Management Plan

Llogora-Rreza e Kanalit-Dukat -Orikum-Tragjas-Radhime-Karaburun
Complex Site

Final Draft

DECEMBER, 2004
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State of Commitment from the Government of Albania

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<td>PNP</td>
<td>Proposed National Park</td>
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<tr>
<td>EIA</td>
<td>Environmental Impact Assessment</td>
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<td>DGFP</td>
<td>Directorate General of Forests and Pastures</td>
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<td>MoAF</td>
<td>Ministry of Agriculture and Food</td>
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<td>MoE</td>
<td>Ministry of Environment</td>
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<td>LAC</td>
<td>Limits of Acceptable Change</td>
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<td>NGO</td>
<td>Non Government Organisation</td>
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<td>VC</td>
<td>Visitor Centre</td>
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<td>WTO</td>
<td>World Tourism Organisation</td>
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<td>District Forest Service</td>
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<td>Decision of Council of Ministers</td>
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<td>Ministry of Local Government and Decentralization</td>
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<td>MoTA&amp;T</td>
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<td>IHM</td>
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<td>RFU</td>
<td>Regional Facilitation Unit</td>
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<td>United Nations Development Program</td>
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State of Commitment from the Government of Albania

The proclamation and management plan for the first marine and coastal National Park of Llogara-Karaburuni area, including Llogora National Park-Rreza e Kanalit-Dukat-Orikumi Lagoon-Karaburun Peninsula and Sazani Island has been identified as a priority action by many recent environmental policy documents of the Government of Albania, such as BIO SAP (Biodiversity-Strategic Action Plan for marine and Coastal Biodiversity) National Report, 2002, Biodiversity Strategy and Action Plan (1999), Coastal Area Management Programme—(UNEP/MAP-CAMP, 1996), and METAP (EU, UNDP, WB, and EIB), Coastal Zone Management Action Plan (CZMAP) for the Albanian Coast (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).

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 is being 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 (May 30, 1990), Ramsar convention (accession on November 29, 1995, and ratification on March 29, 1996), Biodiversity Convention (1996), and Bern Convention (signed on October 31, 1995 and ratified on March 2, 1998), Albania is committed to create an effective system for the administration of its coast. An important part of this system is the creation of a network of protected areas, including coastal and marine parks.

Ministry of Environment in cooperation with Ministry of Agriculture and Food and other inline Ministries will fully support the implementation of the management plan of the Llogora-Karaburuni area, and will take any measure to ensure legal and institutional arrangements that will make possible conservation and sustainable use of natural and biological resources of wetland and coastal ecosystems of the site.

Minister of Environment

Prof. Dr. Et’hem Ruka
Preamble - MedWet Coast project objectives and outputs

The MedWetCoast project, as the Albanian component of a Mediterranean regional initiative involving Albania, Egypt, Lebanon, Morocco, the Palestinian Authority and Tunisia, is designed based on three main outcomes:

1. Development of capacities and promotion of National policies and tools to address policy-related root causes of the loss of wetland and coastal biodiversity

2. Removal of the root causes of biodiversity loss in key demonstration sites, site protection and undertaking of accompanying.

3. Closing the Mediterranean circle” in terms of biodiversity protection and sustainable management of wetlands and coastal zones through cost-effective networking for transfer of lessons, interchange and training

This project aims to develop the structures and networks required by promoting interministerial coordination and policies at local and national level, implementing sustainable development activities in targeted pilot sites (Narta and Orikumi wetland ecosystems) containing globally threatened biodiversity; sensitizing, training, and associating stakeholders and building links within the region.

Following some of the priority actions taken so far, the project has accomplished some important results, contributing to the meeting of project outcomes, such as: the development of innovative legal frameworks, development of intersectorial management structures able to address complex land management issues, capacity building, and, the promotion of a regional network able to exchange experience, providing the transfer of innovative components of the project within and outside the region. Some main challenges of this process included definition of site boundaries and their designation for legal protection status, preparation of analytical part of the management plan based on diagnosis reports, other studies of the project and thematic expert reports, use of participative methods with the involvement of stakeholders and interested parties mainly through the national and local steering committees foreseen by the project, meetings, workshops and surveys are organized with groups of users.

Among the achievements of MedWetCoast project, management plan is one of the key activities which guarantee the success of the project outcome. Efforts and focus was drawn on activities related the process for the preparation of the Management Plans for the targeted sites. This process evolves and developed bankable projects including priority management actions for the conservation and protection of the ecosystems of these areas, including contribution from several thematic experts, stakeholders in local and central level, different user and local authorities, input from thematic groups and local moderators. Very important part of the process are trainings conducted along with MP process and round tables, working missions addressing the environmental concerns and providing alternative thought for their solutions;

Thus, preparation for management planning and the "management plan" document is the result of a process that will guarantee the sustainability of the efforts undertaken on the sites through the MedWetCoast project, in particular by the involvement of local stakeholders. The management plan therefore reflects the orientations, the decisions and the actions that would be undertaken by the stakeholders and the users of the site.
Distinguished acknowledgement goes for the international expertise provided by the Biologic Station of Tour du Valat (TdV) as well as for the institutional commitment of the project patterns established in local and national level (LSC and NSC) has been fully in support of this process.
1. Introduction

1.1 Summary Description

The Management Plan provides a framework to conserve and enhance the special qualities of the site and sets out to secure the varied biodiversity found within its boundaries so that they can be enjoyed by the present and future generations. The plan also seeks to engage the site’s resident population in the management and decision making process in order that local people can benefit in terms of sustainable livelihood development and securing a future for their own communities. The Management Plan recognises that 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 and that the proposed Management Board and the PA Administration will need to work very closely with them, since their commitment is crucial 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 extending the Llogara National Park, in light of new legislation concerning protected areas in Albania.
- 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 which will support that vision.
- To improve collaboration and consultation with the wide range of national and international agencies and organisations who are concerned with protected areas and the conservation of biodiversity as a whole.

The consultants recommend that the site and the extended area should overall be declared as a IUCN Category II NP. However, the area does contain areas which are considered best suited to be categorised as Category I, III, IV and V. This is because the proposed Park contains some areas which require the highest levels of protection, Other sites are classed as natural monuments, and since the Park does have a resident population who undertake traditional forestry and farming practices the Category V protected landscape approach is best suited to these areas. Habitat restoration and management is required in some sites such as adjacent area of Orikumi lagoon, and the Category IV is appropriate for them.

The consultants have therefore developed the MP by adopting 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 and therefore the legal basis of this plan is considered secure, although some amendment may be required to allow for the category zoning approach to be applied.

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 parks resident population, by not exerting the rigid controls that would need to be applied by a single category II approach, which is seen to disadvantage the social and economic development of the area and therefore hinder the improvement of the livelihoods of local residents. The conflicts which can occur between the resident population located within a NP and its administration are well known and documented.\(^1\) The approach taken in this plan integrates local people into the conservation agenda by supporting lifestyles and economic activities which are in harmony with nature and the preservation of the social and cultural fabric of the communities concerned. But, the MP should not be considered as a credit to economical development activities.

Located within the proposed area for the NP extension are activities (i.e mining, quarries, inert exploitation along the Dukati river bed) that are considered not compatible with the designation of protected area status, but currently provide employment opportunities for park residents. Immediate cessation of these activities is required by the law ‘For Protected Areas’ under NP category II designation and therefore it was not considered appropriate to use the category II status solely for the extended area, since it was felt that this would cause hardship and work against the aim of integrating local people into the park. The flexibility permitted under other categories does allow for the phasing out of these incompatible activities over a period of time and therefore the possibility remains for relocation of such activities in the future into an adjacent, less sensitive non-protected area.

Maintaining and managing the formal recreation activities which have developed on the Llogara area in a way which is appropriate to the NP designation and does not detract from the primary nature conservation role of the Park.

Managing and controlling the increasing development pressures being placed inside the boundaries of the Llogara Park, along the coast from Radhima to Orikumi, speculative restaurants and tourism based developments driven by the existing customer base going to Llogora NP, and individual unplanned residential development.

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Box 1. IUCN/CNPPA Management Categories for Protected Areas

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
or Managed Nature Reserve)

*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 total area of the proposed Llogara-Karaburuni NP, including its extension, is estimated at some 31383 hectares.
1.2 European Policy Context
The preparation of the management plan of the project site is in line with attempts of the Government of Albania (GoA) to approach EU nature conservation legislation and policy. The Council of Europe, in collaboration with other national and international organisations, took the initiative to develop a Pan-European Biological and Landscape Diversity Strategy (Council of Europe et al. 1996). The Strategy is intended to operate within a 20-year period, establishing a broad and consistent framework for achieving its aims and objectives (Box 2), and providing guiding principles for action.

**Box. 2  Aims and Objectives of the Pan-European Biological and Landscape Diversity Strategy (PEBLDS)**

**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 (PEBLD) 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;

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♦ Building up environmental development capacity in the Central and Eastern Europe (CEE) and in the Newly Independent States (NIS);
♦ Providing information and enhancing communication;
♦ Developing the Pan-European Ecological Network (PEEN);
♦ Carrying out reviews and assessments, and monitoring, reporting and funding of the Pan-European Strategy.

**Box 3: What is the Pan European Ecological Network (PEAN)?**

The Pan-European Ecological Network (PEEN) is both 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 (Jongman 1995). The PEEN will build on existing site conservation initiatives, particularly by applying the lessons learned from Natura 2000 and the Emerald Network, and on the many national and regional ecological networks under development. It 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.

**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 or under their responsibility where that area fits one or several of the following conditions:

♦ it contributes substantially to the survival of threatened species, endemic species, or any species listed in Appendices I and II of the convention;
♦ it supports significant numbers of species in an area of high species diversity or supports important populations of one or more species;
♦ it contains an important and/or representative sample of endangered habitat types;
♦ it contains an outstanding example of a particular habitat type or a mosaic of different habitat types;
♦ it represents an important area for one or more migratory species;
♦ it otherwise contributes substantially to the achievement of the objectives of the convention."
The implementation phase of the EMERALD Network started in 1999. The years 1999-2000 should mark the pilot stage of setting up the EMERALD Network, supported by the Council of Europe. In 1999 pilot projects started in the following countries: Bulgaria, Russian Federation, Slovakia, Slovenia and Turkey.

Albania signed the *Convention on the Conservation of European Wildlife and Natural Habitats (Bern, 1979)* on 31 October 1995 and ratified it on 2 March 1998. 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 25 February 2002 between the Ministry of the Environment of Albania and the Council of Europe.

During this pilot phase six 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).

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.

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. Llogara national park (extended as proposed by the National Biodiversity Strategy and Action Plan—2000) as one of the CORINE sites of Albania, is already a potential ASCI to be part of the EMERALD Network.

**1.3 National Context for Nature Conservation**

The existing network of protected areas in Albania currently is covering an area of 164,455 hectares and equal to 5.8% of the total land cover. There are eleven IUCN category NPs with an area of 52,860 ha. 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 Biodiversity Strategy and Action Plan.

The law “On Protected Areas” No. 8906, year 2002, provides the legal base for the designation of the protected areas and development of the ecological network in the country.

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 that are the followings:

♦ 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.

1.4 Regional and Local Context for Nature Conservation

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

Extended Llogora-Karaburun NP is the most important place, 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.

Recently a new building for the park personnel was established in Llogara, with the financial support of the World Bank (Integrated Forest Management-Albania). Several restaurants are licensed within the territory of the park’s core zone, and many others are situated along the road Orikum-Dukat-Llogora.

1.5 Legal Framework for NPs in Albania

The legal framework for the designation of NPs in Albania can be traced back to 1960 with the declaration of Dajti Mountain as a protected area. In 1966 the Forest NP network was formed by the proclamation of seven new NPs, including Llogora NP. Between the years 1981–1986 a joint regulation was issued by the Minister of Agriculture and Food and the Minister for Communal Economy “Regulation for the administration, criteria for establishing, treating and maintaining the Forest NPs”. This gave the District Forest Service (DFS) responsibility for the administration of the Parks and imposed a series of regulations to forbid a range of damaging activities. From 1991 until 2002 a wide range of laws were
passed which cover a range of protected area issues, however, there appeared to be confusion to who and how the laws and regulations should be implemented. As a result the protected areas suffered levels of degradation since the laws could not be satisfactorily implemented.

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. According to the law a NP is:

*The wide territories, no less than 1000 ha, unique for national and international values, many of them are natural eco-systems, having been less affected from human activity, where flora, fauna, natural and physical environment are of a particular importance for science, education, are declared NPs.*

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. Defined in the law are the priorities and strategic objectives for the management of each protected areas category.

**Regulatory Framework for the Management of NPs**

NPs in Albania have been for the most part considered as forest areas and have been termed as ‘Forest NPs’. As a result the parks have historically been administered by the DGFP 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:

1. Proposing areas to be protected.
2. Preparing the legal and managerial procedures to propose and declare a protected area.
3. Compile management plans for protected areas.
4. 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 DGFP, 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 DGFP under the DFS D.C.M. no 266 dated 24.04.2003.

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

The value of a Management Plan can only be realised if it is 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 and thereby provides the Committee with direction in the decision making process. Thirdly, it is the working plan for the site administration who manage the area on a day to day basis under the guidance of the Management Committee, and fourthly by the various land managers, community leaders, ecologists, conservation NGOs and others concerned with managing the various land uses which take place across the plan area. 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 land uses and a detailed set of proposals for extending the Llogara NP 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, such as tourism. As defined in the National Strategy of Tourism Development, the site of Llogora-Karaburuni is a priority area for tourism development, but such a development should take into consideration all the ecological, social and cultural concerns of the site and should be compatible.

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

1.7 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 and that a full plan review is undertaken on a five-year cycle. This timescale is considered to be the normal time period of a plan of this type. 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.

1.8 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. An analysis of the social implications of extending the existing Llogora NP is provided later on in this document.

It is considered of critical importance that the inhabitants and all local user groups of the site are recognised 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 One. Site description

2.1 Site location and boundaries
The project area covers Llogara National Park, Mountain range of Rreza Kanalit, Karaburuni Peninsula, Sazani Island, Orikumi Lagoon, and Dukati Valley. It is a large and very complex site of about 31383 ha ranging from coastal plains to alpine habitats on Çika and Qore Mountains, divided into the following categories:

1. Forest area 10589 ha
2. Bared area 4126 ha
3. Rocky area 1078 ha
4. Agriculture land 2820 ha
5. Pasture land 12514 ha
6. Wetlands 199 ha
7. Other areas (urban, military, gravel) 517 ha

From the administrative point of view the whole area belongs to Vlora district, and to one municipality, that of Orikumi. The project site borders are set at the west slopes of Cika Mountain, Llogara National Park borders, Channel’s border, Dukati valley, Karaburun peninsula and Sazani Island. Although the Sazani island has been part of the Site Diagnosis activity, it has been excluded from planning considerations due to strategic Government views related to this island. (Map 3. Borders of the Site)

Llogara National Park is located NorthWest of the mountain range of Çikë – Lungarë. The Çika mountain (2045 m) and the peak named Maja e Qorres (2018 m) are the two highest peaks descending towards the Qafa e Llogarasë (1027 m) and Valley of Dukat located as NW of it. From the geological point of view, Llogara is made up of carbonic deposits of the Mesozoic and Paleogenic eras. There are also flysch deposits on top of them, especially in the valley of Dukat.

The mountain range Rrëza e Kanalit starts from the valley of Llogara, being gradually separated from the Karaburun Peninsula, having a vertical “crack” named Pashaliman – Bay of Brisan. This mountain range has a general longitude of 24 km and wideness of 4-7 km. It is made up of limestone rocks wetted mainly in the Cretac era, and less in Paleogenic era. The highest peak is Maja e Shëndëllise (1499m), while a number of lower peaks like Maja Ali Hila (1318 m), Shtruga e Gurit (1238 m), Gjokaj (954 m), Sinan Duka (818 m) derive on the way to the lower altitudes, which in the West goes down to the Jonian sea, while in the East to the Valley of Dukat.

Valley of Dukati is located between the mountain of Lungara in the East and the mountain range Rrëza e Kanalit in the Western side. It is goes up to the Valley of Llogara in the southern part, while, in the NW direction, it has wide panoramic opening to the Bay of Dukati (Vlora). It has a longitude 20 km and wideness from some hundred meters (the upper part) to 5-7 km (the lower part). The upper part of the valley of Dukat is composed of limestone rocks, the middle part of terrigenic deposits, as well as deposits of Kuaternar era. The lower part represents Dukati Plain, which is located on the left side of Dukat river. The coastal part of Dukati Valley has an alluvional origin having an approximate surface of 1000 ha. That is the area, where the Lagoon of Orikum, approximately 130 ha, is located.
Orikumi lagoon is located at the southern end of Dukati (Vlora) bay and is connected to the see by a canal. Only about 130 ha of the former larger Orikumi (Pasha-Limani) Lagoon remained in the present days. Some 25 years ago some drainage works and the construction of a dike dried up approximately 400 ha of the former lagoon. At the same time the intensive deforestation witnessed by many dead tree trunks, drastically changed the character of the area. The quantity of rains was also reduced. Many of agricultural polders are currently abandoned or used for non intensive grazing. Consequently, natural vegetation has invaded considerable part of the formerly cultivated lands and forests. Inflow of the fresh water into lagoon and the water exchange between the lagoon and the see is reduced. This changed the hydrology of the lagoon.

The Karaburun Penninsula covers a surface of 62 km²; it is located between Bay of Vlora (E) and Ionian sea (W). The narrow channel named Mesokanali separates it from Sazan Island. It is 16 km long and 3-5 km wide. From the geological point of view it is made up of carbonic limestone of Kretac era, while in the northwestern part of it, Bay of Shën Jani, it is composed of terigenic deposits. The relief comprises a number of hills. The average altitude from the sea levels 800 m with a number of peaks. The highest peaks are the so-called Maja e Ilqes (733 m), Maja e Flamurit (826 m) and Çadëri (839 m). The coastal profile of Karaburun peninsula is characterized by a rough relief that dips vertically into the sea, and by canions
and caves among which only boats can get into. The tectonic motions, that change the seabed’s morphology, determine the erosion of cliffs creating, along the seashore, recesses in the form of caves and canions. A number of small bays are found along the Karaburun Peninsula: Raguza Bay, Bay of Shën Jani, Bay of Bristan, Bay of Dafina, etc.

2.2 Legal and land tenure context
2.2.1 Land tenure status
Agricultural Land – All agricultural land has been returned to its original owners or privatised. There is a small land market emerging, however, the cost of the land is considered to have been valued far in excess of its ‘real’ economic value.

Forest and pasture Land – the majority of forest and pasture land remains in the tenure of the Ministry of Agriculture and Food, under the administration of the Directorate General of Forests and Pastures (DGFP). Illegal ‘squatting’ on forest land covers 0.55 hectares and this has been created by restaurant proprietors enclosing land around their establishments. There is a strong claim from the local inhabitants of Dukati on land ownership for Karaburuni area as well as for some parts of the existing Llogara NP. It is recommended that forest areas which fall within the Core Zones CZ1, CZ2 and CZ3 and within the Nature Recreation Zone RZ2 remain in public ownership.

Wetlands–the whole area of Orikumi (Pashalimani) lagoon belong to the state, Ministry of Agriculture and Food (MoAF). The area is administrated by the Fishery Department within MoAF.

2.2.2 Rights and servitudes
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). DGFP through DFS is the administrator of Forest and Pasture resources, including National Parks and other protected areas. 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.

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 National Council of Territorial Adjustment (NCTA). MoTA&T issues licenses to Tourism operators in case they want to build up tourism infrastructure and facilities in areas identified for tourism development. Dukati bay and Karaburun Peninsula area are identified as priority zone for tourism development by the newly approved National Strategy for Tourism Development.
Map 4. Landcover map of the site
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 is using part of the area as a military base (base of Pasha Limani), and is using marine waters of Karaburuni and Sazani for military operations. Through maritime district of Vlora they are entitled to give permission for allowing any activity within or nearby military areas, as well as for allowing pastors or other interested to do any maintenance work.

Local government authority, that’s Orikumi municipality, is complaining about lack of funds and competencies to influence the resource use of the area. However, the municipality can influence licensing of all activities under its territory jurisdiction. In addition despite the fact that Orikumi lagoon as well as forests and pastures 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 municipality of Orikum 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 in the municipality of Orikumi. 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. Municipality of Orikumi 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 bellow:

- **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

### 2.2.3 Site legal status

Inside the complex site of Llogara-Rreza e Kanalit-Dukat-Orikum-Karaburun there are two existing protected areas: 1) Llogara (1010 ha) which has the status of the National Park (Category II, IUCN 1996), and 2) Rreza e Kanalit-Karaburun Penninsula (20000 ha) designated formerly as game reserve and having since 1992 the status of Managed Natural Reserve (Category IV, IUCN) (see map no.1). A number of Nature and Culture monuments are also legally protected. So far, very little has been done to ensure their legal status and manage them according to their management objectives. There is no Management Plan for the National Park of Llogara and the Managed Natural Reserve of Karaburun Peninsula. In the Biodiversity Strategy and Action Plan (October 2000), Llogora-Karaburuni area is purported to be designated as a Marine and Terrestrial National Park (see map no.2).

