

- Complete inventory of nature and culture monuments
- Information on historical evolution of the area
- Information and educational publications (booklets, leaflets)
- Improved access to St. Marie church (Zverrnec)
- Map of culture and natural monuments of the site published

4.3.1.13. Training, awareness raising and public participation

Public awareness and community involvement

Aim. Raise public awareness and increase local community involvement in conservation of the biological and landscape diversity of the site.

Actions

- Develop and conduct awareness raising and community participation programme on nature and biodiversity conservation and management
- Produce brochure, posters, information leaflets and calendars on nature, landscape and culture values of the site.
- Produce and display a calendar of environmental, social and culture events for the site.
- Produce a newsletter (four times a year) on the progress of implementation of the management plan actions.
- Produce a program on guided walks, talks and events.
- Maintain and improve school grounds as educational resource for nature conservation.
- Employ a public relation/communication officer as part of the PA administration. The communication officer should (i) create a webpage for the site on the internet, (ii) serve as contact point for NGO, local users and environmental journalists, and (iii) produce/edit the newsletter.
- Review and improve existing walking routes inside the zones open to public access.
- Improve road access, walking routes and tracks to improve public access and enjoyment to nature.
- Provide with signs and signposts along the walking routes and tracks, as well as with information on the site for culture and nature monuments.
- Produce and show the emblem of Vjose-Narta Landscape Protected Area in all entrances and information centres of the park area.
- Encourage developers to enhance and create wildlife habitats on development zones.
- Support to local NGOs and media on awareness raising activities

Indicators:

- Brochure, booklets, leaflets, calendars
- Local newsletter (four times a year)
- Program on guided walks, talks and events in the site
- Improved school grounds
- Employment of a public relation/communication officer
- Signs and signposts along the walking routes and tracks
- The emblem of the Vjose-Narta Landscape Protected Area produced and shown in all entrances and information centres of the park area.
- Media coverage of the events
- Attitude and behaviour of local community and general public towards nature and culture values of the site changed (reduced litter and garbage in nature, decreased poaching, and so on)

Public Relations and Partnerships

Aim: Improve public relation and partnerships among the various users and stakeholders of the site

Actions

- Establish the dialog between various local stakeholders on the use and management of nature resources they share
- Establish good working relationship between PA administration and Orikumi municipality
- Help and support local initiatives on community based development and sustainable management of nature resources
- Build partnership with local user associations, NGOs and private sector
- Improve co-operation between central and local government institutions

Indicators:

- Minutes of meetings and round tables
- Informal meetings with Local Municipalities authorities
- List of participants, pictures
- Agreements between MA/PA Administration and local users/stakeholders

Training program

Aim: Building up local capacities in managing and monitoring of wetlands and coastal ecosystems

Actions

- Training of local staff on information and data management of wetland and coastal ecosystems (MedWet methodology on wetland inventory, MedWet database, and the use of GIS)
- Training on public participation and community involvement on nature resource management
- Produce guidelines on public and local community participation in the process of design and implementation of the management plan
- Creation of a communication/public relation center and employment of a communication officer as a full staff member of the PA administration
- Training of Management Committee members

Indicators:

- Trainings received by local staff (list of participants, training modules)
- Trainings received by members of MC
- Guidelines on public and local community participation (publication)
- Creation of a communication/public relation center
- Employment of a communication officer
- Participation of local staff and MC members in national and international conferences and seminars on wetlands and coastal ecosystems

4.3.2. Work Plan

Program 1. Supervision and Control	Indicators
Aim: Improve supervision and control of the project site to stop its further degradation	<ul style="list-style-type: none"> ➤ Management Committee established ➤ Director of the PA appointed ➤ Appropriate staff of PA increased ➤ Site borders well defined and demarkated ➤ Number of trainings received by the park administration ➤ Fees and taxes collected ➤ Activities regulated ➤ Special account for the park created by the year 2006