### 2.2.4 Other planning documents

#### 2.2.4.1 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 Program/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 Durresi-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 (CZMP was endorsed by the GoA in July 2002). 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 the project site of Llogora-Karaburuni area is strongly built upon the strategic orientation of the CZMP and in such a context, it is to be considered as a follow up activity of the CZMP.
Box 4. Strategic Objectives of the CZMP in Albania

Strategic objectives of the CZMP are the following:

- to promote conservation of Albania’s coastal biodiversity, including marine, freshwater and intertidal habitats;
- to promote conservation of Albania’s coastal culture heritage, including historical, cultural, architectural and archeological sites of interest;
- to promote expansion of Albania’s coastal and marine-related tourism and ecotourism industry, other activities, and investment opportunities;
- to enhance employment creation opportunities and maximize benefits to people living in coastal areas;
- to enhance the institutional capacity to manage and implement recommended actions and projects; and
- to recommend a series of investment projects that will help “kick-start” the coastal economy in an incremental way while providing a vision of the overall ICAM programme in a “step by step” implementation program.

Source: CZMP, 1996
Map 5. Proposed status of the site by the CZMP (proposed in 1996 and endorsed by GoA in 2002)
2.2.4.2 National and Regional Context for Tourism Development

Overall the tourism sector in Albania cannot be regarded as being well advanced. Albania has a great deal to offer in terms of natural and cultural tourist attractions, however, at the moment there appears to be no serious commitment from central government to invest in and
promote this sector. Domestic tourism is the prevailing form of tourism. This is chiefly focussed on beach centred holidays. Foreigners who are living and working in Albania have also recently started to create an internal tourism demand. In recent years there has been very little interest from incoming foreign tourists other than Diaspora. Information on actual numbers of incoming tourists is not reliable, as this level of information is not requested at the port of entry into the country. Business and ‘development aid’ tourism undoubtedly accounts for the greatest number of foreign visitors.

Tourism development is the responsibility of the MoTR&T who are also responsible for marketing activities through the production of promotional materials and participation in the international tourism fairs.

At the regional level, there are no Municipalities with departments for tourism promotion in their individual districts and no tourist information centres have been established. The lack of structure for planning and marketing tourism at all levels of government will greatly impede the development of tourism in Albania as a whole. In the context of Llogara-Karaburun NP, there is no overriding marketing structure in which the Park can link to promote itself as a tourist destination. Private tour businesses operate for both inbound and outbound clients. The Association of Tourism Travel Agencies represents this group.

<table>
<thead>
<tr>
<th>Year</th>
<th>Foreigners</th>
<th>Overnights</th>
<th>Average length of stay</th>
<th>Day Tourists</th>
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<td>1966</td>
<td>280</td>
<td>3,660</td>
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<td>1960</td>
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<tr>
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</tr>
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</table>

Table 1. Arrivals of Foreign Visitors to Albania 1956 - 2001

National Tourism Policy and National Parks
Although stated in the National Tourism Strategy that the NPs and protected areas offer potential tourism opportunities, there are no specific policies relating to their development as tourism centres. Future tourism policy will need to address this omission. National Parks of Llogara-Karaburuni area Management Plan (Final draft)
Albania are offering great potentials and opportunities for recreation and leisure activities. Difficult access to some of them, lack of infrastructure to accommodate those activities, lack of publications and promotions and tourist guides are some of the main reasons why such potentials have not been developed so far. Nature guided tourism, ecotourism, along with culture and agrotourism can turn NPs into important touristic destinations.

Local Context for Tourism Development
According to the law “For Urbanity”, no 8405, 1998, and law for “Areas as a priority for tourism” 1993 the Ministry of Territory Adjustment and Tourism is responsible for preparing master plans with a life of 20 years. These are approved by the Council of Territory Adjustment of the Republic of Albania.

The Development Control Process and the NP
Development within the boundaries of a NP is controlled by the law no 8405, 1998 ‘For Urbanity’. Within this law all construction / development has to be approved by the Council of Territory adjustment of the Republic of Albania. The sequence for planning approval is as follows:
According to the law “For the Environment Protection” 2002 an EIA must be undertaken for a range of activities and an Environmental License issued before development activities can take place.

**Study for the National Park of Llogara and “Rreza e Kanalit” area**

This study was conducted by the National Planning Institute (NPI) and approved by the National Council of Territorial Adjustment. Decree No 4, date 11.01.1996

Based on the Government Decision No 88 (101.03.1993) on the tourist priority development areas, and the decision No 96 (21.11.1966) on the National Forestry Parks, the aim of the study is two fold: (i) the preservation of natural resources; and (ii) tourist development. The study covers an area of about 8536 ha (see map 7.).

Despite the fact that a relatively long time passed since this study was approved, no actions have been taken by local and central administration to adopt and implement the plan on the ground. It seems that there are little chances that the study will start to be implemented. However, it is important to be aware about the values and limitations of this plan.
As far as the location of the urban area is concerned there are no potential conflicts between the two studies. Most importantly, the study proposes a “low-density” and “extensive development” typology consisting in 1-2 stories villas and hotels.

In conclusion, the consistency between the NPI and MWC studies is relatively high except when tourism development areas are concerned. Two are the main potential conflicts:

1. The proposed coastal tourism especially in the areas of Ginbitri, Llovizi, Grama, and Shen Ndreu (see map 7) conflicts with the destination of A1 zone (Core Zone) defined by the management prescription of the MWC Project as well as the master plan of the CZMP 1996 (endorsed by the GoA in 2002). According to the regulations of the environmental zoning the emphases in this sub-zone should be on minimum disturbance and no access except for scientific research should be allowed. In addition, the same regulation proposes a 100 m buffer zone around this sub-zone.

2. The proposed mountain and sub-mountain tourism which falls under the same area A1 may conflict also for the same reasons mentioned above.
For more information on this study and its implications with the proposed Management Plan please see the study “Urban Planning Instruments and Territorial Governance”, written on behalf of GTZ by Sotir Dhamo (Co-PLAN, 2004).

2.3 Organization of the management

2.3.1 Legal and institutional framework

As mentioned above, Llogora national park (1010 ha) and Rreza e Kanalit-Karaburuni Managed Nature Reserve (20000 ha) are under the administration of DGFP and DFS, under the the Law on Forestry and Forestry Police and the Law on Wildlife and Hunting. Orikumi lagoon as the major wetland of the site is not having a legal protection, but the proposals are made to have it under proper legal protection.

The law “For the Protected Areas” (2002) states that whilst the primary administrative role lies with the Ministry of Environment and DGFP, the interests of other Government Ministries have to be taken into account. The responsibility for the management of protected areas (categories II and IV) remains stil inside the DGFP, under the DFS D.C.M. no 266 dated 24.04.03.

However, the MoE and other in line Ministries such as MoAF (DGFP, FD, Water Dept.), MoTA&T, and Ministry of Defence, should make proper legal and institutional arrangements to avoid dualism and overlap of competences regarding management of nature resources in the existing and proposed Protected Areas. The establishment of the Management Committee for the whole site, as foreseen in the provisions of the Protected Area Law and described earlier in this document is an important step forward in the right direction.

2.3.2 Management structures

There is not any management scheme in both existing protected sites, Llogara NP and Rreza e Kanalit-Karaburuni Managed Nature Reserve (MNR). No management plans for both sites have ever been prepared and implemented so far.

2.3.3 Responsibilities and personnel

As explained earlier, the DGFP through its District Forest Service of Vlora (DFS) is responsible for the administration and management of both protected sites: Llogara NP and Rreza e Kanalit-Karaburuni MNR. Personnel is limited in number (tw forest engineer and 7 forest technicians serving as rangers) and not well trained and qualified to conduct PA management exercises. 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 personnel is relatively well equipped with communication, transport means and logistics.
2.3.4 Buildings (Administration)

A small building constructed under the Albania’s forestry project (1996-2004) financed by the World Bank is operating in the territory of Llogara NP. For the time being this building is serving as an office of the forest personnel responsible for safeguarding the territory of the park. It is not well equipped and not serving as an information center to visitors of the park.

2.4 Physical characteristics

2.4.1 Climate

The climate of Albania is very diverse. This is due to its geographic position, high altitudinal amplitude and mostly the hilly and mountainous relief, characterized by profound valleys and deep gorges. There are four distinguishing climatic zones divided into 13 climatic sub-zones, which strongly contribute to the country’s rich biological diversity.

Map 8. Climatic Zones of Albania

The project site of Llogora-Karaburun has a Mediterranean climate, but due to its size, position and verticality it lays in three main climatic zones: 1) Southern Coastal Plain, 2) Hilly Zone, and 3) Mountainous Zone.
Mean annual precipitations in the site are estimated between 1000-1200 mm. Precipitations are mainly in the form of rains; snow is a much rarer phenomenon, occurring only in the mountainous part of the site (mali Cikes). Most of the rainfall is concentrated during winter, from November to April; 70-80% of the year precipitations are recorded during this season. During spring season there are registered only 20% of the annual precipitations. The mean annual air temperature is 17° C. In January the air temperature is between 8-10° C, while in July the air temperature oscillates between 24-26° C. Being a coastal area, the sea breeze phenomenon influences directly the climatic conditions, especially in the summer time. During winter the predominant directions are northeast (30%), and southern (35 %). These winds have a mean velocity of 7.2 m/s. In special synoptic situations, high wind velocity up to 40m/s is observed. These winds have southern direction.

Figure 4. Annual course of means temperature for the site (Vlora station)

Figure 5. Annual course of precipitation of the site (Vlora station)

January
July
Figure 6. Wind roses for two characteristic months (Vlora station)

2.4.2 Geology, geomorphology and soils
The geology of the area is complex. The area can be subdivided into two distinct complexes, namely, terrigen formations (flyschet and molas) and carbonate rocks (limestone and limestone-dolomite).

The carbonate rocks cover most of the area. All range of mountains Cika Mountain (Llogora)-Rreza e Kanalit-Ravena-Karaburuni and from Cika Mountain to Shashica are composed by limestones and limestone-dolomite of the upper Cretac. These rocks are very distinctive with steep ridges, escarpments, cliffs, and well-developed karst features.

Terrigjen formations (flysh) and Quaternar deposits of molas are found mostly in the Dukati valley, and areas around the villages Dukati, Tragjasi, and Radhima. This formations are very susceptible to erosion, especially on steep slopes. The relief underlies the areas landscape character which appears very fragmented due to a high density torrents, streams and gullies.

Geomorphology of the continental shelf of the Rreza e Kanalit-Karaburuni area is characterised by a narrow and steep platform; very often the 5 m isohypsum is reached within less than 30 m away from the shoreline, while a 20m depth is reached within some 200 m away from the shoreline.

2.4.3 Hydrology
Hydro-geological region of the LLogora-Karaburuni area is characterised by high limestone mountains of porous structure, easily percolated by waters running through underground channels. This is why most of the torrents and streams of the site have only seasonal or temporal riverbeds. The main stream with permanent running waters of the site is that of Tragjasi that originates from the carstic springs of Izvori.
2.4.3.1 Groundwater
The site as expected is rich in groundwaters. A number of karstic springs are freshwater suppliers of the site, including those discharged into the Orikumi lagoon. The freshwater input of the groundwaters into the Orikumi lagoon is very important for maintaining its ecological conditions. Some of these springs are discharged directly into the sea through underground springs below sea level. The most powerful karstic spring of the site is that of Izvori, nearby Tragjasi village. The groundwater is supplying drinking waters for the locals and is sufficient to respond to their demands as well as to potential tourism development of the site.
Map 9. Hydrology and hydrography of the site
2.4.3.2 Surface water: irrigation and drainage

As already explained, the surface waters are scarce in the site. Their regime is linked with the amount and distribution of precipitations. The surface waters of the Tragjasi stream have been used in the past (before 1991) for irrigation of the Tragjasi and Radhima fields. Pumping stations and irrigation channels were built to make possible the use of these waters to agriculture land of the site. Nowadays, most of this irrigation scheme is out of functioning, due to severe damages caused during the transition period, after the collapse of communist regime.

Some of the waters of Tragjasi stream was used in the past for fish farming. Some few acres of the land has been used for such a purpose. The fish farm was also damaged during the years of transition, but today there is an private initiative of the locals to revive this activity again, although not at that extend it used to be; only a small part of the former fish farm is being reused today.

During the years ‘80s of the last century, most the former wetland area of Orikumi was drained (part of it is below the sea level). A drainage scheme was built to take the water out the reclaimed area, including draining channels and pumping stations/hydrovors. An embankment was built to protect the reclaimed wetland area from the influence of the sea waters. Part of that reclamtion work was diversion of the Dukati stream that formerly was discharged directly into the Orikumi lagoon. Consequently, the lagoon has become an environmentally sensitive area (ESA) because the today’s lagoon is much smaller, the inflow of freshwater into the lagoon is reduced as well as water exchange between the lagoon and the sea.

2.5 Ecological characteristics

2.5.1 Natural habitats

The main types of habitats based on the phyto-sociological classification occurring inside the project site of Llogora-Karaburun are the followings:

<table>
<thead>
<tr>
<th>Class</th>
<th>Zosteretea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Order</td>
<td>Zosteretalia</td>
</tr>
<tr>
<td>Alliance</td>
<td>Zosterion</td>
</tr>
<tr>
<td>Ass.</td>
<td>Zosteretum noltii</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Class</th>
<th>Ruppietea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Order</td>
<td>Ruppietalia</td>
</tr>
<tr>
<td>Ass.</td>
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</tr>
<tr>
<td>Ass.</td>
<td>Ruppietum cirrhosae</td>
</tr>
<tr>
<td>Alliance</td>
<td>Posidonion oceanicae</td>
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<tr>
<td>Ass.</td>
<td>Posidionetum oceanicae</td>
</tr>
<tr>
<td>Alliance</td>
<td>Cymodoceion nodosae</td>
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<tr>
<td>Ass.</td>
<td>Cymodocetum nodosae</td>
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</table>

<table>
<thead>
<tr>
<th>Class</th>
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</tr>
</thead>
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<tr>
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</tr>
<tr>
<td>All.</td>
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</tr>
<tr>
<td>Ass.</td>
<td>Crithmo – limonietum anfractii</td>
</tr>
</tbody>
</table>

| Class       | Phragmitetea                                   |

Llogara-Karaburuni area Management Plan
(Final draft)
Class: Phragmitetalia
Ord.: Phragmitetum australis
All.: Phragmition australis
Ass.: Typhetum angustifolii
Cladetum marisci
Scirpetum lacustris

Class: Umbilico – Cheilanthetea
Ord.: Ptilostematalia chamaepeuces
All.: Capparo – Putorion

Class: Thero – Salicornietea
Ord.: Thero – Salicornietalia
All.: Thero – Salicornion
Ass.: Salicornietum – fruticosae
Arthrocnemetum glauci
Salicornietum europeae

Class: Juncetea maritimi
Ord.: Juncetalia maritimi
All.: Juncion maritimi
Ass.: Juncetum maritimi –acuti

Class: Thero – Brachypodietea
Ord.: Thero – Brachypodietalia
All.: Echio – Galactition
Ass.: Ditrichietum – viscosae

Class: Cymbopogoni- Brachypodietalia
All.: Chrysopogon – Saturion
Ass.: Asphodelo – Chrysopogonetum grylli
Brachypodietum ramosi
Chrysopogono – Phlometum fruticosae

Class: Quercetea ilicis
Ord.: Quercetalia ilicis
All.: Quercion ilicis
Ass.: Orno – Quercetum ilicis
Quercetum cocciferii
Arbutus unedo – Erica aehorea
Eriecetum manipuliflorae
Quercetum macrolepsis
Pistacio – Pinetum halepensis
Pistacio – Euphorbitum dendroides.
Quercetea pubescentis
Quercetalia pubescentis
Quercetum pubescentis
Quercetum frainetto – cerris
Ostryo- Carpinion orientalis
Seslerio – Ostryetum

Class: Querco – Fagetea
Ord.: Fagetalia
All.: Fagion helenicum
Ass.: Pineto – Abietetum borissii- regis

Class: Erico – Pinetea
Ord.: Erico – Pinetalia
All.: Pinion – leucomedermis
Vegetation of Lowlands or Evergreen forests and shrubs

It is ranging from coastal plains up to the altitude of 900m. The hill slopes of Karaburuni peninsula, mountain range of Rërëzë e Kanalit, and Valley of Dukati are characterized by a great diversity of vegetation types. The following paragraph present general view of the main vegetation types in this region.

Broadleaved evergreen forests (Assoc. Orno–Quercetum ilicis)
The large areas on Karaburun Peninsula and mountain range of Rërëzë e Kanalit are covered by the broadleaved evergreen forests at altitudes 0-800 m. At Karaburun Peninsula and mountain range of Rërëzë e Kanalit, there is a specific case that large rivulet courses (valleys) from foothills up to the top are covered by this type of forests (in both sides, western and eastern facing slopes).
The most important trees in this type of forest are Quercus ilex, Fraxinus ornus, Quercus coccifera, Acer campestre, which form dense tree layer (cover 80 – 90 % in very well developed stands, height 8-10 m ).

Due to the fact that area used to be a military zone for a long time, these rare forests for Albania are relatively well preserved.

Widespread Mediterranean species comprise much of the undergrowth of these forests e.g. Pistacia lentiscus, Quercus coccifera, Phillyrea angustifolia etc. These forests represent the climax vegetation of the evergreen zone at altitudes 0-900 m.

Macquis vegetation

It represents dense evergreen shrubs up to 3 m tall quite widespread throughout the coastal region of Vlora. In this project site, it occurs mainly on acid soils in tightly damp places. Macquis is believed to constitute local climax vegetation, but, more often, it is the result of the degradation of broadleaved evergreen forests. The main plant communities of macquis in this region are:

a- Plant communities dominated by Quercus coccifera (Assoc. Orno-Quercetum cocciferae). They are widespread in region, mostly over limestone, at altitudes 0-900 m. A large surface of hill slopes at Sazani Isle, Karaburuni peninsula, mountain range of Rërëzë e Kanalit and Valley of Dukati are covered by rather dense shrubs of 2-3 m tall, dominated by Quercus coccifera (Shrub layer cover 80-90 %, height 2-3 m). Others evergreen shrubs, which constitute the shrub layer of these plant communities are: Pistacia lentiscus, Quercus ilex, Fraxinus ornus, Myrtus communis, Laurus nobilis (especially on Western slopes of Karaburun Penninsula, near by the Bay of Bristani). The dense structure of this vegetation limits considerably the herb layer at ground level, which is consequently rather poor in species (herb layer cover 10%, height 0.3 m). Main herb species are Brachypodium ramosum, Trifolium stellatum, Reichardia picroides etc.

b- Plant communities dominated by Arbutus unedo and Erica arborea (Assoc. Arbutus unedo-Erica arborea). In all territory of this region, some of the slops, mostly over limestone, but rarely over flysh substrate (above Pasha –Liman, Uji i Ftohte) are covered by a machia of evergreen shrubs and small trees such as: Arbutus unedo, Erica arborea, Phillyrea angustifolia, Pistacia lentiscus, Rhamnus alaternus, Quercus coccifera, etc. (Shrub layer 70-80 %, height 1.5- 2 m). Some species of deciduous shrubs occur here, too, and become an important element on the upper belt distribution of these plant communities.
(Cotinus coggyria, Ostrya carpinifolia, Carpinus orientalis, etc.). The herb layer is dominated by Brachypodium ramosum, B.distachyum, Schlerocloa rigida, etc (herb layer 10%).

Cutting, grazing or burning of macquis or evergreen shrubs has produce a similar but slightly taller vegetation called garigue. This anthropogenic vegetation is common in rocky areas of this region (mostly in hill slopes of Dukati Valley). It is dominated by spiny shrubs, often with small, rigid leaves much as Quercus coccifera, Calicotome villosa etc.

**Mediterranean pine forests.** (Assoc. Pistacio- Pinetum halepensis).

These forests occupy most of the hill slopes of Dukti Valley, as well as in small stands in Uji i Ftohtë, Vlore. The main constituents of these forests are Pinus halepensis and rarely Pinus pinea. They occur from the sea level up to 400-500 m in Dukati Valley. There is no doubt that these forests are not indigenous for the area.

There has been a reforestation project planting Pinus halepensis some 30-35 years ago in Dukati Valley. These communities grow on poorly developed soils. They are often heterogeneous from a phytosociological point of view. In Dukati Valley there is a tree layer formed exclusively by Pinus halepensis; they do not have shrub layer and a small amount of dwarf shrubs and herbaceous species; the most frequent species are the small tree species like Daphne gnidium, Rubus fruticosus, Lolium rigidum, Crucianella latifolia etc. Their tree (tree layer covers 60 %, height 8-10 m) and shrub layers (shrub layer covers 60-70 %, height 1-2 m), become denser and, consequently, the herb layer is reduced (herb layer covers 10 –20 %, height 0.3 m ). Some of main species are: Smilax aspera, Rubia peregrina, Pistacia lentiscus, Erica manipuliflora, Anthyllis hermanniae, Rhamnus alaternus, Quercus coccifera, Asparagus acutifolius.

**Plant communities dominated by Euphorbia dendroides, Pistacia lentiscus,**


Towards the inner parts of Karaburun Peninsula and mountain range of rrëza e Kanalit (North- Eastern and Western part of Karaburuni peninsula and Western part of mountain range of Rrëza e Kanalit), a vegetation belt exposed to the sea, at low altitudes (c. 50-100 m) is dominated by: Euphorbia dendroides, Pistacia lentiscus, Phillyrea angustifolia, Quercus coccifera, Olea europea subsp. sylvestris, Prasium majus, etc. (Shrub layer covers 60-70 %). The soil, over which these plant communities are found, is usually poor with scattered stones and rocks.


It is low shrub type vegetation, usually not extending the 100 cm in height, with often cushion – shaped shrubs being well spaced. This vegetation, widespread distributed in the Karaburun Peninsula, occurs on dry shallow soil over limestone at altitudes 0-900 m. The main dominant shrubs of the phrygana vegetation are: Erica manipuliflora, Thymus capitatus, Phlomis fruticosa, Urginea maritima, Chrysopogon gryllus, Anthyllis hermanniae, etc.