Identified Management Actions	Priority	Responsible	Period	Duration	Means
▪ Setting up the Management Committee	1	MWC, MoE, GDFP, FD, MoAF, Local Communes, MoTAT,	2005	3 months (establishment)	
▪ Prepare and implement a regulation for the LPA	1	GDFP, FD, MWC, MoE, Local Communes,	2005	3 months (preparation)	
▪ Establishment of the Management Authority (Director and staff)	1	GDFP, FD MC, MWC, MoE, REA,	2005	6-12 months	
▪ Improve PA Administration capacity and qualification to conduct day to day management work (training)	1	MWC	Permanent		
▪ Control and regulate fishing activities	1	MA	Permanent		
▪ Control and regulate hunting	2	MA	Permanent		
▪ Control and regulate grazing	2	MA	Permanent		
▪ Control and regulate water extraction from salinas	1	MA	Permanent		
▪ Control and regulate fresh water entrances in the main wetland site	1	MA	Permanent		
▪ Control fires in forest	2	MA	Permanent		
▪ Stop sand extraction from sand dunes	1	MA	Permanent		
▪ Control and regulate hydrological interventions in coastal wetland sites	1	MA	Permanent		

Identified Management Actions	Priority	Responsible	Period	Duration	Means
▪ Control tourism development	2	MA	Permanent		
▪ Create a special account for LPA of Vjose-Narta	1	MC, MA	2006		

Program 2. Conservation, management and habitat restoration	Indicators
<p>Aim: Protect, restore and enhance ecological integrity of the site through undertaking appropriate conservation and management actions to re-establish ecological conditions on degraded ecosystems and habitats.</p>	<ul style="list-style-type: none"> ➤ Hydrological conditions of Narta lagoon improved (linked with monitoring system) ➤ Narta Lagoon Communication channels reopened and enlarged ➤ Fresh water reserves created (Zverrneci reservoir, Limopua, Soda Dump) ➤ 10-15 ha of pine forest subject of recent fires replanted ➤ Mediterranean forests in Zverrneci hills rehabilitated ➤ Fire prevention infrastructure in place ➤ Sand dunes restored ➤ Fresh water reserves created (Zverrneci Reservoir, Limopua, Soda Dump) ➤ Pilot pastures improved

Identified Management Actions	Priority	Responsible	Period	Duration	Means
▪ Improvement of sea-lagoon communication channels in Narta lagoon,	1	MC, MA, MWC, MoE, MoAF, Qendra Commune, Private fishing enterprises, Kripa ShA	2005-2007		Hydraulic intervention
▪ Improvement of fresh water entrances in Narta lagoon (Akernia, Gorica pumping station)	2	MA, MWC	2005-2008	Three years	Hydraulic intervention
▪ Deviate sewage waters from Narta lagoon,	1	MC, MA, MWC, Wat Dir,	2005-2006	3 months	Hydraulic intervention
▪ Restore Limopua from saline to brackish versus freshmarsh	2	MC, MA, FD, MoE	2005-2008	3 months	Hydraulic intervention
▪ Restore former Soda dump as a fresh water reservoir	3	MC, MA, FD, MoE	2006-2009	12 months	Hydraulic intervention
▪ Improve hydrological conditions of Lumi i Vdekur,	2	MC, MA, FD, MoE, Private fishing enterprises	2005-2007	3 months	Hydraulic intervention

Identified Management Actions	Priority	Responsible	Period	Duration	Means
▪ Restore Zverrneci fresh water reservoir	2	MC, MA, FD, Wat. Dir., MoE	2005-2008	3 months	Hydraulic intervention
▪ Open water surface in Zverrneci reservoir	3	MA, MWC	2007-2009	3 months	Hydraulic intervention
▪ Rehabilitation of the degraded forests subject of recent fires,	3	MA, MWC	Permanent		Silvio-cultural works, fencing
▪ Implement measures preventing fire impact on Pische-Poro	1	MA, MWC, GDFP	2005-2006	6 months	Opening roads
▪ Rehabilitation of mediterranean maquis and forests	3	MA, MWC	Permanent		Sulvio-cultural works, fencing
▪ Conduct pilot interventions on pasture improvement	2	MA	2006-2009	24 months	Ploughing/ planting
▪ Restore nesting sites for birds	2	MA	2006-2008	3 months	Digging and diking
<ul style="list-style-type: none"> • Island in Narta lagoon (near the northern channel) • Salinas 	2	MA	2006-2008	24 months	
▪ Restoration of degraded dune systems in Zverrneci and Zhuka	2	MA	2006-2008	24 months	Fencing