Similar to the macquis vegetation, phrygana might represent a local climax vegetation of hot and dry hilly slopes, but quite often, it is result of the degradation of macquis vegetation. It also constitutes an early succession stage following burning of coniferous forest. Phrygana vegetation is generally more open that the vegetation of other types and relatively rich in species. Widespread Mediterranean species comprise much of the flora of phrygana, where the Phlomis fruticosa, Erica manipuliflora are often prominent and dominant species.
Pseudo–steppe vegetation dominated by Brachypodium ramosum

As it was mentioned before the further degradation caused by overgrazing, has converted the garigue into a pseudo-steppe vegetation type dominated by grasses mostly Brachypodium ramosum. Patches of meadows in Karaburun Peninsula and mountain range of Rrëza e Kanalit are common at altitudes 0-900 m. They have a rich herb flora. The families Graminaceae and Fabaceae are well represented, mostly annual species. Prominent among the latter group are: Avena barbata, Aegilops ovata, Anthoxanthum odoratum, Poa trivialis, P. bulbosa, Bromus sterilis, Trifolium stellatum, Medicago minima, Lotus corniculatus, Cardus pycnocephalus, Orlaya daucorlaya, Malva sylvestris, Anthenis arvensis, etc.

The other areas with heavy human impact, including the cultivated and abandoned fields, road sides and ruderal places contain a large number of species or different type of vegetation which is not found in natural vegetation. Flat grounds and much of the hill slopes (mostly in Dukati Valley) are now largely cultivated with cereals, olives, oranges etc. Much of the hillside vegetation was transformed by cutting and grazing into bushwood where the spiny Paliurus spina-christi, Asphodelus microcarpus and Chrysopogon gryllus are often prominent (Assoc. Asphodelo – Chrysopogonetum grylli). While Borago officinalis and Ecballium elaterium are common species on roadsides and ruderal places; Agrostema githago, Oxalis pes-caprae, Papaver rhoeas are common species on roadsides and ruderal places; Cardus pycnocephalus, Orlaya daucorlaya, Malva sylvestris, Anthenis arvensis, etc.

Oak deciduous woodlands (Assoc. Quercetum frainetto)

The western slopes of mountain range Rrëza e Kanalit between 500 and 300 m is mostly a zone of deciduous oaks such as Quercus pubescens, Q. cerris, Q. frainetto, Q. trojana (open deciduous woodland). Well developed oak forests composed primarily of Q. cerris and Q. frainetto are found in several places, with a rich undergrowth (tree layer cover 50-60 %; shrub layer 30-40 %). There is sometimes an undergrowth of Buxus sempervirens, Carpinus orientalis, Ostrya carpinifolia, Fraxinus ornus, Cornus sanguinea, Pistacia terebinthus, Juniperus oxycedrus, Crataegus monogyna, Acer monspessulanum, Pyrus spinosa, etc.

At the altitude of approximately 500-900 m (Western and Eastern parts of mountain range Rrëza e Kanalit), small stands of deciduous oak woodlands or evergreen scrub are replaced by deciduous shrubs dominated mostly by Ostrya carpinifolia, Carpinus orientalis, Acer monspessulanum etc. (shrub layer covers 70 – 80 %, height 1.5 – 2 m).

Quercus ithaburensis subsp. macrolepis (known as Valona oak) is the dominant species of Oak forests: tree layer covers 60 – 70 %, height 7 m; shrub layer cover 50-60 %, height 1-2 m; herb layer cover approximately 30 %, height 0.3 m; max. trunk diameter 30-40 cm. This type of forests is met here and there all over the Karaburun peninsula at altitudes 0-800 m. Forests with predominance of Quercus ithaburensis subsp. macrolepis are growing within the evergreen forest belt (below 800 m), but not forming a distinct forest belt. Some analysis of undergrowth vascular flora associated with the Quercus ithaburensis subsp. macrolepis woods found similarities in elements belonging to the characteristic undergrowth of broadleaved evergreen forests. The most frequent species are herbs and phrygana shrubs, widespread in Karaburun Peninsula. Quercus ithaburensis subsp. macrolepis might be considered as a relict species that persisted on the Karaburun peninsula since Tertiary times. Most of these forests have a tree layer formed exclusively by Quercus ithaburensis subsp. macrolepis, but especially, at higher altitudes it is often accompanied by Quercus pubescens, Quercus ilex, Quercus cerris, etc.

The most common undergrowth species are: Cistus salvifolius, Hypericum empetrifolium, Trifolium campestre, Dactyliis glomerata, Asparagus acutifolius, Quercus coccifera,
Calicotome villosa, Medicago polymorpha, Crepis vesicaria, Carpinus orientalis, Cercis siliquastrum, Securigera securidaca, Anagallis arvensis, Avena barbata, Satureja graeca, Trifolium stellatum, Acer campestre, Galium aparine, Ostrya carpinifolia, Anthoxanthum odoratum, Cynosurus echinatus, Acanthus spinosus, Rhagadiolus stellatus, Psoralea bituminosa.

Mountain Coniferous forests (Assoc. Pineto – Abietetum borissi-regis)
Tree layer covers 80-90 %, shrub layer covers 50-60 %, herb layer covers 20 %.
At an altitude of c. 750 –1300 m, deciduous oak woodlands are replaced by Mountain coniferous forests, mainly of Pinus nigra and Abies borissi – regis (mostly in the National Park of Llogara). Patches of pure Abies borissi – regis occur locally, mostly on the Eastern part of the Llogara National Park. The road towards “Qafa e Llogarasë” passes through large and very well preserved forests, dominated by these species. Several deciduous trees and shrubs are found there, including: Acer obtusatum, Colutea arborescens, Cornus sanguinea, Cotinus coggygria, Fraxinus ornus, Ostrya carinifolia, Ilex aquifolium, as well as species of Taxus baccata although very occasionally. Sometimes, an undergrowth of Buxus sempervirens, Daphne laureola, etc. is found in the forest. At lower altitudes, these forests do have often a shrub layer of evergreen species usually found in macquis or garigue, e.g. Quercus cocifera, Juniperus oxycedrus, Phillyrea latifolia, Crataegus monogyna. The herb flora is relatively rich, e.g. Euphorbia amygdaloides, Bellis sylvestris, Agrimonia agrimonoides, Mercurialis perennis, Parietaria officinalis, etc. The evergreen hemiparasite Viscum album is common on Pinus nigra.

At an altitude of 1000 m (Qafa e Llogarasë, National Park of Llogara) there is found an individual of “Flag pine”, a rare natural monument (height 13 m, with all branches in the north –western direction).

Patches of meadows have rich herb flora including some bulbous plants such as Sternbergia lutea, Crocus spp, etc.

On wet rocks close to a spring, near Qafa e Llogarasë (950 m above sea-level), a large colony of Pinguicula balcanica, an insectivorous plant, is found.

Dominant tree species along the small streams within the area of Llogara National Park are: Platanus orientalis, Salix alba, Salix eleagnos, Alnus glutinosa, Rhamnus saxatilis, sometimes entangled by woody climbers Clematis vitalba, wild form of Vitis vinifera, Hedera helix, etc.

The forests dominated by Pinus leucodermis (Assoc. Pinetum leucodermis typicum)
There are some open stands at subalpine levels. Mountain pine (Pinus leucodermis) forms often pure stands, but at lower altitudes (1300 –1700 m) it may be found rarely mixed with Pinus nigra and Abies borisii – regis. These forests are widespread in Qore and Çika mountains (Western slopes) at altitudes of c. 1300- 1700 m. Tree layer covers 40 – 50 %, height is 10-12 m.

In mountains, Pinus leucodermis forms the upper forest line. It is distinguished for its vegetation rich in species, due to the open stands of shrubs, including Rhamnus alpinus subsp. fallax, Junipers communis, Daphne oleoides (shrub layer covers 50-60 %), as well as a rich flora of perennial and annual herbs much as Sideritis raesi, Senecio squalides, Euphorbia cyparissias etc. (herb layer covers 60 %).

Above upper forest line (from 1700 m to 2045 m, Mountain of Çika), there is a variety of habitats, including meadows, grassy moors, screens and rocks; the vegetation type and species composition are quite influenced by the bedrock, generally dominated by grasses (species of Festuca, Sesleria, Poa, Stipa, Phleum, Alopecurus etc.).
2.5.2 Flora

Historical data and those collected from the recent research in the site are showing a quite rich and diverse flora, high diversity of habitats and plant associations of a particular national importance, both from scientific and economic point of view.

A number of plant species of the study area belongs to the national list of rare species, a considerable number of plants are distinguished for their specific scientific interest, while many of them are of particular economic values as medicinal plants, oil-bearing plants, industrial plants, decorative plants and so on.

Inspite of its size, flora of Llogara-Karaburuni area is very rich: some 1400 vascular plant species (representing 42.4% of the total flora of Albania). This great figure is explained with geographical position of the site, the very broken orography and diverse geological formations, as well as various types of microclimates found within the site.

Many endemic and Tertiary relict plant species are met inside the study area, such as *Hypericum haplophyloides*, *Leucojum valentinum subsp. vlorense*, *Taxus baccata*, *Aesculus hippocastanum*, *Quercus ithaburensis subsp. macrolepsis*, etc.. The first two species, *Hypericum haplophyloides*, *Leucojum valentinum subsp. vlorense*, are strictly endemic of the project site.

The study area represents an important cross of migration routes of the flora of Balkan region. A number of species meet here with their most northern limit of their distribution area, such as *Quercus ithaburensis subsp. macrolepsis*, *Abies borisii – regis* etc.. Other species do have here their most southern limit of their areal, such as *Petteria ramentacea*. Some species, such as *Aesculus hippocastanum*, do have their most western areal limit, while some others (*Teucrium fruticans*, *Brassica incana*) their most eastern areal limit.

**About 68 plant species or 21.25% of** the total rare and endangered species of Albania (330 species) are met inside the study area.

Research shows that flora of the study area has stronger floristic affiliation with most southern Balkan countries; more than 24 species distributed in Greece do have most northern part of their areal in the site.

The flora composition of the site as shown in the table is quite rich and diverse, although the data are incomplete.

<table>
<thead>
<tr>
<th>Species recorded</th>
<th>Rare</th>
<th>Noteworthy</th>
<th>Threatened</th>
<th>Endemic</th>
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<td>1400</td>
<td>34</td>
<td>69</td>
<td>68</td>
<td>2</td>
</tr>
</tbody>
</table>

*Table no.2:* Number of species of flora in Llogara, Reza e Kanalit, Karaburuni Peninsula, Orikumi Lagoon area

2.5.3 Fauna

2.5.3.1 Invertebrates
Incomplete data on invertebrates collected under Site Diagnosis activity are those related to insects. 151 species from order Coleoptera, and 93 species from Lepidoptera (butterflies and moths) are reported in the area. There is a need for further research and exploration work on species richness of invertebrates, especially on mollusks and insects (other groups, apart from those mentioned above).

2.5.3.2 Fish
As shown in the table no.3, the main fish species of the Orikumi lagoon are Sea bream (*Sparus aurata*), Sea bass (*Dicentrarchus labrax*), European eel (*Anguilla anguilla*) and Grey mullet (*Mugil cephalus*). The lagoon is also distinguished for the population of the bivalve molluscs such as *Ruditapes decussatus*.

Table no.3. Main fish and shellfish species of the Orikumi lagoon

<table>
<thead>
<tr>
<th>Scientific name</th>
<th>English name</th>
<th>Lokal name</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Mugil cephalus</em></td>
<td>Grey mullet</td>
<td>Qefull i veres, gushtak, cumerr</td>
</tr>
<tr>
<td><em>Chelon labrosus</em></td>
<td>Thicklip grey mullet</td>
<td>Mavriak, vijosh, vrute</td>
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<td><em>Liza saliens</em></td>
<td>Leaping mullet</td>
<td>Vesh verdhe, gastro</td>
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<td><em>Anguilla anguilla</em></td>
<td>European eel</td>
<td>Ngjale</td>
</tr>
<tr>
<td><em>Dicentrarchus labrax</em></td>
<td>Sea bass</td>
<td>Levrek</td>
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<tr>
<td><em>Sparus aurata</em></td>
<td>Sea bream</td>
<td>Koce</td>
</tr>
<tr>
<td><em>Ruditapes decussatus</em></td>
<td>Clams</td>
<td>Vongola verace</td>
</tr>
</tbody>
</table>

In the cold and fresh waters of Tragjadi river (Izvori) the wild trout is found (*Salmo trutta fario*).

2.5.3.3 Amphibians and Reptiles
Some 10 species of Amphibians (out of the 15 species known in the country) and 28 species of Reptiles (out of 37 species known in the country) are reported in the site. The quite rich and diverse herpetofauna of the site is explained with site position, favorable climate conditions, and diverse types of habitats.

2.5.3.4 Birds
In the Site Diagnosis report some 105 bird species are reported for the site, but the number is believed to be higher (the total number of birds known in the country is estimated at about 330 species). Based on the seasonal status, the ornithofauna consists of:

- 63 resident species or 60 % of all species
- 30 “summer visitor” species or 28.6 % of all species
- 11 “wintering”species or 10.5 % of all species.
- 1 “migratory” species or 0.9 % of all species

Aquatic birds (mostly those of the Orikumi lagoon) and sea birds are important elements of the biota of wetland habitats. The area is offering suitable habitats for a number of birds of prey, including vultures. Forest birds linked with old-growing stands, such as woodpeckers and passersines are abundantly found inside the area, especially in Llogora national park. All this makes the site to be very attractive for birdwatchers.

2.5.3.5 Mammals
Inspite of incomplete data, the site-complex of Llogora-Rreza e Kanalit-Dukat-Orikumi-Karaburun represents one of the most important sites in the country as far as mammals

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concern. Some 55 species out of 71 species known in Albania so far are expected to occur inside the site, of which 42 species have been recorded (see table no.4).

Table no. 4. Composition of the Mammalofauna of Albania and that of the site-complex of Llogora-Rreza e Kanalit-Dukat-Orikum-Karaburun

<table>
<thead>
<tr>
<th>Taxa/Order</th>
<th>No. of species in Albania</th>
<th>No. of species in the site</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Expected</td>
<td>Recorded</td>
</tr>
<tr>
<td>Insectivora</td>
<td>11</td>
<td>6</td>
</tr>
<tr>
<td>Chiroptera</td>
<td>26</td>
<td>24</td>
</tr>
<tr>
<td>Rodentia</td>
<td>23</td>
<td>16</td>
</tr>
<tr>
<td>Lagomorpha</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Carnivora/Fissipedia</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>Artiodactyla</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Cetacea/Odontoceti</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Pinnipedia</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>85</strong></td>
<td><strong>71</strong></td>
</tr>
</tbody>
</table>

Cave-dwelling bats, large mammals and carnivores and aquatic and marine mammals (*Lutra lutra*, *Monachus monachus* and dolphins) are some of the most interesting mammals of the site.

### 2.6 Socio-economic characteristics

#### 2.6.1 Local Participation and Sustainable Development

Protected areas can be catalysts for rural development (IUCN 1994) by providing opportunities for developing services and marketing locally produced products. Whilst there will be controls and measures put in place to manage the protected area (PA), emphasis must be placed on maximising the positive interaction between the PA management and local residents. It is therefore crucial that the interests of the local population are not only taken care of in the management process, but that active measures are taken to encourage the participation and inclusion of the local community in the PA activities and accruing benefits.

“The successful establishment and maintenance of protected areas in most societies will depend on a co-operative relationship between local communities and protected area managers.”

“Local communities living in or adjoining protected areas should therefore be considered as a special group in the establishment and management of protected areas. Protected areas cannot be separated from the need for local people to meet their aspirations for economic development and a better quality of life.”

IUCN 1994

The site proposed to be protected and managed extends over a wide area of land from which the majority of residents make their living. The imposition of regulations on this land and

---

3 As above

Llogara-Karaburun area Management Plan (Final draft)
exclusion of residents from the decision making process would inevitably lead to conflict between each party. Without doubt this would lead to further degradation of the site biological resources as there would be no incentive for local people to support the conservation activities of the protected area.

Box 4 sets out the key principles that should be adhered to when considering local people and protected areas. These principles must be coupled with policies and action plans that encourage employment and growth of the local economy in a sustainable way.

<table>
<thead>
<tr>
<th>Box 4. Local People and Protected Areas – Key Principles</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Local people should be fully involved in making decisions about the management objectives and policies</td>
</tr>
<tr>
<td>• the needs of local communities should be assessed and information arising from these consultations should be used in protected area planning and management</td>
</tr>
<tr>
<td>• the creation and management of protected areas should be co-ordinated with the provision of infrastructure and services, as well as development of sustainable rural land use</td>
</tr>
<tr>
<td>• the maintenance of agricultural biodiversity, fuel supply, livestock bloodlines, forage systems and range management should be assured because local people may not have viable options for supporting protected area management until they achieve higher productivity in their core economic activities and meet their basic needs</td>
</tr>
<tr>
<td>• the selection and training of local protected area staff should be recognised as critical in relation to community involvement. Skills in areas such as community consultation need to be developed</td>
</tr>
<tr>
<td>• there should be evaluation and analysis of successful models of community involvement, with wide dissemination of the results. There also needs to be a sharing of experience between those working in different cultural and economic contexts.</td>
</tr>
</tbody>
</table>

Source: IUCN 1994

Therefore the PA administration has a duty to foster the economic and social well-being of the local communities contained within its borders in ways which are compatible with the PA designation and purpose by working with the local commune leaders, the local authority, local business community, NGOs, agencies, donors and others responsible for these matters, but without incurring significant expenditure for the PA itself. The PA administration must therefore be one of the catalysts to assist the local community in social and economic development matters, but cannot and must not act in the role of a development agency. The PA administration will, in developing its own activities, work in partnership with the local stakeholder groups, development agencies and organisations to support the rural economy and communities in ways which will conserve and enhance the special qualities of the site.

An integral component of developing this management plan has been the widespread participatory planning exercise undertaken to inform the various stakeholder groups of the project and to ascertain their views and ideas for inclusion in the Management Plan. The participatory process however is not a one off exercise, but must be continuous if the stakeholders are to be fully integrated into the planning and management process of the PA.

Llogara-Karaburuni area Management Plan (Final draft)
This is required if ultimately they are to give their full commitment to achieving the PA’s overall management goals.

2.6.2 Key Stakeholder Groups

The following main stakeholders groups are identified and approached in the study:
- Central Government
- Local Government
- Regional Association and Users
- NGOs / Development Agents
- Other Private or Individual Users

The following tables provide with an analysis of all stakeholders that have a stake when considering conservation and use of natural resources of the site. Local stakeholders are described separately for the two main subsites: 1) Orikumi lagoon and 2) Llogara National Park and Karaburuni Managed Nature Reserve.
<table>
<thead>
<tr>
<th>Main Groups</th>
<th>Stakeholder Groups</th>
<th>Interests at stake in relation to project</th>
<th>Effect</th>
<th>Importance of Stakeholder for success of Project</th>
<th>Degree of influence of Stakeholder over project</th>
</tr>
</thead>
<tbody>
<tr>
<td>CENTRAL GOVERNMENT</td>
<td>Ministry of Environment</td>
<td>fulfill the obligations of international treaties</td>
<td>+</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>prepare legislation</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>set standards for sustainable development and monitor</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regional Environment Agency</td>
<td>Monitor the environment quality</td>
<td></td>
<td>+</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Fishing Directorate (MoAF)</td>
<td>maintain the communication canals between the lagoon and the see</td>
<td></td>
<td>+</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Fishing licenses</td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Directorate of Forestry and Pastures (MoAF)</td>
<td>maintain forests and pastures</td>
<td></td>
<td>+</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Directorate of waters (MpAF)</td>
<td>maintain the drainage canals which furnish lagoon with fresh water</td>
<td></td>
<td>+</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Ministry of Territorial Adjustment and Tourism</td>
<td>administer the development process according to established targets</td>
<td></td>
<td>+</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Local Government</td>
<td>Ministry of Defense</td>
<td>ensure security in the military areas</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>------------------</td>
<td>-------------------</td>
<td>--------------------------------------</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>Local Government</td>
<td>Municipality Orikum</td>
<td>administer development in Orikumi Municipality</td>
<td>+</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Regions are the second level of local government.</td>
<td></td>
<td>support initiatives in the interest of the local community</td>
<td>+</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>issue decrees, ordinances and orders to support initiatives</td>
<td>+</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Vlora Region</td>
<td>develop and implement regional policies</td>
<td>+</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>harmonize development at the regional level with national policies</td>
<td>+</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Vlora Prefecture</td>
<td>control legal conformity of the decisions taken by the municipality</td>
<td>+</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Regional Associations &amp; Users</td>
<td>Drainage &amp; Water Boards</td>
<td>coordinate drainage problems and investments</td>
<td>+</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>participate in decision making</td>
<td>0</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>reduce conflicts</td>
<td>+</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Pastures’ and agricultural land Owners</td>
<td>claim land ownership</td>
<td>-</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>improve pastures &amp; increase pasturing area</td>
<td>+</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Hunters and Fishermen Association</td>
<td>stop hunting and fishing out of the hunting and fishing season</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>---------------------------------------------------------------</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>limit unlicensed hunting and fishing</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>improve the habitat of the area</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>benefit from tourism development</td>
<td>$^5$</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$^5$ The status of “special protected area” will set limitations on the tourism development.
Table no. 6. NGOs / Development Agents, other private or individual users

1. *Orikumi Lagoon*

<table>
<thead>
<tr>
<th>Main Groups</th>
<th>Stakeholder Groups</th>
<th>Interests at stake in relation to project</th>
<th>Effect of Project on Interests</th>
<th>Importance of Stakeholder for success of Project</th>
<th>Degree of influence of Stakeholder over project</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEVELOPMENT AGENTS / NGOs</td>
<td>Dukati Association</td>
<td>claim land ownership on behalf of Dukati local population</td>
<td>-6</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Association of Organic Agriculture</td>
<td>promote local economic development</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>create a brand name for local agricultural and dairy products</td>
<td>+</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>improve the technology of production</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>improve pastures</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Association Karaburuni</td>
<td>protect pastures from fires</td>
<td>+</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>improve conditions of pastures (lerat)</td>
<td>+</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>improve technology of production in dairy farms</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fishermen Association “Delfini” and any other fishermen association in the area</td>
<td>protect fauna</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>promote fishing and hunting rules</td>
<td>+</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>stop illegal fishing</td>
<td>+</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>“Laguna e”</td>
<td>community sensitization</td>
<td>+</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6 Concerns that if the area will be classified as “special protected area” their land will not be restituted and development will be restricted
<table>
<thead>
<tr>
<th>OTHER PRIVATE OR INDIVIDUAL USERS</th>
<th>Kalter“</th>
<th>Fish farm “Kthesa”</th>
<th>Tourist operators</th>
<th>Fish traders</th>
<th>Pastors</th>
<th>Unlicensed fishermen</th>
<th>Unlicensed hunters</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>complete and implement environment projects  + 3 2</td>
<td>protect lagoon from illegal activities  +</td>
<td>protect their own rights of fishing  0</td>
<td>continuously increase fish harvest  -</td>
<td>continuously increase number of tourists in the area  -</td>
<td>sell products and maximize their profit  -</td>
<td>improve pastures  + (-) 4 2</td>
</tr>
<tr>
<td></td>
<td>protect lagoon from illegal activities  +</td>
<td>protect their own rights of fishing  0</td>
<td>continuously increase fish harvest  -</td>
<td>maintain communication between lagoon and the see  +</td>
<td>include Karaburuni coastline in tour itineraries (promote local tourism)  + to 07</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>protect lagoon from illegal activities  +</td>
<td>protect their own rights of fishing  0</td>
<td>continuously increase fish harvest  -</td>
<td>maintain communication between lagoon and the see  +</td>
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<td>protect lagoon from illegal activities  +</td>
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<td>protect lagoon from illegal activities  +</td>
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<td></td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

7 This could be considered as positive as far as the activity is done within certain sustainable criteria
8 Improve through burning
2. National Park of Llogara and Managed Nature Reserve of Karaburuni

<table>
<thead>
<tr>
<th>Main Groups</th>
<th>Stakeholder Groups</th>
<th>Interests at stake in relation to project</th>
<th>Effect of Project on Interests</th>
<th>Importance of Stakeholder for success of Project</th>
<th>Degree of influence of Stakeholder over project</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEVELOPMENT AGENTS / NGOs</td>
<td>Dukati Association</td>
<td>claim land ownership on behalf of Dukati people</td>
<td>-</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Association “Karaburuni”</td>
<td>protect pastures from fires</td>
<td>+</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>improve conditions of pastures (lerat)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>improve technology of production in dairy farms</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>“Laguna e Kalter”</td>
<td>community sensitization</td>
<td>+</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>complete and implement environment projects</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OTHER PRIVATE OR INDIVIDUAL USERS</td>
<td>Private business (bars / restaurants / hotels)</td>
<td>increase the number of tourists / visitors in the area</td>
<td>+</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>minimize expenses to eliminate solid waists produced by their activities (pollution)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>expand their activity (urban sprawl)</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Owners of illegal buildings / activities</td>
<td>legalize illegal constructions / businesses</td>
<td>-</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>expand their activity</td>
<td>-</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9 Scare that if the area will be classified as “special protected area” their land will not be restituted
<table>
<thead>
<tr>
<th></th>
<th>continuous number of tourists in the area</th>
<th>-</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>include Karaburuni coastline in tour itineraries (promote local tourism)</td>
<td>+ to 0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>use the area for recreational purposes</td>
<td>+</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>organize picnics in the open air without obeying to camping and picnic rules (risk of fires)</td>
<td>-</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>improve pastures through burning</td>
<td>+ (-)⁰¹⁰</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>enlarge pasturing area</td>
<td>- to +¹¹</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>maximize their profit without following common rules</td>
<td>-</td>
<td>4</td>
<td>1</td>
</tr>
</tbody>
</table>

2.6.3 Overview of social structure
2.6.3.1 Population and Villages

The whole territory of the project site belongs to one administrative unit: Municipality of Orikumi, including Orikumi as the center and the villages of Dukati, Tragjas and Radhima. The population of the Orikumi Municipality is estimated at 10423 inhabitants, in 2502 families (average 4 members per family). Their distribution by administrative units of the site is as following:

<table>
<thead>
<tr>
<th>Administrative Unit</th>
<th>Inhabitants</th>
<th>No. of families</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dukat fshat</td>
<td>1535</td>
<td>360</td>
</tr>
<tr>
<td>Dukat i Ri</td>
<td>2860</td>
<td>612</td>
</tr>
<tr>
<td>Tragjas</td>
<td>1208</td>
<td>299</td>
</tr>
<tr>
<td>Radhima</td>
<td>844</td>
<td>207</td>
</tr>
<tr>
<td>Orikumi</td>
<td>3976</td>
<td>1024</td>
</tr>
</tbody>
</table>

¹⁰ Improve through burning
¹¹ There are some positive elements related to the local economic development, however, the phenomenon is negative as far as the reduction of the forests area is concerned
Compared to 1989 the population has increased by 1,802 people. The biggest urban area is the Orikumi town, counting some 3,960 inhabitants.

The population density in the Municipality of Orikum as a whole is the lowest in the MEDWET Coast project area of Albania: 30 inhabitants per square kilometer, whereas within project area (including Narta) it is 74 inhabitants per square kilometer. This relates to the quite large uninhabited territories that encircle the settlements of Orikumi municipality, such as Karaburuni peninsula, 56 square kilometer or the Llogara park, 10.4 square kilometer.

2.6.3.2 Household Structure
The local community in the area is organized based on the family’s structure, mainly composed by 4 members. The relations among individuals don’t exceed in clan pattern or social life organization. Migration has created an imbalance in the age structure; young persons between the ages of 17 and 30 are leaving the area to find work either in other urban areas of Albania or emigrating abroad. (Almost 60% of the site population is in emigration).

2.6.3.3 Education (Schools)
There are five basic schools (8 years) attended by 472 school children, two high schools or colleges (4 years) attended by 524 students and three kindergartens (250 kids altogether). In total: 1,200 school children and students, and some 130 teachers. Approximately 20% of children go on to attend a University.

2.6.3.4 Employment
The key employment sectors in the site are:

- Agriculture and livestock rearing
- Forestry
- State/public Sector (Education, Health, social servise, local administration)
- Business (tourism, hotels, bars and restaurants, construction) and shops
- Fishery
- Quarries and mines

Private sector provides 90% of the employment while the public sector the remaining 10% (220 employees are employed in public sector, of which 130 in education). Agriculture and farming activities are not considered to be the main source of income for most of the resident population because of the difficulties of access to markets, the lack of farm mechanisation and the limited land area suitable for farming. However, majority
of the population is involved with livestock and farming activities in some form, and some 74% of the total family incomes in the Municipality of Orikumi is coming from stockbreeding. Very poor families are receiving social aid or pensions (1200 retired persons, of which 92 are handicaps).

2.6.3.5 Migration

Since the political change of the early 1990s there has been an increase in the mobility of the population as a whole. This migration can be characterised as:

1. Migration from rural areas to the cities.
2. Migration from the north of Albania towards the centre.
3. Migration from Albania to neighbouring countries.
4. Migration from Albania to non-neighbouring countries.

In the project area migration is characterised by these main movement of the population:

1. Migration from the area to neighbouring countries
2. Migration towards overseas.
3. Migration of the inhabitants towards other urban areas, seeking new opportunities in or close to the city.

According to survey data, more than 60% of inhabitants of Orikumi municipality have emigrated abroad. 75% of emigrants are working in Italy, 20% in Greece and the remaining 5% in USA and other EU countries.

2.6.3.6 Religion

Some 90% of the population is Muslim, but there is not any mosque in the area. Orthodox community is estimated at 7% while Christian catholic community at 3%. Historically there has been no conflict between the followers of different religions.

2.6.3.7 Traditional Values and Culture

The plan area retains a high level of traditions and cultural practices that are influenced by its rural position and being a part of a very outstanding ethno-cultural region proudly called by the locals LABERIA. The area and especially Dukati and Tragjasi village retains its own dances, poliphony song and traditional costume. Traditional values are also seen in the architecture as the methods of construction give an insight into the economic status of the owner, with large houses representing the earliest patriarchal families with large numbers of family members. It is characteristic for houses to contain a ‘guest’ room, which will often be lavishly decorated.

2.6.4 Local Stakeholder Concerns
**Orikumi Lagoon**

A fish farm produces some 100 Kw/y, however they still have difficulties in selling their products. It was reported by the fish farm which is currently administering the entire lagoon that the communication canal with the see needs further investments which are unaffordable to them. They reported also a decrease in the fish harvest due to the problems which are sourced in a much larger environment picture. Problems related to the illegal fishing and hunting still exists in the lagoon. In order to increase the level of control in the lagoon there are tendencies from the fish farm to close the lagoon area with wire fences.

According to Orikumi municipality land claims and rights of use (tourist purposes) are very important problems in this area. In addition, it is reported a relatively poor understanding amongst local population related to the central government “imposed protection” on “their areas”. They still confuse “environment protection” with “military protection” and there are strong doubts that “something is behind” central government strategies and projects. They concern to be left aside to the benefits of the tourism development of the area. Because of this the special protected status of this area is still rejected by many people in the villages of Dukati and Tragjasi (land ownership is only recognized but not restituted).

Another conflict in the area is represented by the presence of “Pasha Limani” military base in Orikumi vicinity. They still consider “like theirs” most of the surrounding land. At the same time the presence of the military base creates great difficulties for local population to access their pastures even in cases they need to do some maintenance works in their pastures. The only access road to Karaburun peninsula gets across the military base and a special permition is needed to enter and pass through the base.

**National Park of Llogara and Karaburun MNR**

Llogara-Karaburun area includes relatively untouched terrestrial and marine ecosystems. There are three different climate zones in a small area which result in dynamic and various landscapes. Pastures and forests are one of the main resources of this area largely used by local population to earn their everyday life. The area is also used for hunting, tourism, wood and non-wood products, and collection of medicinal plants.

**Land ownership** is reported by Orkumi municipality and by “Karaburuni Association” to be the biggest problem in this area. The issue becomes even more complicated due to the fact that no written documentation exists related the ownership in the area of Llogara-Karaburun and every thing is referred only to verbal knowledge. Most of the local population is skeptic about the inclusion of their areas as protected area because they still do not see any benefit for themselves. This is due to the same facts presented in the previous section related to Orkumi lagoon.

**Illegal constructions** are another problem in the area. Despite the existence of the master plan of the area approved by the National Council of Territorial Adjustment (Government Decision Nr. 4 date 11.1.1996) no one in local government is aware about the existence of
the plan and consequently no steps have been taken to further detail and implement this plan. Construction police already started the administrative procedures to demolish illegal buildings, however, no actions has been taken so far to protect and to clean up the park.

**Solid wastes** caused by the small restaurants, bars, and hotels are another problem persisting in the area. There is not an organized service to collect the solid wastes in the area. In addition, a high number of tourists visit the area on week-ends especially during the summer time. Quite often they organize open air picnics in uncontrolled areas living behind considerable quantities of food and other plastic material refuses. This exposes the forests and pastures to a high risk for fires especially during the summer.

**Fires.** There is a common understanding amongst all interviewed that another important source of fires in Llogara-Karaburuni area are shepherds. This is sourced in their believe that burning out the entire pasture is the most effective and easiest way to improve them. There is a very high risk that the fire gets out of control and not only the pasture but also the neighboring forest could be heavily damaged. In collaboration with MWC project, municipality of Orikum organized awareness raising campaigns to clarify pastors and land owners that burning out pastures is not the most effective way. This had a positive impact to certain extent; however awareness needs a new follow-up.

**Military operations.** In the last few years a part of Karaburuni peninsula is being used for common exercise of military operations of the NATO and Albania’s naval troops. A number of raids are destroyed in the Karaburun peninsula during such military operations. The entire area of Karaburun peninsula is closed for several days for people and livestock to enter for security purposes while military operations takes place inthere. Shepherds should take away their herds of sheep and goats, by moving them in safer areas and all this has raised a great concern not only to shepherds, but to all local inhabitants of Dukati village that consider the Karaburuni area as its own pastureland. Although shepherds are paid or compensated by the military authorities for their losses as long as military operations continue in the Karaburuni area, the local community is becoming more and more sensitive to the intentions of the Ministry of Defense to declare the Karaburun peninsula a military area as a whole.

Military operations in the Karaburuni area and destroying of raids have caused damages in the quality of the pastures. Honey-Bee cultivators are claiming that since the military operations of NATO have started in the Karaburuni area, they have had great losses in beehives and honey production. They claim that explosives have polluted the pastures of the Karaburuni area and consequently, diseases and mortality in the honey bees are increasing.

**Damages in pine trees caused by insects.** A great concern in Llogara is the “processionaria” which is damaging the pine trees in the area. Despite monitoring of the damage carried out during the last year no further actions have been taken.

Other issues that should be taken in consideration are the followings:

- Small size of the existing Llogara NP;
- Lack of management plan for visitors and cars;
Lack of waste and garbage management;
Lack of fire control management plan, especially for Karaburuni area;
Illegal hunting inside the Park area and its surroundings;

Main problems and conflicts in the area

There are some important issues to be taken in consideration while analyzing the stakeholders in these areas:

People still do not feel to be part of the development processes in their area. It was clearly expressed by local government in Orikumi 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.

Population movement (emigration and internal migration) is a multifaceted phenomenon: manifested with land abandon because of emigration abroad (Orikumi area); increase of human pollution and wastes, vehicles pollution, oil discharges, noises, metal wastes, etc.

Finally, it is important to present here some conflicts which could affect the participatory process such as conflicting perceptions between central and local level, conflicting activities and perceptions amongst institutions at the same level, and conflicting activities between local user groups of populations. A summary of potential conflicts is presented below:

- 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 any eventual government decision to include project area under the status of National Park, or to proclaim the Karaburuni area as a military area of strategic interest.

- Conflicting interests between business and local population: 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 and pasture land, use of pesticide and fertilizers Vs organic farming, urban wastes discharges to lagoon, tourist influx, etc.
• Conflicting interests between illegal activities: tree cutting, forest fires, fishing with explosives, inner material removal.

2.6.5 Uses and production systems
2.6.5.1 Farming and Livestock

Livestock
Historically, livestock has been the most important economical activity in the study area, mostly for breeding goats and sheep.

After the World War Two, goats and sheep inside the study area were estimated at 100,000 individuals, but after the collectivisation reform the livestock population declined sharply. By the end of the years ’80 of the last century there was an increase of the livestock numbers, but never exceeding the level of the late ‘40s. At the beginning of years ’90 population of sheep and goats was estimated at 60,000 individuals, most of them property of Dukati village. After the breakdown of the so-called cooperatives, number of goats and sheep dropped down again, as result of (i) massive killings, (ii) organisation in small herds difficult to manage, (iii) lack of willingness of the youngsters to become shepherds, and (iv) emigration.

A general picture of the today’s livestock in the study area is created by looking at the table no. 7.

<table>
<thead>
<tr>
<th>Livestock</th>
<th>Dukat i Ri</th>
<th>Dukat i Vjeter</th>
<th>Tragjas</th>
<th>Rradhime</th>
<th>Orikum</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cattle</strong></td>
<td>700</td>
<td>300</td>
<td>520</td>
<td>250</td>
<td>350</td>
<td>2,120</td>
</tr>
<tr>
<td>Milky Cows</td>
<td>400</td>
<td>200</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>1,250</td>
</tr>
<tr>
<td><strong>Sheep</strong></td>
<td>7500</td>
<td>1000</td>
<td>3000</td>
<td>1000</td>
<td>1500</td>
<td>14,000</td>
</tr>
<tr>
<td>Female sheep</td>
<td>6000</td>
<td>800</td>
<td>2200</td>
<td>800</td>
<td>1100</td>
<td>10,900</td>
</tr>
<tr>
<td><strong>Goat</strong></td>
<td>4000</td>
<td>4000</td>
<td>1500</td>
<td>1500</td>
<td>60</td>
<td>11,060</td>
</tr>
<tr>
<td>Female goats</td>
<td>3000</td>
<td>3000</td>
<td>1000</td>
<td>1000</td>
<td>40</td>
<td>8,040</td>
</tr>
<tr>
<td>Chicken</td>
<td>6000</td>
<td>2700</td>
<td>3900</td>
<td>1600</td>
<td>1700</td>
<td>15,900</td>
</tr>
<tr>
<td>Turkeys</td>
<td>2000</td>
<td>2000</td>
<td>1000</td>
<td>200</td>
<td>300</td>
<td>3,700</td>
</tr>
<tr>
<td>Horses</td>
<td>130</td>
<td>144</td>
<td>77</td>
<td>30</td>
<td>20</td>
<td>401</td>
</tr>
<tr>
<td>Honey bees</td>
<td>200</td>
<td>110</td>
<td>170</td>
<td>20</td>
<td>70</td>
<td>570</td>
</tr>
<tr>
<td>Pigs</td>
<td>-</td>
<td>-</td>
<td>50</td>
<td>-</td>
<td>-</td>
<td>50</td>
</tr>
</tbody>
</table>

**Note:** The figures of sheeps and goats are relatively lower than those reported by the DGFP (DGFP estimates some 32000 sheep and goats)
Based on our surveys and data analysis, only 70 families possess 75% of the total 14000 sheeps of the site, while the remaining 25% is distributed in the remaining families. The same situation is also for goats; only 40 families possess 70% of the total 11000 goats of the study area.

Herds of sheeps are grazing in the pastures of Ravena (Karaburuni area), in the valley Tragjas-Orikum-Dukat Fushe, in the area of Valltos (former wetland area) and partially in Radhime. Herds of goats during winter time graze in the mountain range from Dhermiu to Gjuhezes cape (Rreza e Kanalit-Karaburuni area). Very few goats are kept in the villages, mostly in Dukat i Vjeter (some 1000 goats).

Sheeps and goats are kept in concentration in locations, and so they are causing overgrazing. This is due to several factors, but most important are:

1. Lack of “lerave” (water supply facilities for livestock)
2. Very poorly developed road infrastructure (lack of access roads);
3. Long distance from the milk collection and milk processing centres.

**Cattle breeding** is the main supplier of the milk for the families of the study area. Almost every family has 1 or 2 milky cows, that area crossbreeder of the local race with Gersey, and only few families has got “Black and White” breed of milky cow.

**Chickens and turkeys.** Each farmer has got few chickens and some more turkeys. Chicken are grown for eggs, while turkeys for meat.

**Honey bees.** Inspite of very favourable clime and environmental conditions, and great potentials for its development, Apiculture is a very seldom activity in the region. There has been an old tradition for that activity, but this tradition needs to be revived and supported.

**Farming**

Historically and presently, farming has not been an important economical activity in the study area, due to very limited arable land and not very good quality of land (soils).

**Table no.8. Distribution of arable land in the Orikumi municipality area**

<table>
<thead>
<tr>
<th>Nr</th>
<th>Administrative unit</th>
<th>Arable land (ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Orikumi</td>
<td>463.88</td>
</tr>
<tr>
<td>2</td>
<td>Dukat-fusha</td>
<td>1043.76</td>
</tr>
<tr>
<td>3</td>
<td>Dukat fshati</td>
<td>239.51</td>
</tr>
<tr>
<td>4</td>
<td>Tragjasi</td>
<td>606.64</td>
</tr>
<tr>
<td>5</td>
<td>Rradhima</td>
<td>578.59</td>
</tr>
<tr>
<td>6</td>
<td>Municipality (Total)</td>
<td>2932.38</td>
</tr>
</tbody>
</table>

Composition/distribution of lands by main types of landuse and management is provided by the following tables (table no.9, 10 and 11).
### Table no. 9. Distribution of agriculture land by types of management

<table>
<thead>
<tr>
<th>Nr</th>
<th>Administrative units</th>
<th>Land use type</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Arable land (ha)</td>
<td>Fruit trees</td>
<td>Olive trees</td>
<td>Vineyards (ha)</td>
<td>In use</td>
<td>Privatised</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ha</td>
<td>Tree</td>
<td>Ha</td>
<td>Tree</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Orikum</td>
<td>307.93</td>
<td>136.6</td>
<td>19.31</td>
<td>463.88</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Dukat fushe</td>
<td>908.04</td>
<td>99.4</td>
<td>36.32</td>
<td>143.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Dukat fshat</td>
<td>115.92</td>
<td>76.32</td>
<td></td>
<td>47.27</td>
<td>239.5</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Tragjas</td>
<td>553.4</td>
<td>35.15</td>
<td>18.09</td>
<td></td>
<td></td>
<td>606.6</td>
</tr>
<tr>
<td>5</td>
<td>Rradhime</td>
<td>85.86</td>
<td>229.8</td>
<td>78.79</td>
<td>184.14</td>
<td>280</td>
<td>298.5</td>
</tr>
<tr>
<td>6</td>
<td>Municipality (Total)</td>
<td>1971.15</td>
<td>577.31</td>
<td>152.51</td>
<td>231.41</td>
<td>743.88</td>
<td>2286.5</td>
</tr>
</tbody>
</table>

### Table no.10. Distribution of Crops cultivation in the study area (in ha)

<table>
<thead>
<tr>
<th>Crops</th>
<th>Dukati</th>
<th>Dukat-Fshat</th>
<th>Tragjasi</th>
<th>Rradhima</th>
<th>Orikumi</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn (Miser)</td>
<td>5</td>
<td>15</td>
<td>10</td>
<td>-</td>
<td>15</td>
<td>45</td>
</tr>
<tr>
<td>Beam (Fasule)</td>
<td>3</td>
<td>10</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>20</td>
</tr>
<tr>
<td>Barley (Hassell)</td>
<td>120</td>
<td>20</td>
<td>100</td>
<td>10</td>
<td>30</td>
<td>280</td>
</tr>
<tr>
<td>Alfa alfa (Jonxhe)</td>
<td>3</td>
<td>25</td>
<td>10</td>
<td>5</td>
<td>15</td>
<td>58</td>
</tr>
<tr>
<td>Others</td>
<td>-</td>
<td>25</td>
<td>20</td>
<td>-</td>
<td>10</td>
<td>50</td>
</tr>
</tbody>
</table>

Having a look at the last tables one can notice that practically only a small percentage of the arable land in the study area is used (10-20%).