Program 3. Conservation, management and species restoration	Indicators
<p>Aim: Protect, restore and enhance ecological integrity of the site through undertaking appropriate conservation and management actions to re-establish ecological conditions on degraded ecosystems and habitats.</p>	<ul style="list-style-type: none"> ➤ Number of habitats and species (endemic, rare, threatened) covered with recovery plans (project documents) ➤ Maps of distribution and demarcation ➤ Quantitative data gathered

Identified Management Actions	Priority	Responsible	Period	Duration	Means
▪ Identify threatened and rare habitats and species to be covered with action plans	1	MC, MA, MWC	2005	2 months	
▪ Design and implement recovery plans for threatened and rare habitats	1	MC, MA, MWC	2005-2008		
▪ Design and implement species recovery plans (endemic, rare and threatened plant and animal species)	1	MC, MA, MWC	2005-2008		

Program 4. Administration and regulations to improve management of visitors	Indicators
Aim. Improve control and administration on the current leisure and recreational activities	<ul style="list-style-type: none"> ➤ Parking places built in Zverneci and Poro ➤ Observation towers used by the public ➤ Visitor guide and leaflets edited ➤ Number of guided tours in the site ➤ Camping sites created ➤ Ecotourist trails defined and used by the public

Identified Management Actions	Priority	Responsible	Period	Duration	Means
▪ Establishment of parking places within recreational zones	2	MC, MA	2006		Public works
▪ Defining and proper demarcation of areas open to active and natural recreation	1	MA, MWC	2005		
▪ Demarcation and improvement work of tracks/trails	1	MA	2006-2009		
▪ Defining and proper demarcation of camping sites within recreational zones	1	MA	2005-2006		
▪ Visitor centres opened to the public	2	MA, MWC	2005-2007	24 months	
▪ Observation towers opened to the public	2	MA, MWC	2005-2006	12 months	
▪ Producing guidebook and leaflets on natural values and ecotourist trails	1	MA, MWC	2005		
▪ Organize guided visits	1	MA, MWC	Permanent		
▪ Control and regulate food and accommodation facilities inside the active recreation zones	1	MA	Permanent		
▪ Agreement with local entrepreneurs and local municipalities on waste	1	MC, MA	2005		

Identified Management Actions	Priority	Responsible	Period	Duration	Means
management					

Program 7. Infrastructure and engineering works	Indicators
Aim. Improve control and administration on the current leisure and recreational activities	<ul style="list-style-type: none"> ➤ Parking places built in Zverneci and Poro ➤ Observation towers used by the public ➤ Visitor guide and leaflets edited ➤ Number of guided tours in the site ➤ Camping sites created ➤ Ecotourist trails defined and used by the public

Identified Management Actions	Priority	Responsible	Period	Duration	Means
▪ Improve the road from Narta to Zverneci and Lagoon channels	3	MA, MTA&T, MoLG&D	2007-2009		
▪ Establishment and equipment of visitor centres together with a small museum of nature of the area in Zverneci and Poro	1	MA, MWC	2005-2007	24 months	
▪ Planning and Construction of observation towers	1	MA, MWC	2005-2006	12 months	
▪ Agreement with local entrepreneurs and local municipalities on waste management	1	MC, MA	2005		

Program 8. Tourism and Ecotourism	Indicators

<p>Aim: Promote any form of environmental friendly tourism in the site. Nature, landscape and cultural values of the site should be promoted and enjoyed by visitors.</p>	<ul style="list-style-type: none"> ➤ Master Plan of Territorial Planning and tourism development prepared and approved ➤ Strategy for ecotourism development prepared and approved ➤ Promotional materials (booklets, leaflets, posters) on eco-tourism and eco-developments (including use of solar energy) ➤ Microproject designs for eco-tourism, agrotourism and cultural tourism development
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Identified Management Actions	Priority	Responsible	Period	Duration	Means
<ul style="list-style-type: none"> ▪ Preparation of the Master Plan of territorial planning and tourism development in the site (Expected contribution from Co-Plan). 	1	MC, MA, MWC and CO-Plan	2005-2006	3 months	
<ul style="list-style-type: none"> ▪ Prepare a strategy for ecotourism development in the site 	1	MC, MA, MWC and CO-Plan	2005-2006	3 months	
<ul style="list-style-type: none"> ▪ Promote potentials of the site for ecotourism and nature recreational activity (publications). 	2	MA, MWC, Business sector	Every year		Publications
<ul style="list-style-type: none"> ▪ Promote potentials of the site for eco-developments (i.e. fishery and aquaculture, silvo-pastoralism, medicinal plants, organic farming). 	2	MA, MWC, Business sector	Every year		Partnership
<ul style="list-style-type: none"> ▪ Promote eco-tourism activities in the sea waters (scuba diving, windsurfing, sportfishing, boat tours) 	2	MA, MWC, Business sector	Every year		Partnership
<ul style="list-style-type: none"> ▪ Design and implement micro-projects in support to ecotourism, agrotourism and culture tourism development. 	3	MA, MWC, Business sector	2006-2009		Partnership
<ul style="list-style-type: none"> ▪ Promote use of solar and wind energy 	3	MA, MWC, Business sector	Permanent		Lobbying, Partnership

<p>Program 9. Organization of local communities (rural development, users associations, co operations)</p>	<p style="text-align: center;">Indicators</p>
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Aim: Building up capacities and strengthening of local users associations and NGOs	<ul style="list-style-type: none"> ➤ Seminars and trainings received by users associations, groups and NGOs etc (pictures taken, training modules) ➤ Web-pages in the internet created for main users associations, groups and NGOs ➤ Increased number of projects proposed and implemented by environmental NGOs
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Identified Management Actions	Priority	Responsible	Period	Duration	Means
▪ Establish the dialog between various local stakeholders	1	MC, MA, MWC	Permanent		Round tables, informal meetings
▪ Establish good working relationship between PA administration and Novosela and Qendra Commune	1	MA	Permanent		Informal meetings
▪ Help and support local initiatives on community based development and sustainable management of nature resources	2	MA, MWC	Permanent		Provide assistance, contacts
▪ Build partnership with local user associations, NGOs and private sector	1	MA	Permanent		
▪ Improve co-operation between central and local government institutions	1	MA, MWC	Permanent		
▪ Organizing seminars and trainings on design of the business plan and project proposals	2	MA, MWC	Every year	5 days/y	Training modules
▪ Organizing seminars and trainings on sustainable use of natural resources	2	MA, MWC	Every year	5 days/y	Training modules
▪ Assistance to create web-pages in the internet	3	MA, MWC	Permanent		
▪ Logistical support and providing tweening opportunities with other NGOs of the Mediterranean region	3	MWC, MA	Permanent		

Program 10. Studies, research and monitoring	Indicators
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<p>Aim. Conduct research and monitoring in support to sustainable management of the wetland and coastal ecosystems of the site.</p>	<ul style="list-style-type: none"> ➤ Research conducted on unknown taxa ➤ Research conducted on endemic and endangered species ➤ Monitoring data collected and published ➤ Map of Corine Biotopes ➤ MEDWET Database and modest GIS operation established
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Identified Management Actions	Priority	Responsible	Period	Duration	Means
▪ Research on poorly studied or unknown taxa	2	MC, MA, MWC	2005-2006		
▪ Mapping Corine biotopes of the site	2	MC, MA, MWC	2006		
▪ Further research on endemic and endangered species	1	MC, MA, MWC	2005-2006		
▪ Monitoring of water quality (physical parameters and bio-indicators)	1	MC, MA, MWC	Every year		
▪ Monitoring of medicinal plants	1	MC, MA, MWC	Every year		
▪ Monitoring of species of economical use	2	MC, MA, MWC	Every year		
▪ Monitoring of invasive species	2	MC, MA, MWC	Every year		
▪ Monitoring of wintering waterbirds	1	MC, MA, MWC	Every year		
▪ Monitoring of nesting waterbirds and their breeding success	1	MC, MA, MWC	Every year		
▪ Monitoring of Loggerhead turtle <i>Caretta caretta</i>	1	MC, MA, MWC	Every year		
▪ Monitoring of Otter <i>Lutra lutra</i>	2	MC, MA, MWC	Every year		
▪ Establishment of Database and GIS on wetland and coastal ecosystems of the site	1	MWC	2005-2006		
▪ Monitoring the bathymetri of lagoons	1	MC, MA, MWC, IHM	2005-2006		