### Table no.11. Horticulture in the study area.

<table>
<thead>
<tr>
<th>Fruit trees (Total)</th>
<th>18 440</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fig-trees</td>
<td>15 400</td>
</tr>
<tr>
<td>Pear-trees</td>
<td>1 100</td>
</tr>
<tr>
<td>Plumtrees</td>
<td>110</td>
</tr>
<tr>
<td>Peach-trees</td>
<td>100</td>
</tr>
<tr>
<td>Date trees (Hurma)</td>
<td>20</td>
</tr>
<tr>
<td>Almond trees (Bajame)</td>
<td>80</td>
</tr>
<tr>
<td>Pomegranate (Shege)</td>
<td>20</td>
</tr>
</tbody>
</table>

### Olive trees (total) | 22 500 |

### Agrum trees (total) | 20 750 |

a. Orange trees | 18 230 |
b. Mandarins trees | 2 130 |
c. Limo trees | 390 |

### Vineyards (ha) | 43 |
The field of Dukat-Fushe that constitutes the majority of the agriculture land in the study area, as well some of the land of Tragjasi and Orikumi are formed by sediments of Dukati river. This land is relatively poor and scelletic, soil is very thin and mixed with stones and gravel, and thus, not suitable for crop cultivation.

Field of Tragjasi and some parts of Orikumi land is classified as good quality and productive land, suitable for cultivations.

2.6.5.2 Medicinal plants

The site is very rich in medicinal and aromatic plant species. There are 57 species worth to be mentioned for different values of usage. Many of them are well-known also by the local population, which have a long tradition in collecting them either for individual and family use or for sale. A list of the medicinal and aromatic plants of the site is given below.

List of medicinal and aromatic plants

| Abies borissi – regis | Mentha pulegium |
| Adiantum capillus – veneris | Myrtus communis |
| Alchemilla vulgaris | Nerium oleander |
| Arbutus unedo | Opuntia ficus- indica |
| Asplenium trichomanes | Orchis spp. |
| Brassica oleracea | Orygananum vulgare |
| Buxus sempervirens | Plantago major |
| Carlina acaulis | Polygala vulgar |
| Centaurium erythrea | Polypodium vulgare |
| Ceratonia siliqua | Primula veris |
| Colchicum autumnale\(^{12}\) | Ruscus aculeatus |
| Thymus capitatus | Salvia officinalis |
| Crataegus monogyna | Satureja montana |
| Crithmum maritimum | Saunguisorba officinalis |
| Cyclamen hederifolium | Scilla bifolia |
| Dictamnus albus | Sedum acre |
| Digitalis lanata | Sideritis roeseri |
| Ephedra distachya | Smilax aspera |
| Equisetum arvense | Stenberdia lutea |
| Eryngium maritimum | Taxus baccata |
| Galanthus nivalis | Teucrum polium |
| Gaulium odoratum | Urginea maritima |
| Geranium sanguineum | Veratrum album |
| Glauclum flavum | Viscum album |
| Ilex aquifolium | Vitis aegminus- castus |
| Inula helenium | Vitis sylvestris |
| Juniperus communis | |
| Juniperus oxycedrus | |
| Laurus nobilis | |
| Marrubium vulgare | |
| Melissa officinalis | |

\(^{12}\) Most common collected medicinal plants are marked in green.
In recent years very few medicinal plants are collected, mainly mountain tea (*Sideritis reiserii*), and marjoram (*Oryanum vulgare*). Lack of organization, lack of marketing, and lack of appropriate facilities for primary treatment of collected medicinal plants are some of the main reasons explaining such a situation.

### 2.6.5.3 Forestry

Forest harvesting for timber production is not an issue in the project area, due to the fact that high forests situated in the Llogara NP are considered protected forests. Only few parcels above the upper Dukati village and some parts of Karaburun peninsula are given for harvesting firewood. However the forests (apart from Llogara NP area and very remote areas of the site) are considerably damaged by the locals who obtain firewood and animal fodder from the forest. Shrubs and coppice are overexploited, heavily degraded and damaged by overcutting, overgrazing and fires (photos). The lack of enforcement of the laws to protect the forest, the low level of community awareness about the forest, and the yet unsolved issue of land ownership on forest and pasture land are some of the main reasons.

### 2.6.5.4 Tourism and leisure activities

The site has been and is well known in the country, especially in the Region of Vlora, as a very attractive destination for recreation. In the past Llogara NP was used as recreational area for syndicates. A number of wooden bungalows have been constructed inside the park, supported with some restaurants, and sport fields. In the early 1990s all the bungalows were abandoned and destroyed. A new touristic village was constructed (legally), some new restaurants and hotels were built and some others are being planned and constructed, but without respecting any regulation or plan.

Leisure activities are not controlled, and in the way they are executed, they are causing a lot of pollution, disturbance to wildlife, and fire risk.

Nowadays, a lot of houses in Orikumi town are offering accommodation (bed and breakfast) for visitors, especially during summer holidays. A new and very modern hotel (Grand Hotel) is built nearby Izvori area (Tragias), offering accommodation and food, but also other services associated to leisure and recreational activities. Accommodation and food are offered also by a number of small hotels and restaurants along the coast from Orikumi to Radhima.

Data collected from the Municipality of Orikumi on the number of visitors during the last summer time (year 2004) show that a total of 15 – 20 thousand of tourists have visited the area, of which tourists accommodated in houses are 10 thousand, while the remaining 5-10 thousand have beenaccommodated in hotels. Some 70-80% of the visitors/tourists are domestic (Albanians), while the remaining 20-30% are foreign tourists (from Macedonia, Kosova, Greece, Italy, UK, Germany and USA). Daily visitors are estimated at 30 – 40
thousand, mainly along the beach Radhima-Orikumi. Mountain tourism at Llogora NP has been very limited.

2.6.5.5 Hunting

Karaburuni area as a formerly hunting reserve was opened for game shooting, mostly for games such as wild boar (*Sus scrofa*), hare (*Lepus europaeus*), and woodcock (*Scolopax rusticola*). Over the last 10 years the hunting as organized by the DGFP has been banned for the wild boar, and limited for the two other games because of remarkable decline of their stock.

Due to lack of control and legal enforcement the site has been in the last several years subject of illegal hunting. Illegal hunting is taking place everywhere, including the Llogara NP area. Poachers are not only from the locals; some of them are coming from other cities such as Vlora, Fieri, Tirana, but there are also foreign hunters, especially Italians guided by local hunters.

2.6.5.6 Fishery and aquaculture

Fishery in the site is mainly concentrated in the lagoon of Orkumi. Four main fish species caught in the lagoon are *Sparus aurata*, *Mugil cephalus*, *Anguilla anguilla* and *Dicentrarchus labrax*. Bivalve molluscs of the lagoon are important both from economical and ecological point of view. *Ruditapes decussatus* and *Venerupis aurea* are the two main molluscs of the site. They grow around the communication channel of the lagoon with the sea, on a gravel substrate. The production yield of mollusks is strongly linked with the intensity of water exchange between the lagoon and the sea. The sea bream (*Sparus aurata*) is a good bioindicator of the bentic community of the bivalve molluscs already mentioned, as well as of hidrological and hidrochemical conditions of the lagoon in winter time. Young generations of the fish are severely damaged during winter time, due to lack of winter beds inside the lagoon.

The most threatened fish species of the Orkumi lagoon is the sea bream (*Sparus aurata*), because the benthic communities of molluscs especially those of *Mytilus galloprovincialis* have declined, due to reduced communication between the lagoon and the sea, while the two other mollusks (*R.decussatus* and *V.aurea*) as being very highly required in the market, are overexploited, and consequently their populations have sharply declined.

In the last 10-15 years, there has been an increase of illegal fishing activity in the lagoon, resulting in severe damages of the fish and shellfish stock; there is a clear evidence of changes in the fish catch composition as well as in the amount of fish catch.
The average annual fish product in the Orikumi lagoon has been estimated at 100 kv. During the unrest situation of the year 1997, fish product dropped down to 50 kv, while today it has reached almost the average annual fish product. Apart from the fish, every year the lagoon produces some 15-20 kv mollusks, high quality and very preferable in the market.

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Table no. 12. Fish product from the Orikumi lagoon (in kv)

<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fishcatch (in kv)</td>
<td>80</td>
<td>150</td>
<td>110</td>
<td>100</td>
<td>90</td>
<td>80</td>
<td>50</td>
<td>100</td>
<td>102</td>
<td>95</td>
<td>110</td>
<td>105</td>
<td>90</td>
</tr>
</tbody>
</table>

Figure 7. Fishcatch in Orikumi lagoon (years 1991-2003)

Table no. 13. Fishery structure and organization in Orikumi lagoon

<table>
<thead>
<tr>
<th>Years</th>
<th>No. of fishermen (licensed)</th>
<th>No. of boats</th>
<th>Engeen power</th>
<th>Types of fishing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>13</td>
<td>4</td>
<td>Motor Fuoribord 10Hp</td>
<td>Dajlan, selective, paranca</td>
</tr>
<tr>
<td>1997</td>
<td>13</td>
<td>4</td>
<td>Motor Fuoribord 10Hp</td>
<td>Dajlan, selective, paranca</td>
</tr>
<tr>
<td>1998</td>
<td>12</td>
<td>4</td>
<td>Motor Fuoribord 10Hp</td>
<td>Dajlan, selective, paranca</td>
</tr>
<tr>
<td>1999</td>
<td>12</td>
<td>4</td>
<td>Motor Fuoribord 10Hp</td>
<td>Dajlan, selective, paranca</td>
</tr>
<tr>
<td>2000</td>
<td>12</td>
<td>4</td>
<td>Motor Fuoribord 10Hp</td>
<td>Dajlan, selective, paranca</td>
</tr>
<tr>
<td>2001</td>
<td>12</td>
<td>4</td>
<td>Motor Fuoribord 10Hp</td>
<td>Dajlan, selective, paranca</td>
</tr>
<tr>
<td>2002</td>
<td>12</td>
<td>4</td>
<td>Motor Fuoribord 10Hp</td>
<td>Dajlan, selective, paranca</td>
</tr>
</tbody>
</table>

Note: some other 10 fishermen fish illegally in the lagoon (not licensed)
Besides fishing activity in Orikumi lagoon, another activity is that of fish-farming. It is run nowadays along the Izvori stream by a private subject, producing trout (*Salmo trutta*). In the past, until 1990, a relatively big fishfarming was created in a field next to Izvori stream, but later on, by the collapse of communist regime, this activity was abandoned. The management plan should carefully consider riactivisation of such an activity in the area, making sure that impacts of fishfarming and aquaculture are minimized.

In recent years some aquaculture activity has been developed in the littoral water along the Karaburun peninsula. In 1 or 2 locations along eastern edge of Karaburun peninsula (Raguza) there are built sea cages cultivating sea bream (*Sparus sp.*) and sea bass (*Dicentrarchus sp.*). Their yearly product for the time being is relatively small (50-70 kv/year per each sea cage aquaculture firm), but trend is for further increase of such an activity, because the visitors’ flux to the coastal area of Vlora bay, especially during summer touristic pick, is steadily increasing from one year to another.

### 2.6.5.7 Water use

**Drinking water**

Drinking water inside the study area is provided by (i) natural springs, (ii) Dukati and Izvori rivers (through pumping) and (iii) water wells. Dukat-Fshat village is getting water supply from natural springs, while inhabitants of Dukat-Fushe from wells inside their gardens. The town of Orikumi, Pasha limani, Radhima and Tragjasi villages are taking drinking waters from two main pumping stations: one build at the carstic freshwater spring of Izvori (nearby Tragjasi village), and the other at Dukati field.

**Irrigation water**

Irrigation water is being taken from Izvori river (through pumping station), from Dukati river (free running water) as well as from the ground wells. The most important provider of irrigation water inside the study area is the pumping station of Izvori river, that irrigates the agriculture area Tragjas-Radhime.

Dukati field is using for irrigation waters coming from Dukati river, through an irrigation system run without engaging pumping facilities. Farmers of Orikumi and a part of agriculture land of Dukat-Fushe are using ground wells to get irrigation water.

### 2.6.5.8 Mining

Mining is not anylonger an important activity in the study area. A dolomite mine has been in operation nearby Dukat-fshat. After the years ’90 until recently this mining activity was conducted by a French company. This mine is not operating nowadays. The marmer mining in Karaburun peninsula has also been closed its activity.

Two quarries have been operating inside the study area until recently: the quarry above Katorris stream, and the quarry of Radhima stream. Both quarries used to produce gravell of different fractions for construction purposes.
Recently, the gravel used for construction is being provided by the gravell extraction activity from the river bed being conducted by three licensed private companies; two of them are operating along the riverbed of Dukati river, while a third one operates in the riverbed of Izvori.

2.6.5.9 Research

The site is used for research by various academic and research institutions, such as Academy of Sciences (Institute of Biological Researches, Institute of Hidrometereology, Center of Geographical Studies), Tirana University (Faculty of Natural Sciences, Museum of Natural Sciences, Botanical Garden, Faculty of History-Philology and Geography), Politechnical University of Tirana (Faculty of Geology), Agriculture University of Tirana (Faculty of Forestry), Institute of Forestry and Pasture Researches and Institute of Fishery Researches. Other Regional Universities such as Vlora, Gjirokastra, Shkodra, Elbasani are also conducting some research in the site. As shown by the bibliography, a number of foreign researchers have conducted research in the site, too.

2.6.5.10 Other uses

Housing
250 ha of the land is covered by Orikumi town and villages of Dukati, Tragjasi and Radhima.

Transport
The national road Tirana-Vlora-Saranda passes across the project site.

Military or defense
The military base of Pasha Limani is situated in the southwest of Dukati (Vlora) bay, at the foothill of Ravena.

2.6.6 Land use changes

During the first years after the World War Two, number of the sheep and goats in the study area was estimated at 100 thousands individuals, and the ration goats: sheep was 6:4. During the communist regime and under the cooperative system, the number of sheep and goats declined and in 1991 (time of changing regime) the number was estimated at some 60 thousands individuals, of which 40 thousands belonging to Dukati village.

Since then the number of sheep and goats has been reduced. The exact figures are difficult to get, but this number is estimated between 25-32 thousands. Although the livestock has reduced, there is evidence of heavy degradations of pasture lands, due to lack of pasture improvements and maintenance work in the last 15-20 years, and frequent fires put intentionally by shepherds to “improve pasture quality”. This is the main problem in the study area. Pastures are burned by the end of summer season in order to use them for winter time. During our surveys in the Ravena pastures (Karaburuni area),
we noticed a very high degradation stage of the pastures. This pastureland is used for sheep grazing.

In the last several years there is a new tendency regarding livestock breeding; sheep is dominating over goats. This is firstly due to market demand that is higher for sheep and secondly, most of the arable land is abandoned and used only for sheep grazing. Another tendency is that few families (40-70 families) possess more than 70% of the total sheeps and goats of the region, that’s livestock is organized in big herds and concentrated in few areas, causing so overgrazing.

Farming is not an important activity in the site at present times. During the cooperative system some investments were made to improve the productivity of the arable land, by setting up an irrigation scheme and use of organical and chemical fertilizers. Apart from food and forage crops, there were also practiced cultivation of industrial and oil-bearing plants.

Today, only 10-20 % of the agriculture land already privatised is cultivated, mainly for forage. Horticulture is very modestly developed, while green-houses are practiced in 2-3 cases, but in small fields.

Recently, due to the activity of the Association of the Organical Farming, there is growing the interest of the local farmers towards organical farming.

2.6.7 Cultural heritage

The study area has a long and interesting history. The ancient town of Oriko (dated in century IV BC), the Castle of Gjon Bocari (Trasjas), the Tower of Dervish Aliu (Dukat), the Church of Marmiro (Orikum), the Cave of Grama (Karaburuni area), are some of the main culture heritage sites (see map no.10). A full list of culture monuments and a short description of each is given by the appendix 2.

Other cultural values are presented in traditional folk songs and dances, as well as in folks costume.

2.6.8 Landscape

An impressive and very mosaic landscape is developed in the study area. Apart from physical features of the site, this landscape is also a fruit of long co-existance and, in most of the cases, friendly relationship between nature and man in the region. Nature features and characteristics are well combined with those created by man. High mountains, nature forest areas and artificial plantations, maquis and open grasslands, well organised and situated villages, surrounded by fruit-tree plantations (mostly olive trees and orange tree), Orikumi lagoon, streams, torrents, carstic freshwater springs and the coast are together creating a very harmonic, scenic and fascinating landscape.
Map no. 10. Nature and culture monuments of “Llogora-Karaburun” site
Part Two. Assessment and Objectives

3.1 Assessment

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

The site is large enough to maintain its ecological integrity. It includes the whole catchment area of Dukati river and Orikumi lagoon. However, inside the area there are subsites such as Orikumi lagoon that is as much as three times smaller than it used to be until 24 years ago, time in which the majority of the former wetland area of Orikumi was drained. The remaining wetland area is not having any legal protection and is facing the ecological problems due to reduction of freshwater inflow into the lagoon and limited communication with the sea.

The existing Llogara national park area (1010 ha) is also too small to accommodate conservation objectives of the park when considering the impacts of the recreational activities inside the park area as well those coming from the rehabilitated national road Vlore- Sarande getting across the park area and deviding it into two parts. There is a need for further enlargement of the park area, and establishing new zoning and management regulations.

3.1.2 Biodiversity

The whole area of Llogara, Rreza e Kanalit, Karaburuni Peninsula, Orikumi Lagoon, Dukati valley and Dukati bay is distinguished for its diversity of habitats and its richness in flora and fauna species. Many of them have a conservation concern at international, national and regional level. A wide range of habitats are found inside the study area, such as: high mountain ecosystems (up to 2000 m), alpine and subalpine grasslands, different types of forests (mixed conifers and broadleaved, mixed broadleaved dominated by decidous trees, broadleaved dominated by evergreen trees, mediterranean shrubs and maquis, alluvial forests), lowland pastures, sandy and rocky coastal habitats, presence of fresh water bodies such as Orikumi lagoon, streams, torrents and carstic springs, caves, etc). From the ecological point of view, the presence of the high diversity of habitats establish a high number of ecological niches and therefore a high level of biodiversity in the area, hardly to be found in comparable surface areas within Albania and/or other neighbor countries.

The flora and vegetation of this area is very rich and interesting. Some 1400 vascular plant species (equal to 42.4% of the flora of Albania) are known for the site. This is explained (i) with the old history of the flora in this region (such as presence of Tertiar species or relicts), (ii) with the influence of other floras such as that of Ege, (iii) with geographical isolation of the region (high mountains and sea barrier), and (iv) with the relationship nature-man established here over centuries, creating very complex and mosaic habitats (natural, seminatural, modified, artificial) and landscape.

All these plant species make up a great national asset with economic and scientific values. Same of them are extremely rare, some others have scientific values, most of them make up widely used economic groups such as the medicinal, aromatic, industrial alimentary and decorative plants.
Due to its geographic and flora characteristics, the area represents interesting habitats for entomofauna. The diversity of this group is emphatic comparing to the size of the study area. Referring to butterflies of the order *Rhopalocera*, 93 species are observed in the site, of which some are of international conservation importance. A relatively big number of species is observed from the Order *Coleoptera*: 152 species belonging to 21 families.

The site is also rich in vertebrate groups (see table no. 14). Some 10 species of Amphibians (out of 15 species known to Albania), 28 species of Reptiles (out of 37 species), 105 species of Birds (out of 330 species) and 55 species of Mammals (out of 71 species) are known to the site.

**Table no. 14: Vertebrates of Llogara-Karaburni area**

<table>
<thead>
<tr>
<th>No.</th>
<th>Taxa</th>
<th>No. of species known in the site</th>
<th>No. of species known in the country</th>
<th>Rare</th>
<th>Noteworthy</th>
<th>Threatened</th>
<th>Endemic</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Amphibia</td>
<td>10</td>
<td>15</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>Reptilia</td>
<td>28</td>
<td>37</td>
<td>13</td>
<td>5</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Aves</td>
<td>105&lt;sup&gt;13&lt;/sup&gt;</td>
<td>330</td>
<td>13</td>
<td>35</td>
<td>6&lt;sup&gt;**14&lt;/sup&gt;</td>
<td>0</td>
</tr>
<tr>
<td>6</td>
<td>Mammalia</td>
<td>55</td>
<td>71</td>
<td>7</td>
<td>10</td>
<td>31</td>
<td>5&lt;sup&gt;*15&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>Total known</td>
<td>198</td>
<td>453</td>
<td>37</td>
<td>47</td>
<td>45</td>
<td>5</td>
</tr>
</tbody>
</table>

The Llogara-Karaburun area provides habitats for a number of endangered species. 45 vertebrate species of the site are considered threatened at national level. Among those species we can mention birds of prey (*Neophron percnopterus, Circaetus gallicus, Aquila chrysaetos, Hieraaetus pennatus, Hieraaetus fasciatus*) and large mammals (*Monachus monachus, Meles meles, Mustela putorius, Lutra lutra, Canis aureus, Felis silvestris, Rupicapra rupicapra, Capreolus capreolus, Sus scrofa*).