Program 11. Eco-Development	Indicators
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<p>Aim. Rehabilitation and improvements of traditional practices through designing and implement demonstration projects in support to organic farming, sustainable silvo-pastoralism, responsible fishing as well as promoting and supporting the use of new technologies to ensure sustainable nature resource management.</p>	<ul style="list-style-type: none"> ➤ Milk processing products available ➤ Horticulture products available ➤ Rehabilitation of irrigation and drainage scheme initiated ➤ Local producers of bioproducts received trainings ➤ Increased number of local breeds ➤ Creation of farms (Cattle, poultry) ➤ Pastures improved ➤ Communication channel between the sea and the Narta lagoon improved and maintained ➤ Fires infrastructure in place
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Identified Management Actions	Priority	Responsible	Period	Duration	Means
▪ Support development of Agrobusiness on milk processing and products	2	MA, Business sector	2005-2009	Permanent	Training, Study tours
▪ Support Horticulture development	2	MA	2005-2009	Permanent	
▪ Support efforts to rehabilitate the irrigation and drainage schemes	2	MA, MWC, MoAF, Business sector	2005-2009	Permanent	
▪ Support to Organic farming and extension service	3	MA	2005-2009	Permanent	
▪ Support to sustainable grazing and livestock	2	MA	2005-2009	Permanent	
▪ Restore genetic constitution of the local/native breeds of sheep and goats	3	MA	2005-2009	Permanent	
▪ Support creation of cattle farms	3	MA	2005-2009	Permanent	
▪ Support creation of poultry farms	3	MA	2005-2009	Permanent	
▪ Take evidence of pastures occupied by infestive plants not eaten by animals	2	MA	2005-2009	Permanent	
▪ Undertaking pilot intervention of pasture improvement in selected areas through the involvement of local shepherds	2	MA	2005-2009	Permanent	
▪ Monitoring effectiveness of the pasture improvement interventions in the pilot areas	2	MA	2005-2009	Permanent	
▪ Support to responsible fishery and aquaculture	2	MA	2005-2009	Permanent	
▪ Support to sustainable Forestry	1	MA	2005		

Program 12. Making use of natural and cultural heritage	Indicators
Aim : Promoting sustainable use of nature, landscape and cultural heritage of the site	<ul style="list-style-type: none"> ➤ Complete inventory of nature and culture monuments ➤ Information on historical evolution of the area ➤ Information and educational publications (booklets, leaflets) ➤ Improved access to St. Marie church (Zverrnec) ➤ Map of culture and natural monuments of the site published

Identified Management Actions	Priority	Responsible	Period	Duration	Means
▪ Conduct a full inventory and assessment of nature and culture monuments of the site	1	MA, MWC	2005	2 months	
▪ Collect information on historical evolution of the area	1	MA, MWC, IoA	2005	2 months	
▪ Produce booklet and leaflets on natural and cultural monuments of the site	1	MA, MWC	2005-2006	90 days	
▪ Design and implement pilot interventions to improve public access to selected natural and cultural monuments of the site (Triporti, St. Marie church)	1	MC, MA, MWC	2005-2006		Architecture and Public works
▪ Promote restoration and rehabilitation of cultural heritage of the site	2	MA, MWC	Permanent		
▪ Promote local festivities (St. Marie's day, Narta Carnavals)	1	MA, MWC, MoE, Local Municipalities	2005		Agreement