The site is showing global conservation interest; at least 17 species of mammals, 2 species of birds, and 6 species of Herps (2 Amphibians and 4 Reptiles) and 3 invertebrate species belong to the list of Globally Threatened Species (IUCN, 2000).

**Table no.15. List of species of globally conservation interest occurring in the site (based on IUCN threat categories, 2001)**

<table>
<thead>
<tr>
<th>No.</th>
<th>Taxon</th>
<th>CR</th>
<th>EN</th>
<th>VU</th>
<th>LR</th>
<th>DD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Mammals</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td><em>Rhinolophus euryale</em></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td><em>Rhinolophus hipposideros</em></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td><em>Rhinolophus ferrumequinum</em></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>13</sup> Number of Birds recorded in the site is relatively low, but this due to lack of complete inventories and systematic data birds on terrestrial ecosystems.

<sup>14</sup> ** Only for the Order *Accipitriformes*

<sup>15</sup> * Endemic species for the Balkan Peninsula and/or Mediterranean region
<table>
<thead>
<tr>
<th>No.</th>
<th>Taxon</th>
<th>CR</th>
<th>EN</th>
<th>VU</th>
<th>LR</th>
<th>DD</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.</td>
<td><em>Rhinolophus blasii</em></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td><em>Myotis capaccini</em></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td><em>Myotis myotis</em></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td><em>Miniopterus schreibersi</em></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td><em>Sciurus vulgaris</em></td>
<td></td>
<td>X</td>
<td></td>
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<tr>
<td>9.</td>
<td><em>Myaxus (Glis) glis</em></td>
<td></td>
<td>X</td>
<td></td>
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<tr>
<td>10.</td>
<td><em>Dryomys nitedula</em></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td><em>Muscardinus avellanarius</em></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td><em>Microtus felteni</em></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td><em>Microtus thomasi</em></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td><em>Mus spicilegus (abbottii)</em></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td><em>Lutra lutra</em></td>
<td></td>
<td>X</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>16.</td>
<td><em>Monachus monachus</em></td>
<td></td>
<td>X</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>17.</td>
<td><em>Stenella coerulea</em></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Birds**

<table>
<thead>
<tr>
<th>No.</th>
<th>Taxon</th>
<th>CR</th>
<th>EN</th>
<th>VU</th>
<th>LR</th>
<th>DD</th>
</tr>
</thead>
<tbody>
<tr>
<td>18.</td>
<td><em>Falco naumanni</em></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19.</td>
<td><em>Crex crex</em></td>
<td></td>
<td>X</td>
<td></td>
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<td></td>
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</tbody>
</table>

**Reptiles**

<table>
<thead>
<tr>
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<th>EN</th>
<th>VU</th>
<th>LR</th>
<th>DD</th>
</tr>
</thead>
<tbody>
<tr>
<td>20.</td>
<td><em>Dermochelys coriacea</em></td>
<td></td>
<td>X</td>
<td></td>
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</tr>
<tr>
<td>21.</td>
<td><em>Caretta caretta</em></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22.</td>
<td><em>Emys orbicularis</em></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23.</td>
<td><em>Elaphe situla</em></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Amphibians**

<table>
<thead>
<tr>
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<th>EN</th>
<th>VU</th>
<th>LR</th>
<th>DD</th>
</tr>
</thead>
<tbody>
<tr>
<td>24.</td>
<td><em>Triturus cristatus</em></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25.</td>
<td><em>Hyla arborea</em></td>
<td></td>
<td>X</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

**Invertebrates**

<table>
<thead>
<tr>
<th>No.</th>
<th>Taxon</th>
<th>CR</th>
<th>EN</th>
<th>VU</th>
<th>LR</th>
<th>DD</th>
</tr>
</thead>
<tbody>
<tr>
<td>26.</td>
<td><em>Cerambyx cerdo</em></td>
<td></td>
<td>X</td>
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</tr>
<tr>
<td>27.</td>
<td><em>Lycaena dispar</em></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28.</td>
<td><em>Hirundo medicinalis</em></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3.1.3 Naturalness degrees of the site

The study area is offering the whole range of habitat natural degrees. Natural habitats are found in the upper part of the sites, such as Llogara national park, as well in some remaining patches along Rreza e Kanalit and Karaburuni area. Seminatural habitats, and moderate habitats are found in the area with an extention that does not exceed the area covered by natural habitats. Modified habitats, especially those intensively used for firewood collection and grazing are forming the majority, while artificial habitats represented mostly by pine plantations on eroded slopes, are very minor in the site.

3.1.4 Rarity

Endemic, relicts and rare species are found inside the study area, such as *Hypericum haplophyloides*, *Leucojum valentinum subsp. vlorense*, *Taxus baccata*, *Aesculus hippocastanum*, *Quercus ithaburensis subsp. macrolepsis*, etc. Two plant species
(Hypericum haplophyloides, Leucojum valentinum subsp. Vlorense) are strictly endemic of the project site.

The site provides shelter for **82 rare and threatened vertebrate species and 68 plant species**, representing respectively 41.4% and 21.25% of the country’s red-list species. Of particular interest are the **recent records of monk seal (Monachus monachus)** along the western rocky coast of Karaburuni area and **attempts of the sea turtle (Caretta caretta) to breed** along the sandy-gravel beach of Dukati bay.

### 3.1.5 Fragility and Vulnerability.
Llogara national park is often subject of fire risks coming from the surrounding areas. Some of them are happening in a natural way, due to very dry and hot summer, but most of them are put intentionally by the locals, especially shepherds. Shepherds as explained earlier, are using this method because they believe this is the only method to improve grazing quality of pastures. Fires can appear also inside the park area because during some events and summer holidays, a lot of visitors are used to make fire inside the park area to cook meat (mostly lamb) themselves. Some very steep areas and not stable from the geological point of view are in risk of sliding and erosion. This is more evident during the havy rain season and storms. Erosion is appearing also in areas that are not very steep, but are degraded from overgrazing and loss of vegetation cover from fires.

Orikumi lagoon, as being to small nowadays (only 130 ha) represents a very sensitive and fragile ecosystem of the study area. Inflow of fresh water into the lagoon is reduced, communication with the sea is limited, illegal hunting and wildlife disturbance are present in the area. The system becomes more fragile during summer time, when both freshwater input and water exchange between lagoon and the sea are limited. Sometimes, distrophic crisis are appearing in the lagoon during dry summers due to also lack of precipitation, high temperatures and evaporation rate.

### 3.1.6 Typicality
Forests of *Quercus ithaburensis subsp. macrolepsis* met along the Karaburuni peninsula represent the best examples and best preserved forests of this oak tree in Albania. **Mixed coniferous (Pinus nigra, Abies borisi regis)** and broadleaves forests of Llogara are quite unique and most typical along the Jonian Coast. **Coral reefs along the Karaburun peninsula**, especially those in the north of the peninsula (“Gryka e djallit”) are some of the best examples along the Jonian coast.

### 3.1.7 Historical and archeological values of the site
The study area is an important part of the national culture heritage. It is an area of old civilizations and traditions created and maintained in centuries. Some of the most outstanding cultural and historical values of the sites are: **the ancien town of Oriko, the Castle of Gjon Bocari (Tragjas), the Tower of Dervish Aliu (Dukat), the Church of Marmiro (Orikum), the Cave of Grama (Karaburuni area)**. Some of these values are of national importance, but some of them might have also international interest.
3.1.8 Aesthetic, cultural, religious and landscape
Aesthetic and landscape values, the presence of a wide range of habitats from natural, and seminatural to artificial or man-made ones, the presence of a number of Natural and cultural Monuments, and archeological sites, and historical places as mentioned earlier, and rocky coastline rich in small bays and beaches, give the whole area quite additional values in the cultural and eco-tourist aspects, making it a quite unique area of local, national and international importance.

Finally, the area represents a best example in the region of a long co-existence of local population and nature, where quite often the socio-economic interests dominate the nature conservation ones.

3.1.9 Potential for improvement and development
Potentials for improvement of ecological and socio-economical conditions of the site are high. Forest growth and regeneration rate are high, and this can guaranty the rehabilitation of the degraded areas, once the root causes of such degradation are ceased (overcutting, overgrazing, fires). The air and water pollution is not an issue in the area. Forest and water resources are quite rich to support further developments in the area, especially tourism and leisure activities.

There are already plans from Central and Local Government for tourism development within this area, such as those for Llogara National park, Sazani island; zones nearby the project site such as Vlora (Dukati) Bay (touristic facilities), and Ionian coast (the national road going through Orkumi, Dukati valley and Llogara National park is newly reconstructed and rehabilitated), and so on. But, all these plans should be carefully checked and analysed within the lines of the MWC project and the management plan of the study area.

3.1.10 Socio-economic values
3.1.10.1 Erosion control
Erosion is a natural phenomenon in the study area, provided the geological and physical characteristics, and climate conditions of the site. But, the erosion caused by degradation of the vegetation cover as result of forest degradation, overcuttings, overgrazing and fires, is the real problem to be addressed for the site. The heaviest eroded areas are those situated along the Dukati valley, and their tendency is to get worse, unless soil protection measures against are taken. Forests and vegetation cover contribute both to reduce erosion and protect land/soil productivity.

3.1.10.2 Maintenance of water quality and pollution reduction
The importance of the project site becomes high when assessing the role of forest and wetland ecosystems in maintaining water quality and reduce pollution. As mentioned earlier, the site is rich is water resources, especially ground waters, that are vital for the health and economical development of the site. Although the air and water pollution is not an issues at present, it will sooner or latter become so, due to projected developments,
especially those coming from communication and transport (traffic, enlarged Vlora port as part of EC Corridor 8), and tourism development along the coast.

3.1.10.3 Grazing and livestock
Livestock is the main economical activity of the site, and will continue to be so for many other years. Provided that numbers of sheeps and goats will increase, and bearing in mind the new tendency for more sheeps in the region, as well as the estimated potential carrying grazing capacity (2.4 sheep and goats per ha), there is evident that habitat degradation and erosion will be a hot environmental issue if grazing is not controlled and managed rationally.

The site provides suitable conditions also for cattle breeding, especially extensive forms, such as free-grazing milky cows, as well as for apiculture (honey bees), due to favorable geographical position, climate conditions and vegetation structure.

3.1.10.4 Forestry
High forests of the site are classified as protected forest and they are not used for commercial purposes. Timber exploitation is not an issue at the present time in the site. Nevertheless, firewood and fodder is collected by the locals. Collection of non-wood products and medicinal plants are also practiced. Forests and shrubs of the project site are also open to grazing activities. If better protected and managed properly, productivity and biomass of the forest ecosystem of the site would be much higher and would better respond to local people demand on forest resources.

3.1.10.5 Agriculture

Farming
Although the municipality of Orikumi is limited in its possibilities to develop an agriculture, for the reasons already explained, there are chances for reviving this activity, especially in those parts of the site where a good quality and productive land is available, such as Tragjasi field.

Horticulture
In spite of damages caused on some of the vineyards and fruit tree plantations created during the communist regime, the study area still retains its importance for the local economy. The site is providing suitable conditions for a number of fruit trees, especially olive-tree, and there is a potential for further development of horticulture sector in the area.

Fishery
The Orikumi lagoon, Izvori stream and littoral waters of the project site offers important fish and shellfish resources not only for the locals but also for the region. The site is well known for the special quality of the sea bream (\textit{Sparus aurata}) and the bivalve \textit{Ruditapes decussates} growing in the Orikumi lagoon. Freshwater of Izvori stream is offering a potential for fish-farming development, while littoral waters along the Karaburun peninsula are used for aquaculture sea cages activity important for supporting tourism activity in the Vlora bay area.
Agrobusiness
Milk processing and production is an important economical activity for the site. The area is offering high quality milk products, but there is a need for new technologies in order to be competitive and attractive in the market. Processing, marketing and certification of agriculture products that are being produced in a very environmental sound way (as bioproducts) are issues to be focus on in the future, both to increase product and its quality.

Medicinal plants
Collection of medicinal plants is an important activity in the study area. For many families in the site the medicinal plants are the main source of their income.

Although in recent years the production of medicinal plants from the study area has reduced, the potential for medicinal plants is very high (some 57 plant species are known as medicinal plants inside the study area). The site is particularly important for some medicinal species such as Salvia officinalis, Oryganum vulgare, and Sideritis roeseri.

3.1.10.6 Contribution to climate stability
High mountains, forests, wetland and litorral waters of the Dukati bay influence greatly the local climate of the site. If rehabilitated, the riparian/riverrine forest south of the Orikumi lagoon would affect positively the climate conditions of Orikumi municipality.

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. Threatened and endangered species, of which some are of global concern, presence of endemic and relict species, site richness in medicinal plants, possibilities for organizing camps and training, all these make the site very suitable and attractive for education and public awareness of school children, students, general public and decision makers.

3.1.12 Leisure activities and tourism
The site is an important destination in Albania for tourism and leisure activities. A number of activities such as alpine tourism, picnics, sport tourism, sun and sea beach, and so on are taking place in the area. Organical products produced locally by farmers support such forms of tourism and contribute to improved livelihood of the locals. But, the potentials of the site are much higher for accommodating more visitors and developing other types of tourism, such as ecotourism, culture tourism, agrotourism, sport tourism (i.e scuba-diving, sport fishing, wind surfing) and so on.

3.1.13 Research and studies
The Llogora NP forests, alpine and subalpine grasslands, Orikumi lagoon, Izvori river and spring, evergreen and semievergreen broadleaved forests of Karaburuni peninsula, maquis vegetation, riverine vegetation, rocky coast and sandy and gravel beaches along the coast, well preserved littoral and benthic communities, erratic phenomena and caves (including underwater caves), natural and cultural monuments, presence of endemic species and rare vegetation types, all these make this site very interesting and attractive for research and studies. However, research and studies should take into account the fragility of small sites such as Orikumi lagoon, caves, as well as wildlife requirements for quiet and undisturbed places during reproduction season.

***

A summary of the earlier assessments of the most important features of the site is provided by the table no.16.

<table>
<thead>
<tr>
<th>Site features</th>
<th>Importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geology and Geomorphology</td>
<td>Internatio</td>
</tr>
<tr>
<td>1 Geology and Geomorphology</td>
<td>♦ Special geological phenomena</td>
</tr>
<tr>
<td>♦ Caves</td>
<td>Low</td>
</tr>
<tr>
<td>♦ Coral reefs</td>
<td>Average</td>
</tr>
<tr>
<td>Biodiversity</td>
<td>♦ Species diversity</td>
</tr>
<tr>
<td>♦ Habitat diversity</td>
<td>Low</td>
</tr>
<tr>
<td>Typicality or presence of best examples of particular biotopes</td>
<td>♦ Rocky costal habitats</td>
</tr>
<tr>
<td>♦ Suitable habitats for <em>Monachus monachus</em></td>
<td>Average</td>
</tr>
<tr>
<td>♦ Associations of <em>Euphorbia dendroides</em></td>
<td>Low</td>
</tr>
<tr>
<td>♦ Northern limit of Alliance Oleo-Ceratonion</td>
<td>Low</td>
</tr>
<tr>
<td>♦ Biotopes of <em>Quercus ithaburensis subsp. macrolepis</em></td>
<td>Average</td>
</tr>
<tr>
<td>Site features</td>
<td>Importance</td>
</tr>
<tr>
<td>------------------------------------------------------------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td></td>
<td>International</td>
</tr>
<tr>
<td>4     Rarity</td>
<td>Low</td>
</tr>
<tr>
<td>♦ Rare species and plant associations</td>
<td></td>
</tr>
<tr>
<td>5     Endemic species</td>
<td>Average</td>
</tr>
<tr>
<td>♦ 2 endemic plant species of the site</td>
<td></td>
</tr>
<tr>
<td>6     Medicinal plants</td>
<td>Low</td>
</tr>
<tr>
<td>♦ 57 medicinal plants</td>
<td></td>
</tr>
<tr>
<td>7     Historical and archeological values</td>
<td>Low</td>
</tr>
<tr>
<td>8     Aesthetic, cultural, religious and landscape</td>
<td>Average</td>
</tr>
<tr>
<td>9     Erosion control</td>
<td>High</td>
</tr>
<tr>
<td>10    Maintenance of water quality and pollution reduction</td>
<td>Average</td>
</tr>
<tr>
<td>11    Maintenance of surface water and ground water</td>
<td>Average</td>
</tr>
<tr>
<td>12    Grazing and livestock</td>
<td>High</td>
</tr>
<tr>
<td>13    Forestry</td>
<td>Average</td>
</tr>
<tr>
<td>14    Agriculture/farming</td>
<td>Average</td>
</tr>
<tr>
<td>15    Fishery and aquaculture</td>
<td>Average /High</td>
</tr>
<tr>
<td>16    Contribution to climate stability</td>
<td>Low</td>
</tr>
<tr>
<td>17    Education and public awareness</td>
<td>Average</td>
</tr>
<tr>
<td>18    Leisure activities and tourism</td>
<td>Average</td>
</tr>
<tr>
<td>19    Research and studies</td>
<td>Average</td>
</tr>
</tbody>
</table>
3.2 Long-term Objective

The long term objective formulised in the form of vision statement jointly supported by local communities and local users of the site is the following:

*We are committed to stop further degradation and deterioration of coastal and wetland ecosystems and habitats of the site, to protect, restore and enhance its biological and landscape diversity, to ensure the equal share of its nature resources for today’s and future generations, to promote and practice sustainable nature resource management, to promote environmentally friendly tourism development and other forms of eco-development in order to respond to local people demand for more jobs, more incomes and improving their livelihood, to raise public awareness and increase local community participation in protecting, using and managing natural and cultural assets of the site.*

3.3 Factors influencing the implementation of long-term management objective

3.3.1 Natural factors of internal origin

- Natural vegetation successions
- Variations in freshwater inflow of the Orkumi lagoon
- Winds and storms
- Sedimentation
- Erosion

3.3.2 Artificial factors of internal origin

- Invasion by exotic or alien species
- Pollution
- Local erosion caused by human activity (grazing)
- Human disturbance (illegal fishing, illegal hunting, illegal and uncontrolled harvesting of wood and non-wood products)

3.3.3 Natural factor of external origin
Climate changes and its influence on vegetation dynamics, and related flora and fauna.

Changes in sea level and their effects on hydrological regime of Orikumi lagoon, and ultimately on the lagoon biota and important fish and shellfish resources.

### 3.3.4 Artificial factor of external origin

- Increased sedimentation caused by upstream
- Pollution, mostly connected with transport and traffic, and tourism industry
- Infrastructure (roads, urban planning)

### 3.3.5 Factors inherent to legislation or traditions

- Legal and/or customary rights for grazing, hunting, fishing, wood and non-wood harvesting
- Legal obligations of the GoA resulting from international, national and local laws

### 3.3.6 Physical characteristics

- Broken and steep terrains and influence on visitors access, erosion control, pasture improvements, habitat management, and other management interventions.
- Inaccessibility of the site (limited road access to the area) for visitors, firebreak and management interventions.

### 3.3.7 Human and financial resources

- Limited human local resources to execute the management work and implementation of the management plan
- Limited financial resources at national level.

### 3.4 Operational objectives and Site Management Goals

The following are the operational objectives that are aiming at reaching and supporting the long term objective of the management plan.
Operational Objective no.1. Improve supervision and control of the site to stop its further degradation.

Operational Objective no.2. Protect and enhance ecological integrity of the site through undertaking appropriate conservation and management actions to re-establish ecological conditions on degraded ecosystems and habitats.

Operational Objective no.3. Formulate and implement recovery plans for threatened and rare habitats and species.

Operational Objective no.4. Protect and promote wise use of nature, landscape and culture heritage of the site.

Operational Objective no.5. Control and improve management of leisure and recreational activities.

Operational Objective no.6. Rehabilitation and improvement of traditional use of nature resource through introducing examples of best practices in sustainable use and management of nature and biological resources of the site.

Operational Objective no.7. Promote and develop micro-projects for eco-tourism and other forms of eco-development of the site.

Operational Objective no.8. Raise public awareness and increase local community involvement in enjoyment and conservation of the biological and landscape diversity of the site.

Operational Objective no.9. Build up working relationship and partnership between PA authority and local community, local users and private sector.

Operational Objective no.10. Build up local capacities in planning, management and monitoring of natural and biological resources.

Operational Objective no.11. Conduct research and monitoring in support to sustainable management of the wetland and coastal ecosystems of the site.
Part Three. Management Action Plan

4.1 Management strategies and options

A. Habitat management, including wetland restoration.
Options:
1. Non-intervention
2. Limited intervention
3. Active management.

B. Species management.
Options:
1. Non-intervention
2. Control, reduction or eradication
3. Encouragement and increase
4. Reintroduction
5. Introduction.

C. Land use.
Options:
1. No use
2. Traditional uses
3. Use by inhabitants
4. Rational use

D. Access.
Options:
1. No access
2. Restricted access
3. Partially open
4. Open or entirely free access

E. Education, interpretation and communication.
Options:
1. No equipment
2. Discreet publicity
3. Active publicity
4. Special promotion including actions aimed at decision makers.

F. Research.
Options:
1. No equipment
2. Special equipment
3. controlled equipment or open equipment
4.2 Site Zonation

4.2.1 Site limits

The proposed boundaries of the site complex Llogora-Treeza e Kanalit-Dukat-Orikum-Karaburun are those shown on the Map 3. As shown in the map and recommended by the local authorities and elected municipality leaders, the entire administrative area of Orikumi municipality is included in the site borders. In drawing the borders of the site for which this MP is prepared the ecological, economical and social integrity of the study are have been considered.

4.2.2 Site zoning.

4.2.2.1 IUCN Criteria and Definitions of Site Management Goals

The IUCN/Commission on NPs and Protected Areas (CNPPA) have categorised protected areas in order to:

- alert governments to the importance of protected areas
- encourage governments to develop systems for protected areas with management aims tailored to national and local circumstances
- reduce the confusion which has arisen from the adoption of many different terms to describe different kinds of protected areas
- provide international standards to help global and regional accounting and comparisons between countries
- provide a framework for the collection, handling and dissemination of data about protected areas and
- generally improve communication and understanding between all those engaged in conservation (IUCN 1994b).

Six categories are recognised according to the mix and prioritisation accorded to the main management objectives of a protected area (see Box 1 in the introduction part of the MP document).

4.2.2.2 Site Management Zones and Goals

The single most important factor to consider regarding categorisation of a protected area is that the basis of categorisation is by the primary management objective. Areas should be classified on the basis of the primary management objective as contained in the legal definition on which it was established and which are reflected in the goals set out in the management plan. The MP is the essential instrument to outline the activities needed to bring the management up to the required level and sets a timetable for accomplishing them (IUCN 1994a, 1994b; Knapp et al. 1998).

The fundamental difference between Categories II and V is the degree to which they are open to human intervention - Category II is slanted towards non-intervention and natural
processes while Category V is slanted towards careful management of traditional human activities and conservation and maintenance of resulting eco-systems and landscapes. Both sets of objectives are relevant to project site since the area contains large expanses of natural eco-systems and scenery, but at the same time supports large areas of landscape arising and maintained through traditional human activities which continue to the present.

Therefore within the context of the newly evolving Albanian NP system, the establishment of the enlarged Llogara-Karaburun NP on the basis of an overall Category II designation with sub areas designated as appropriate I, III, IV and V appears the better choice.

In managing protected areas or areas designated for conservation, it is necessary:

♦ To protect sensitive elements of the various eco-systems of the site from disturbance
♦ To separate incompatible uses, and
♦ To prioritise the various uses or purposes in different areas.

This is most commonly and effectively achieved by the adoption of a management zoning approach. This is recognised as “the best approach for most large protected areas in the inhabited parts of Europe”. Indeed, Recommendation 8.4.1 of Parks for Life (IUCN 1994a) states:

“Protected area agencies should give more attention to zoning as the management approach for protected areas in crowded countries and as a way of ensuring protection of vital natural areas to Category II standards.”

Accordingly, the designation of management zones in the proposed integral PA should take account of:

♦ biological and landscape values
♦ ecological sensitivities
♦ on and off-site factors influencing management
♦ existing conservation management and infrastructure associated with the Llogara NP as existing (1010 ha) and Karaburun Managed Nature Reserve (20000 ha).
♦ existing livelihoods
♦ existing tourism infrastructure
♦ the sustainable use concept
♦ physical attributes useful to management, and
♦ requirements of management support activities, e.g. research.

4.2.2.3 Categorisation of Llogora-Karaburun Protected Area

Based on the above requirements, a four-fold model is recommended based on the following Management Zone Categories of the project site:
♦ Core Zone
♦ Recreation Zone
♦ Traditional-use Zone
♦ Sustainable-use Zone

For each zone a description and statement of its purpose is made. The statements emphasise the management and conservation focus of the zone and the priority activities in that zone. The statements are further augmented by descriptions of:

♦ permitted activities (those activities which do not require individual management approval each time they are undertaken)
♦ incompatible activities (those activities which are deemed to be clearly incompatible with the purposes of the zone and will generally not be permitted in that zone except in exceptional circumstances) and
♦ activities requiring management approval (those activities which are not clearly incompatible with the purposes of the zone but which may have adverse impacts and therefore require case by case management approval, in some cases following an environmental impact assessment).

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 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 5 year review of the PA Management Plan.

4.2.2.4 PA Management Zone Prescriptions

The purpose of the four management zones identified above as providing the framework for the management of the NP are shown in Map no.11 and described here in more detail together with an outline of the permitted, prohibited and restricted activities allowed in each (Box 6).

<table>
<thead>
<tr>
<th>Core Zone (CZ)</th>
<th>Purpose</th>
<th>Management Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose</td>
<td>The purpose of the Core Zone is to provide an undisturbed, natural reference area. It includes natural habitats and phyto-climatic zones, natural and old growth forests, geologic and geomorphologic features, wetlands and riparian habitats. Key areas include parts of Cika Mountain-Llogara NP and Rreza e Kanalit, and some selected sites along the Karaburun peninsula (i.e. parcels of Quercus macrolepis), and nature monuments.</td>
<td>CZ1 Special Preservation Sub Zone</td>
</tr>
<tr>
<td>Management Options</td>
<td>Emphasis is placed on minimum disturbance. Usually no internal access</td>
<td></td>
</tr>
</tbody>
</table>

Box. 6. PA Management zone prescription
except for approved scientific research. A buffer protection zone of 100 metres will be respected around a Special Preservation Sub Zone; this requires that there is no access for whatever purpose except for the actions that take place in the zone itself.

**CZ2 Natural Environment Sub Zone**

Extensive areas that are good representations of each of the parks natural habitats, which will be maintained in their natural state. Dispersed activities allowed providing experiences consistent with resource preservation, such as educational guided walks, bird and mammal watching.

**CZ3 Natural Monument**

Protection of specific natural feature. Where appropriate, visitations allowed providing experiences consistent with resource preservation.

A buffer protection zone of 100 metres will be respected around a Natural Monument; this requires that there is no access for whatever purpose except for the actions that take place in the zone itself.

<table>
<thead>
<tr>
<th>Permitted Activities</th>
<th>CZ1 Special Preservation Sub Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Access for scientific monitoring as part of the NPs ecological monitoring system and essential management such as fire-fighting, control / removal of non-native species.</td>
</tr>
</tbody>
</table>

| Incompatible Activities | Activities contrary to the purposes of the zone, including: hunting, harvesting, unauthorised collection, destruction, or disturbance of indigenous wild fauna and flora; habitat management other than control/removal of non-native species; livestock grazing and any form of agriculture; forestry operations; unauthorised access by any vehicle (including by boat); 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. |

| Activities Requiring Management Approval | Activities which are neither permitted nor clearly incompatible with the purposes of the zone, including: non-prescribed scientific monitoring and research which is not part of the NPs ecological monitoring system and provided its effects are not harmful to the purposes of the Park. |

<table>
<thead>
<tr>
<th>Recreation Zone (RZ)</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Areas that can accommodate a broad range of education, outdoor recreation opportunities and related facilities in a way that respects the NPs functions,</td>
</tr>
</tbody>
</table>
ecological values and natural / cultural landscape.

<table>
<thead>
<tr>
<th>Management Options</th>
<th>RZ1 Active Recreation Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Areas of formal recreation use designed with minimum impact on the natural environment (i.e existing recreational facilities within Llogara NP).</td>
</tr>
<tr>
<td>RZ2 Nature Recreation Zone</td>
<td>Areas maintained as natural environments but which can sustain limited low recreational density activities where the emphasis is on minimum disturbance and public access for the quiet enjoyment of the park. Qualifying activities- self guided walking and mountain bike trails, pony trekking trails, canoeing and scuba-diving.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Permitted Activities</th>
<th>RZ1 Active Recreation Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sensitive site hardening to accommodate visitor numbers allowed subject to design agreements, facilities to include; formal serviced picnic sites, NP service buildings and interpretation centres, car parking, serviced camping grounds, informal mini field sports areas, and small hotel and restaurant facilities.</td>
</tr>
<tr>
<td>RZ2 Nature Recreation zone</td>
<td>Unrestricted access for walking, hiking, cycling, horse-back riding, mountaineering, bird-watching, canoeing, scuba-diving and other ecological and nature based recreation activities. Development of community based tourism developments such as home-stays and conversion of existing traditional buildings as tourist accommodation. Overnight camping will be permitted in designated areas according to certain rules. Access for the purposes of research, education and training. Prescribed targeted monitoring. Management will be limited to essential activities such as fire-fighting, control/removal of non-native species and to management of visitor effects including removal of rubbish, maintenance of trails and erosion control, maintenance of camping areas.</td>
</tr>
</tbody>
</table>

| Incompatible Activities    | Activities contrary to the purposes of the zone, including, hunting, harvesting, unauthorised collection, destruction, or disturbance of indigenous wild fauna and flora; habitat management other than control/removal of non-native species; livestock grazing and any form of agriculture; forestry operations; unauthorised access by any vehicle (including by boat); dumping or disposal of waste including untreated effluent; construction of dwelling places other than those specifically authorised for Park-managed tourist use; construction of commercial hotels, restaurants, car parks, play grounds and sports fields; construction and operation of industrial facilities; quarries, mining, removal of aggregates and introduction of non-native species. |

<p>| Activities Requiring Management Approval | Activities which are neither permitted nor clearly incompatible with the purposes of the zone, including: non-prescribed monitoring and scientific research provided its effects are not harmful to the purposes of the Park, construction of dwelling places and other associated structures prescribed for Park-managed tourist use, other prescribed visitor facilities and infrastructure related to community based eco-tourism activities. |</p>
<table>
<thead>
<tr>
<th><strong>Traditional Use Zone (TUZ)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Purpose</strong></td>
</tr>
<tr>
<td>Enables people residing within the NP, both permanently and seasonally, to continue to maintain their livelihoods through traditional means. The Zone allows public access subject to respecting resident’s field boundaries and economic activities. Visitors can enjoy the same activities and values as in Recreation Zone RZ2 but also learn about traditional farming methods and ways of living.</td>
</tr>
<tr>
<td><strong>Management Options</strong></td>
</tr>
<tr>
<td>Emphasis on traditional livelihoods and public access for the quiet enjoyment of Park values by visitors. Encourage development of agri-tourism activities, local home stay accommodation, village heritage centres and revival of traditional festivals. In some areas of the NP emphasis will be on environmental improvements and management of large areas of degraded rural landscapes (soil erosion and degraded pasture and forest).</td>
</tr>
<tr>
<td><strong>Permitted Activities</strong></td>
</tr>
<tr>
<td>Livestock grazing and any form of traditional agriculture; use of forest and forest pastures subject to approved specific NP management plan; access by any permitted vehicle (including by boat). Harvesting non timber forest products (e.g. fungi, honey). Traditional fishing. Unrestricted access for walking, hiking, cycling, horse-back riding, mountaineering, bird-watching. Overnight camping will be permitted in designated areas according to certain rules. Access for the purposes of education and training. Prescribed targeted monitoring. Habitat management including habitat restoration, fire-fighting, control/removal of non-native species and management of visitor effects, maintenance of trails and erosion control, maintenance of camping areas.</td>
</tr>
<tr>
<td><strong>Incompatible Activities</strong></td>
</tr>
<tr>
<td>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 of industrial facilities, mining and removal of aggregates (without EIA study and environmental license) and introduction of non-native species.</td>
</tr>
<tr>
<td><strong>Activities Requiring Management Approval</strong></td>
</tr>
<tr>
<td>Activities which are neither permitted nor clearly incompatible with the purposes of the zone, including: non-prescribed monitoring and scientific research provided its effects are not harmful to the purposes of the Park. Activities subject to an Environmental Impact Assessment prior to possible approval by the Park Management Authority include construction of dwelling places prescribed for Park-managed tourist use, other prescribed visitor facilities and infrastructure, construction and re-construction of dwelling places for local inhabitants, farm buildings, field boundaries including fences, walls and hedges and any use or application of chemicals (fertilisers, biocides, etc.). Controlled hunting by local people subject to scientific monitoring.</td>
</tr>
<tr>
<td><strong>Sustainable-use Zone (SUZ)</strong></td>
</tr>
<tr>
<td><strong>Purpose</strong></td>
</tr>
<tr>
<td><strong>Permitted Activities</strong></td>
</tr>
<tr>
<td><strong>Incompatible Activities</strong></td>
</tr>
<tr>
<td><strong>Activities Requiring Management Approval</strong></td>
</tr>
<tr>
<td><strong>Military Use Zone</strong></td>
</tr>
</tbody>
</table>

### 4.2.2.5 Buffer Zones around Protected Area

Buffer zones provide gradients between totally protected land and intensively used land and often form a belt around the outside of a protected area. In some instances this is exterior to the protected area and occasionally included within it. As such they cannot be easily defined or allocated to categories and every situation is unique.

Within the Law “For Protected Areas” 2002 a buffer zone around a Category II protected area should extend to 100m around the outer edge. In the specific case of Llogara-Karaburun which is a very large protected area in which a wide range of activities are taking place, this is not considered appropriate in the present situation.
Map 11. Management Zones for Llogora-Karaburun PA
Buffer Zones are considered to be required at the edges of the Park where urban-based developments are taking place (such as Orikumi town and its surrounding). The zonation of the Llogara-Karaburun NP has been designed so that the Sustainable Use Zone (SUZ) effectively acts as an internal buffer between the sensitive areas of the site and the external world at large.

The second area where buffer zones are considered important is around the Special Preservation Sub Zones (CZ1) (equivalent to IUCN Category I sites) and Natural Monuments (CZ3) (equivalent to IUCN Category III sites). The buffer zone will be 100m wide around each area, and only the activities that are allowed in the actual Zone it is protecting will be allowed to take place in the buffer zone.

4.2.3 Proposed Site Management Structure

4.2.3.1 Site Administration

Since the time Llogara Forest area was declared as National Park (NP) and Rreza e Kanalit-Karaburun peninsula as Hunting Reserve (equal to IUCN Managed Nature Reserve (MNR) category) until the ratification in 2002 of the protected areas law, both NP and MNR were solely the responsibility of the Ministry of Agriculture and Food. Nowadays, the responsibility for protected areas has been split between the Ministry of Environment and Ministry of Agriculture and Forests through the DGFP. 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 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 NP.

4.2.3.2 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 byelaws that concern the protection, conservation management and recreational management 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 the new PA boundaries are approved and before the appointment of the PA Director and his senior management team. It is also considered vital that all minutes of meetings and management decisions taken by the committee should be published without exception.

Figure 8. Proposed Structure of the Management Committee for Llogara-Karaburuni Protected Area

4.2.3.3 Staffing Structure and Duties
The PA administration of Llogara-Karaburuni 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 who will be responsible for financial and legal matters pertaining to the PA, two ecologists (one terrestrial and one marine/wetland ecologist), 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 10-15 park rangers will be fully or part-time employed to serve for the park (more part time involvement during summer time, such as observers of fire risk, visitors control and assistance).

The tasks of the PA administration are determined in a DCM no 266, dated 24,04,2003. This DCM may need revising from time to time as conditions change. The proposed structure of the PA administration is provided in diagram 9.

Figure 9. Structure of Llogara-Karaburun PA Administration
4.2.3.4 Job Description for the Director of Llogora-Karaburuni PA

Box 7. Job description for Director of the Llogara-Karaburuni PA

<table>
<thead>
<tr>
<th>Job Designation:</th>
<th>Director of the Llogara-Karaburuni PA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Effective From:</td>
<td>........................................</td>
</tr>
<tr>
<td>Grade / Salary:</td>
<td>........................................</td>
</tr>
<tr>
<td>Responsible to:</td>
<td>The Site Management Committee</td>
</tr>
</tbody>
</table>

Job Purpose:
To assume overall responsibility for the proper and transparent administration of the affairs of Llogara-Karaburuni PA.

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 Parks 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 Ministry of Environment, Ministry of Agriculture and Forestry, DGFP, Ministry of Territorial Adjustment and Tourism and other Ministry and Government bodies regarding issues which affect the NP.
♦ To liaise with institutions and agencies with an interest in the NP.
♦ To liaise with donor agencies to secure funding for the development of the NP.
♦ To liaise with business interests and secure sponsorship for NP 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 projects

4.3.1 Supervision and control

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

All activities and services within the park area should be under the administration of the Management Authority. PA Administration personnel will be qualified, trained and well equipped. Definition of fees and taxes to be collected by these activities and services. Creation of a special account for the park.

**Indicators:**
- Management Committee established
- Minutes of the MC meetings published
- Director of the PA appointed
- PA personnel increased
- Site borders defined and demarkated
- Number of trainings received by the park administration
- Fees and taxes collected
- Special account for the park created by the year 2006

**Actions:**
- Site zonation and management
- Setting up the Management Committee of the Llogora-Karaburun protected area
- Prepare and implement a regulation for Llogora-Karaburuni protected area
- Establishing a Management Authority/ 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 grazing activities
- Control illegal hunting and fishing
- Control fires in forest and pastures, especially those put intentionally by shepherds

4.3.2 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.

Indicators:
- 20 ha of forest subject of recent fires replanted
- 100 ha of most heavily degraded shrubland from overgrazing rehabilitated
- Some 60 ha of former marshland restored
- Communicaton channel between Orikumi lagoon and the Adriatic sea enlarged
- 3 most problematic “lera” of the site rehabilitated

Actions:
- Restoration of the former Orikumi wetland
- Improve hidrological conditions of Orikumi lagoon
- Rehabilitation of the heavy degraded forests subject of recent fires and overgrazing
- Conduct pilot interventions on pasture improvement in most degraded pasturelands
- Conduct pilot intervention for “lera” rehabilitation (facilities providing water for livestock)

4.3.3 Conservation, management and species restoration

Aim: Recover threatened and rare habitats and species

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

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)
4.3.4 Soil conservation and anti-erosion measures

Aim: Stop further land degradation and erosion

Indicators:
- Some 1-2 ha forest over Dukat fshat replanted
- Areas most degraded and replanted to be fenced against grazing
- Gravel and humus exploitation from inside Llogara NP area stopped
- Green belts (planting trees) in Dukati fushe to protect the land from winds and erosion created

Actions:
- Reforestation of the heavy degraded lands and burned by forest fires (pilot intervention to replant some 1-2 ha of forest over Dukat fshat next to Paliska burned recently, to protect this part of village from land slides and stones)
- Control grazing activity on the terrains poorly covered with vegetation, nearby villages in order to stop further degradation and help restoration of the vegetation cover
- Stop humus and gravel exploitation inside the Llogara NP area.
- Planning and implementing erosion and land slide prevention measures in most problematic areas exposed to such phenomenon.
- Creating (planting) green belts in the Dukati field to protect the land from the wind and erosion.

4.3.5 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 (register of monitoring data)
- Project design for biological treatment of sewage waters of Orikumi municipality
- Tragjasi-Radhima field put under irrigation

Actions
- Promote new methods and practices making the best use of available water resources for irrigation
- Support and undertake actions to rehabilitate the irrigation scheme in the Tragjasi-Radhima field
- Promote the ecological treatment of sewage waters of Orikumi municipality, introducing the creation of artificial wetlands to treat them prior their discharge into the sea.

4.3.6 Administration and regulations to improve management of visitors

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

**Indicators:**
- Parking places built
- Visitor centres at Llogora and Orikumi created
- Visitor guide and leaflets
- Number of guided tours by rangers and volunteer guides in the site
- Sport grounds
- Camping site
- Agreement between PA administration and legal hotel and restorants owners

**Actions.**
- Establishment of parking places within recreational zones
- Establishment and equipment of visitor centres
- Creation of the Museum on nature and culture values of the Llogara-Karaburun NP
- Producing of visitor guide and leaflets showing tracks and walking routes where visitors can go
- Make use of rangers and volunteers to guide visitors in the park
- Preparation of Sport grounds
- Defining and proper demarcation of areas open to active and natural recreation
- Defining and proper demarcation of camping sites within recreational zones
- Control and regulate food and accommodation facilities inside the active recreation zones
- Agreement with legal hotel and restorants owners regarding management of wastes produced by leisure and recreational activities
4.3.7 Infrastructure and engineering works

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

**Indicators:**
- Small bridges rehabilitated
- Road from Pasha Limani to Bristani bay improved
- Project design for building the by pass road over military base of Pasha Limani
- Trials/tracks demarkated and improved
- Signspots and notices
- Administration building and visitor centres equiped and operational (including water supply, electricity, waste anagement)
- Seedplots and Nurseries created and supported

**Actions**

- Rehabilitation of some damaged parts (small bridges) of the existing road along the eastern edge of Karaburun peninsula.
- Improve the road from Pasha Liman to Bristani bay
- Building a new bypass road over Military base of Pasha Limani in order to encrease public access to the Karaburun peninsula and make possible recreational activities in this part of the site.
- Tracks (demarcation and improvement work)
- Signposts and notices (design and their production)
- Parking places (preparation work of the parking grounds)
- Sport grounds (preparation work)
- 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)
- Architecture work (design)
4.3.8 Tourism and Ecotourism

Other forms of tourism should be promoted in the site, such as agro-tourism, ecotourism, cultural tourism, alpine tourism, sport tourism, scuba-diving 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.

**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 and wind energy)
- Microproject designs for eco-tourism, agrotourism and cultural tourism development

**Actions**
- Preparation of the Master Plan of territorial planning and tourism development in the site (Contribution of Co-Plan is expected).
- Prepare a strategy for ecotourism development in the site
- Promote potentials of the site for ecotourism and nature recreational activity (publications).
- Promote potentials of the site for eco-developments (i.e. fishery and aquaculture, silvo-pastoralism, medicinal plants, organic farming).
- Promote eco-tourism activities in the sea waters (scuba diving, windsurfing, sportfishing, boat tours)
- Design and implement micro-projects in support to ecotourism, agrotourism and culture tourism development.
- Promote use of solar energy and other alternatives (wind energy).