Program 13. Training, awareness raising and public participation	Indicators
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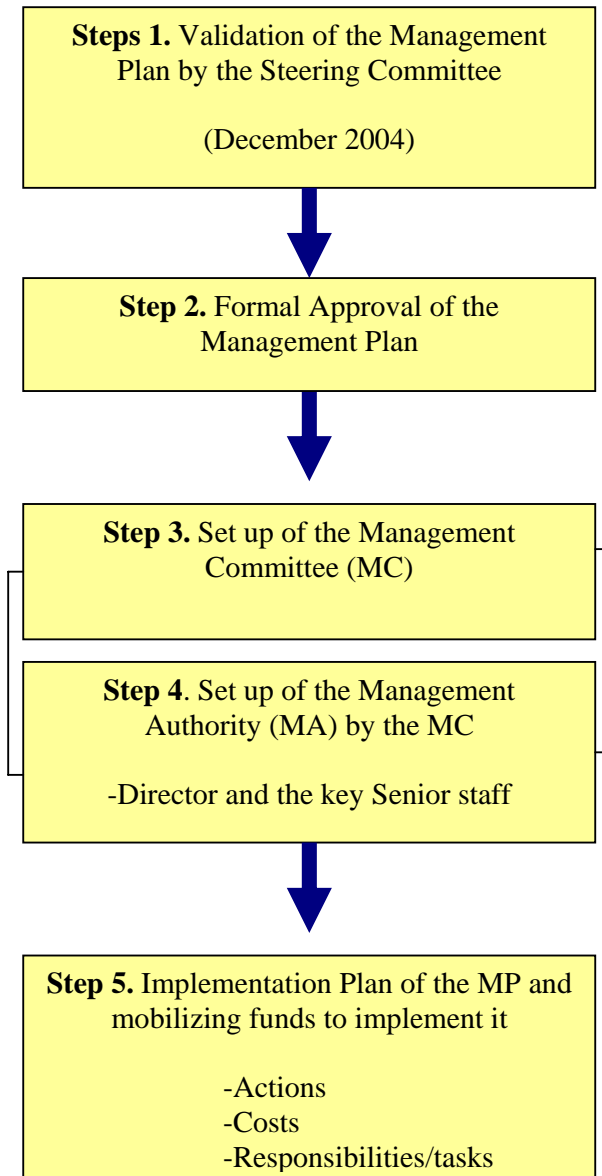
<p>Raise public awareness and increase local community involvement in conservation of the biological and landscape diversity of the site</p>	<ul style="list-style-type: none"> ➤ Brochure, booklets, leaflets, calendars ➤ Local newsletter (four times a year) ➤ Program on guided walks, talks and events in the site ➤ Improved school grounds ➤ Employment of a public relation/communication officer ➤ Signs and signposts along the walking routes and tracks ➤ The emblem of the Vjose-Narta Landscape Protected Area produced and shown in all entrances and information centres of the park area. ➤ Media coverage of the events ➤ Attitude and behaviour of local community and general public towards nature and culture values of the site changed (reduced litter and garbage in nature, decreased poaching, and so on)
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Identified Management Actions	Priority	Responsible	Period	Duration	Means
<ul style="list-style-type: none"> ▪ Training of local staff on information and data management of wetland and coastal ecosystems (MedWet methodology on wetland inventory, MedWet database, and the use of GIS) 	1	MWC, ECAT-Tirana	Every year	3 days/year	
<ul style="list-style-type: none"> ▪ Training on public participation and community involvement on nature resource management 	2	MWC, REC-Tirana	Every year	4 days/year	
<ul style="list-style-type: none"> ▪ Produce guidelines on public and local community participation in the process of design and implementation of the management plan 	2	MWC, REC-Tirana	2005-2006	90 days	
<ul style="list-style-type: none"> ▪ Creation of a communication/public relation center and employment of a communication officer as a full staff member of the PA administration 	1	MWC, MA	2005	9 months	
<ul style="list-style-type: none"> ▪ In service training of PA personnel 	1	MWC, REC-Tirana, Universities	Every year	5 days/year	
<ul style="list-style-type: none"> ▪ Training the members of the Management Committee 	1	MWC, REC-Tirana	Every year	3 days/year	

4.4. Organization and responsibilities

Establishment of institutional structures to implement the actions identified in the MP is a crucial element of the MP process, due to the fact that the management structures are lacking in the site, and human and financial resources are limited.

The followings are the steps of the management plan implementation.



Provided the current legal framework related to PA administration and management, it is important that a Memorandum of Understanding (MoU) among the Ministry of Environment (MoE), Ministry of Agriculture and Food (DGFP, FD, DFS) and MedWet Coast project is formulated and signed by the parties prior the validation of the Management Plan by the Steering Committee.

MWC project as guiding and providing financial and technical support to the whole process of the preparation of the MP will continue to play an important role for the implementation of the steps, by providing logistics, facilitation and some financial resources, during the first two years of MP implementation. Given that management structures are not yet established in the site (MC and MA), MWC project may implement some actions, and microprojects, as it is already doing (i.e. the case of rehabilitation of the “Lera” of Ravenna) that are identified as priority in this MP document. MWC project will help building up local capacities for the MA and MC through training programs that will be designed and implemented during 2005-2006.

4.5. Budget

The implementation of the Management Plan depends on how successful the management structures (MC and MA) will be in mobilizing funds and incentive measures. The financial input from the state budget is necessary to cover the implementation costs of the management plan, although they are limited. It is expected that state budget will cover the costs of the personnel engaged with PA administration. Provided the limited financial resources available to the implementation of the MP, it is essential to define the financial and economic mechanisms which may generate other resources. A number of incentive and non-incentive tools, such as taxes, entrance fees, permits, subsidies, etc. should be used by the MC and MA to raise funds for MP implementation.

Voluntary agreements in the community instituting partnerships sharing a single resource between several users from the same community should be encouraged. This may lead to the mobilization of the “Community Investment Fund”, designed to be re-invested in production activities which in turn, will generate wealth for the entire community and income for those who are directly involved in the operations. Any contribution, small or large, financial or technical, can be useful to the implementation of the plan. Where private agencies are involved, these contributions may come in various forms: from a simple letter of commitment to a point-by-point contract, from a financial donation to a major grant.

Finally, it is essential to underline that the implementation of this management, as well its preparation would require the financial contribution of the donor community. Raising funds from international and national donors would be a priority activity of the MWC project (at the beginning of the implementation phase) and Management Authority (later on, once the MA is established).

4.6. Assessment and review of the management plan

As already stated in the introduction part of this MP document, Management plans are not static instruments, but change with prevailing economic and technological conditions. It is also worth mentioning that this is the very first MP for the site, and is therefore recommended that the MP is appraised every year in order that new information and opportunities can be taken into account. Keeping in mind that Vjose-Narta is an area of intensive development it is recommended that the full plan review has to be undertaken on a three-year cycle. Where necessary, amendments to the plan should be made as needed during this time period, but these should not affect the overall planning aims and objectives, and where necessary, a public consultation process should be implemented before a change is made.

Assessment and reviewing of the management plan is the responsibility of the Management Committee, based on a careful evaluation system.

APPENDIX 1. Management Plan team members

National Team

Dr. Taulant Bino	National Co-ordinator
Mr. Petrit Dervishi	Site Manager
Mr. Rait Llanaj	Local Moderator
Prof. Dr. Murat Xhulaj	Botanists
Prof. Dr. Idriz Haxhiu	Zoologist
Prof. Asoc. Dr. Stavri Lame	Hydraulics
Prof. Asoc. Dr. Maxhun Dida	Forestry
Prof. Asoc. Dr. Aleksander Flloko	Fishery
Mrs. Ardita Pelinku	Environmental Education
Mr. Hektor Harizaj	Agriculture
Mr. Sotir Dhama (Co_Plan-GTZ)	Stakeholder Analysis and Territorial Planning
Mrs. Xheni Hali	Legal expert

Assisted by:

Dr. Violeta Zuna	Head of the Tirana office of MWC project
Mr. Eno Dodbiba	Technical specialist of the Tirana office of the MWC project
Mr. Petrit Dervishi	Head of the Vlora office of the MWC project

International Technical Assistance provided by:

Dr. Mark Lutz	International Expert (Biological Station of Tour du Valat, France)
Dr. Raphael Mathevet	Expert on socio-economics (Biological Station of Tour du Valat, France)
Dr. Philippe Chauvelon	Expert on Hydraulics (Biological Station of Tour du Valat, France)

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