4.3.9 Organization of local communities

4.3.9.1 Users associations

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

**Indicators:**
- Seminars and trainings received by users associations and groups (pictures taken, training modules)
- Web-pages in the internet created for main users associations and groups

**Actions:**
- Organizing seminars and trainings on design of the business plan
- Organizing seminars and trainings on sustainable use of natural resources
- Assistance to create web-pages in the internet

### 4.3.9.2 NGOs

**Aim:** Building up and strengthening of local environmental NGOs

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

**Actions:**
- Organizing seminars and trainings on how to write and implement a project proposal
- Logistical support and providing tweening opportunities with other NGOs of the Mediterranean region
- Assistance to create web-pages in the internet.

### 4.3.10 Studies, research and monitoring

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

**Indicators:**
- Research and surveys (*Hypericum haplophyloides, Leucojum valentinum subsp. Vlorense, Limonium anfractum*, monk seal (*Monachus monachus*) and sea turtles (*Caretta caretta*).
- Monitoring data collected and published (water quality and bioindicators, medicinal plants, invasive species, wintering waterbirds, wintering and nursery colonies of bats)
- Map of Corine Biotopes
- MEDWET Data base and modest GIS operation established
Actions

- Research on poorly studied or unknown taxa
- Mapping Corine biotopes of the site
- Further Research on endemic and endangered species. Delineation of the distribution areal of the endemic species Hypericum haplophyloides and Leucojum valentinum subsp. Vlorense, as well as subendemic species Limonium anfractum. Further research on monk seal (Monachus monachus) and sea turtles (Caretta caretta).
- 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 of Orikumi lagoon
- Monitoring of wintering and nursery colonies of cave-dwelling bats
- Establishment of Database and GIS on wetland and coastal ecosystems of the site

4.3.11 Micro-projects for 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 and aquaculture, medicinal plants and mushrooms, apiculture (honey bees) as well as promoting and supporting the use of new technologies to ensure sustainable nature resource management.

Indicators:
- Demonstration projects (project designs, pictures taken in place)
- Local producers of bioproducts received trainings, including visits overseas, possibly Italy or Switzerland (training modules, pictures taken, list of participants)
- Facilities to primar treatment of the medicinal plants collected are created
- Laboratories/distilators to produce certified essences from oil bearing plants created
- Cultivation of medicinal, oil-bearing and industrial plants
- 3 major “lera” rehabilitated
- Communication channel between the sea and the Orikumi lagoon improved and maintained
- Seedplots or nurseries for seedlings created and supported
- Fancing of new afforestations and plantations from grazing
**Actions:**

**Support development of Agrobusiness on milk processing and products**
The area is offering high quality milk products, but there is a need for new technologies in order to be competitive and attractive in the market.

Before investing for new technologies, care should be taken to train local producers, including study tours in other countries like Italy and Switzerland, in order to exchange knowledge and learn about new products and new technologies of milk processing and production. A lot more should be done to improve hygiene and sanitation conditions of the milk and its derived products, both by shepherds and those engaged with milk processing.

**Support horticulture development**
The study area has potentials for further development of horticulture. Rehabilitation of some of the damaged fruit-tree plantations and creation of new ones should be promoted and encouraged. The areas around Radhima and Dukati i Vjeter villages should be primarily used for horticulture.

Cultivation of vineyards should be kept under control, because they would increase the use of biocides.

Cultivation of varieties/hybrids or native/local cultivars that are not heavy damaged by diseases or insects suitable for production of vines should be promoted.

Further cultivation of olive trees could be exploited, supported by development of any facility to process and produce olive oil from the region, certified and well-oriented in the market.

Rehabilitation of the irrigation schemes is important to support the farming activities in the region.

**Support development of medicinal plants**
This activity should be supported and further developed in the study area. There is a good knowledge among locals about these plants, where they grow, how to and when to collect and how to dry them up before selling. For many families in the site the medicinal plants are the main source of their income.

Although in recent years the production of medicinal plants from the study area has reduced, the potential for medicinal plants is very high. Organisation schemes, trainings of medicinal plants collectors, cultivation of some medicinal plants that are highly required in the market (not only regionally and nationally, but also abroad), investment to new technologies in treating them and marketing are some of the ways to improve this activity and generate more jobs and incomes for the locals.

**Proposed actions:**
• Guarantee the product through signing contracts with the interested dealers or operators of the medicinal plants market
• Creation of facilities to primary treatment of the medicinal plants collected, and introducing new technologies
• Creation of laboratories/distillators to produce certified essences from oil bearing plants
• Develop marketing in order to exploit other business opportunities, including local and foreign investors in this sector
• Increase awareness of the local communities on the importance and values of medicinal plants and the need to use best friendly practices in collecting them
• Cultivation of medicinal, oil-bearing and industrial plants that suits well to soil and climate conditions of the site should be assessed and supported, as creating more jobs and incomes to farmers. Start cultivation of most important medicinal plants most required in the market in the site, by making use of some of the abandoned arable land.

Support to organic farming and extension service
Focus should be on organical farming, given the potential of the site for tourism and the market demand for bio-products. Financial support mechanisms to farmers that do produce organical products should be investigated and ensured.

Intensive farming such as green-houses/sun-house should be kept under limitations and controlled.

Support to sustainable grazing and livestock
Livestock, as main economical activity of the site in the past and present times, will continue to be so for many other years. Provided that numbers of sheeps and goats will increase, and bearing in mind the new tendency for more sheeps in the region, as well as the estimated potential carrying grazing capacity (2.4 sheep and goats per ha), there is evident that habitat degradation and erosion will be a hot environmental issue if grazing is not controlled and managed rationally.

Restoration of the genetic constitution of the local/native breeds of sheep and goats should be treated as a high priority. In order to reach this, the following are some of the proposed measures:

• Stop artificial insemination by using imported genetic materials of other breeds
• Stop buying or using reproductive individuals animals that belong to other breeds
• Individuals/animals that show morphological characteristics different from the native breeds should be eliminated.
• Raising awareness of local breeders and local communities on the need to conserve the native breeds and their products, and promote the use of other best practices in processing and marketing of these local and traditional products.

Cattle breeding, especially extensive forms, such as free-grazing milky cows, should be encouraged in the agriculture land around the villages.
Creation of mixed livestock farms and small mixed herds of cattle and sheeps should be promoted instead of few but very big herds of sheep and/or goats. But, this would require investments to secure water supply in the grazing areas.

Honey bees, production of high quality honey, certification of such a product and its marketing would need more attention and considerations within the Management Plan. It is important to undertake measures aiming at improve pasture quality for bees, including introducing some limitations for grazing activities in some of the areas used by honey bees. An important action to support development of apiculture activity in the site has to do with desease prevention and control. One of the deseases that do greatly influence the honey production in the site is variotosis, a desease that damages new generations of the bees.

Poultry. A complex farm growing turkeys can be established in Tragjasi area, due to the existing tradition in that village’s breeding.

Pasture improvement is a priority in the site. In order to meet this objective the following measures are proposed:

- Taking evidence of the pasturelands occupied by infestive plants not eaten by animals
- Undertaking pilot intervention of pasture improvement in selected areas, and involvement of the local shepherds in such actions as they are very interested on the matter.
- Monitoring effectiveness of the pasture improvement interventions in the pilot areas.

The experience gained in the past in Dukati and Tragjasi villages, as being involved in such activities as members of the former pasture improvement enterprise during the communist regime, should be used. The pilot interventions should take place in those areas where huge herds of sheep and goats are concentrated.

Rehabilitation of the “lera”. The existing water supply facilities for livestock on the ground, as named by the locals “Lera”, need urgent rehabilitation interventions. It is advisable that some 2-3 “lera” are rehabilitated, in order to meet with demands of local users (shepherds) and gain their support to implementation of other conservation objectives of the site management plan. Three most problematic “lera” of the project site are:

1. “Lera” of Ravena
2. “Lera” of “Gropat e Memucit”
3. “Big Lera” of Tragjasi

Support to responsible fishery and aquaculture
In the future priority should be given to increase production of the Sea bream (Sparus aurata) and the bivalve Ruditapes decussates.

Freshwater of Izvori stream is offering a potential for fish-farming development. Care should be taken to repopulation of the native trout species of the river (Salmo truta fario).
Improvement of ecological conditions in the lagoon of Orikumi is being considered a high priority issue. Some of the identified interventions are:

- Improvement and maintenance of the communication channel between the lagoon and the sea (estimated costs at 40,000 USD).
- Management of fishery activity to be done according to the new law, based on creation of Fishing Management Association.
- 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 beds for fish inside the lagoon (estimated costs at 25,000 USD).
- Rehabilitation of the road access to the lagoon (estimated costs at 30,000 USD).

Among the interventions identified, the action aiming at improvement and maintenance of the communication channel between the sea and the lagoon is considered as high priority and may be supported and implemented through MWC project.

**Support to sustainable forestry**
Timber exploitation is not an issue at the present time in the area, but firewood and fodder collection need to be controlled and regulated in order to help rehabilitation of the degraded shrubland and forest areas, and improve forest productivity and biomass.

Rehabilitation interventions are needed to forest and shrublands that have been subject of fires, in which natural regeneration is either very difficult and slow or impossible.

Creation and/or supporting creation of seedplots or nurseries to ensure reforestation and rehabilitation work in the most degraded forest lands from fires and overgazing.

Other energy alternatives should be exploited and promoted in order to reduce the local population needs in firewood.

New technologies more efficient in burning fuel wood, as well as non-wood products and collection of medicinal plants should also be promoted and encouraged in the region.

Fire and disease prevention and control of forests and pastures require creation of appropriate structures (temporary) well equipped and trained in place.

**4.3.12 Making use of nature, landscape and cultural heritage**

Historical and archeological values of the sites, as earlier mentioned, are quite unique and makes it to be a destination for tourism. But, these values should be preserved, enhanced and be accessed and used for visitors. Some of these values, such as the Church of Marmiro, the ancient town of Oriko, The Tower of Dervish Alise, the Castle of Bocari, need rehabilitation intervention in order to restore and enhance their values and make them more attractive for visitors. The public access to the old Tragjasi village, as another touristic attraction, needs to be improved.
**Aim:** Promoting sustainable use of nature, landscape and cultural heritage of the site

**Indicators:**
- Full inventory of nature and culture monuments
- Information and educational publications (booklets, leaflets)
- Agreement with Military Authority to open public access to Oriku ancient town
- Improved access to Marmiroi church
- Map of culture and natural monuments of the site published

**Actions:**

- Conduct a full inventory and assessment of nature and culture monuments of the site
- 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 (i.e. Oriku ancient town, Marmiroi church)
- Promote restoration and rehabilitation of cultural heritage of the site
- Open the public access to Oriku ancient town located within the territory of Pasha Limani military base

4.3.13 Training, awareness raising and public participation

**Public awareness and community involvement**

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

**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 emblema of the “Llogara-Karaburun” protected area (National park) 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)
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 the “Llogara-Karaburun” protected area (National park) 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

Public Relations and Partnerships

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

Indicators:
- Minutes of meetings and round tables
- Informal meetings with Orkumi municipality authorities
- List of participants, pictures
Agreements between MA/PA Administration and local users/stakeholders

**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

**Training program**

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

**Indicators:**

- Trainings received by local staff (list of participants, training modules)
- 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

**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 PA personnel**
Capacity building and training at all levels of the PA/NP administration staff will be a necessary requirement for the successful operation of the PA/NP, both in order to manage the site at the international standards and expectations which are required of any NP/PA and secondly to be able to transmit the principles of conservation, protection and sustainability to the wider public.

Training plan will be required for each staff member in order that they will be able to undertake their tasks to the highest possible standard, utilising modern approaches in their individual areas of expertise, however, selecting persons most suitable for the position to be filled both in their academic background and work experience should in any case be the first consideration, especially in managerial positions. Staff training can be undertaken through a range of activities, rather than the formal classroom situation and therefore a range of approaches should be considered, these include:

♦ In service training and knowledge transfer – the managerial staff of the NP will have a range of backgrounds and qualities which can be passed to their colleagues either through holding short training / information sessions, through working together on particular projects, and by producing occasional briefing notes to bring their colleagues up to date with new information or practices in their particular field.

♦ Formal Training courses which are provided by universities, colleges or research institutions, these may be existing courses on offer, or could be ‘tailor made’ to suit the NP/PA staff.

♦ Environmental NGOs (national and international) can offer a wide range of courses on different aspects of environmental work, they often have a wide experience in the field and therefore their courses are most likely to be practical and informative dealing with social issues etc. The Regional Environmental Centre (REC) provides informative courses.

♦ International courses, seminars and conferences on wetland and coastal ecosystem conservation and management, can provide new perspectives and inspiration for dealing with related management issues, opportunities to attend these functions should where possible be sought, and the staff must be encouraged to actively participate.

**Training the members of the Management Committee**

All new members of the MC should attend at least a familiarisation event where the operation of the NP, its functions, and their responsibilities as committee members is explained, committee members should also be encouraged to attend training events, conferences etc.
4.4. Work plan


<table>
<thead>
<tr>
<th>Operational Objective no.1</th>
<th>Indicators</th>
</tr>
</thead>
</table>
| Improve supervision and control of the site to stop its further degradation. | ⇒ Borders and zonation of the site shown and demarcated  
⇒ Management Committee established  
⇒ Minutes of the MC meetings published  
⇒ Director of the PA appointed  
⇒ PA personnel increased  
⇒ The Regulation for the Protected Area prepared and approved  
⇒ The PA Administration established and operating  
⇒ Trainings received by PA Administration staff  
⇒ Trainings of Management Committee members  
⇒ Round tables with user groups and local stakeholders (Minutes)  
⇒ Imposed fines for illegal activities (police register)  
⇒ Gravel and humus exploitation from inside Llogara NP area stopped  
⇒ Fees and taxes collected  
⇒ Special account for the park created by the year 2006 |

<table>
<thead>
<tr>
<th>Outlined Management Actions</th>
<th>Priority(^1)</th>
<th>Responsible</th>
<th>Period</th>
<th>Duration</th>
<th>Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site zonation and management</td>
<td>1</td>
<td>MWC, MoE, DGFP, FD, Orikumi Municipality</td>
<td>2005</td>
<td>6 months</td>
<td></td>
</tr>
<tr>
<td>Setting up the Management Committee of the Llogora-Karaburuni protected area</td>
<td>1</td>
<td>MWC, MoE, DGFP, FD, Orikumi Municipality</td>
<td>2005</td>
<td>3 months (establishment)</td>
<td></td>
</tr>
<tr>
<td>Prepare and implement a regulation for Llogara-</td>
<td>1</td>
<td>MWC, MoE,</td>
<td>2005</td>
<td>3 months</td>
<td></td>
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</tbody>
</table>

\(^{1}\) Priority 1 is given to projects/actions that must be completed during the given year. Priority 2 projects/actions should be completed within the stated time period (they differ from priority 1 in that they have an element of flexibility). Priority 3 is given to projects/actions that may only be undertaken when time or other resources remain available following the completion of all priority 1 and 2 projects/actions.
<table>
<thead>
<tr>
<th>Outlined Management Actions</th>
<th>Priority</th>
<th>Responsible</th>
<th>Period</th>
<th>Duration</th>
<th>Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>Karaburuni protected area</td>
<td></td>
<td>Orikumi Municipality</td>
<td></td>
<td>(preparation)</td>
<td></td>
</tr>
<tr>
<td>- Establishing a Management Authority/Administration responsible for the implementation of the MP</td>
<td>1</td>
<td>MC, MWC, MoE, DGFP, FD</td>
<td>2005</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Improve PA Administration capacity and qualification to conduct day to day management work (training)</td>
<td>1</td>
<td>MWC</td>
<td></td>
<td>Permanent</td>
<td></td>
</tr>
<tr>
<td>- Stop gravel and humus exploitation from inside Llogara NP</td>
<td>1</td>
<td>MA</td>
<td></td>
<td>Permanent</td>
<td></td>
</tr>
<tr>
<td>- Control and regulate grazing activities</td>
<td>2</td>
<td>MA</td>
<td></td>
<td>Permanent</td>
<td></td>
</tr>
<tr>
<td>- Control illegal hunting and fishing</td>
<td>1</td>
<td>MA</td>
<td></td>
<td>Permanent</td>
<td></td>
</tr>
<tr>
<td>- Control fires and deseases in forest and pastures</td>
<td>2</td>
<td>MA</td>
<td></td>
<td>Permanent</td>
<td></td>
</tr>
</tbody>
</table>
### Operational Objective no.2

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

<table>
<thead>
<tr>
<th>Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>⇒ Some 1-2 ha forest over Dukat fshat replanted</td>
</tr>
<tr>
<td>⇒ Areas most degraded and replanted are fenced against grazing</td>
</tr>
<tr>
<td>⇒ Green belts (planting trees) in Dukati fushe to protect the land from winds and erosion created</td>
</tr>
<tr>
<td>⇒ 20 ha of forest subject of recent fires replanted</td>
</tr>
<tr>
<td>⇒ 100 ha of most heavily degraded shrubland from overgrazing rehabilitated</td>
</tr>
<tr>
<td>⇒ Some 60 ha of former marshland restored</td>
</tr>
<tr>
<td>⇒ Quality of water maintained (register of monitoring data)</td>
</tr>
<tr>
<td>⇒ Project design for biological treatment of sewage waters of Orrikumi municipality</td>
</tr>
<tr>
<td>⇒ Communication channel between Orrikumi lagoon and the Adriatic sea enlarged</td>
</tr>
<tr>
<td>⇒ 3 most problematic “lera” of the site rehabilitated</td>
</tr>
</tbody>
</table>

### Outlined Management Actions

<table>
<thead>
<tr>
<th>Outlined Management Actions</th>
<th>Priority</th>
<th>Responsible</th>
<th>Period</th>
<th>Duration</th>
<th>Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Restoration of the former Orrikumi wetland</td>
<td>2</td>
<td>MA</td>
<td>2005-2009</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Improve hydrological conditions of Orrikumi lagoon</td>
<td>1</td>
<td>MA, MWC</td>
<td>2005-2006</td>
<td></td>
<td>Hydraulic intervention</td>
</tr>
<tr>
<td>▪ Rehabilitation of the heavy degraded forests subject of recent fires and overgrazing</td>
<td>1</td>
<td>MA, MWC</td>
<td>2005-2006</td>
<td></td>
<td>Planting, fencing</td>
</tr>
<tr>
<td>▪ Reforestation of the heavy degraded lands and burned by forest fires (pilot intervention to replant some 1-2 ha of forest over Dukat fshat village</td>
<td>1</td>
<td>MA, MWC</td>
<td>2005</td>
<td></td>
<td>Planting, fencing</td>
</tr>
<tr>
<td>▪ Conduct pilot interventions on pasture improvement in most degraded pasturelands</td>
<td>2</td>
<td>MA</td>
<td>2006-2009</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outlined Management Actions</td>
<td>Priority</td>
<td>Responsible</td>
<td>Period</td>
<td>Duration</td>
<td>Means</td>
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<tr>
<td>Conduct pilot intervention for “lera” rehabilitation (facilities providing water for livestock)</td>
<td>1</td>
<td>MA, MWC</td>
<td>2005-2007</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control grazing activity on the terrains poorly covered with vegetation (fancing)</td>
<td>1</td>
<td>MA, MWC</td>
<td>Permanent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Planning and implementing erosion and land slide prevention measures</td>
<td>1</td>
<td>MA, MWC</td>
<td>Every year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creating (planting) green belts in the Dukati field to protect the land from the wind and erosion.</td>
<td>1</td>
<td>MA, MWC</td>
<td>2005-2009</td>
<td></td>
<td>Planting</td>
</tr>
<tr>
<td>Promote new methods and practices making the best use of available water resources for irrigation</td>
<td>3</td>
<td>MA</td>
<td>Permanent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Support and undertake actions to rehabilitate the irrigation scheme in the Tragjasi-Radhima field</td>
<td>3</td>
<td>MA</td>
<td>Permanent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Promote the ecological treatment of sewage waters of Orikumi municipality, introducing the creation of artificial wetlands to treat them</td>
<td>2</td>
<td>MA</td>
<td>Permanent</td>
<td></td>
<td></td>
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<tr>
<td>Operational Objective no.3</td>
<td>Indicators</td>
<td></td>
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</tbody>
</table>
| Formulate and implement recovery plans for threatened and rare habitats and species. | ⇒ Number of habitats and species (endemic, rare, threatened) covered with recovery plans (project documents)  
⇒ Maps of distribution and demarcation  
⇒ Quantitative data gathered |

<table>
<thead>
<tr>
<th>Outlined Management Actions</th>
<th>Priority</th>
<th>Responsible</th>
<th>Period</th>
<th>Duration</th>
<th>Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Identify threatened and rare habitats and species to be covered with recovery action plans</td>
<td>1</td>
<td>MC, MA, MWC</td>
<td>2005</td>
<td>30 days</td>
<td></td>
</tr>
<tr>
<td>▪ Design and implement recovery plans for threatened and rare habitats</td>
<td>1</td>
<td>MC, MA, MWC</td>
<td>2005-2009</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Design and implement species recovery plans (endemic, rare and threatened plant and animal species)</td>
<td>1</td>
<td>MC, MA, MWC</td>
<td>2005-2009</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Species action plan for medicinal plants</td>
<td>1</td>
<td>MC, MA, MWC</td>
<td>2005-2009</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operational Objective no.4</td>
<td>Indicators</td>
<td></td>
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</tbody>
</table>
| Protect and promote wise use of nature, landscape and culture heritage of the site. | ⇒ Full inventory of nature and culture monuments  
⇒ Information and educational publications (booklets, leaflets)  
⇒ Agreement with Military Authority to open public access to Oriku ancient town  
⇒ Improved access to Marmiroi church  
⇒ Map of culture and natural monuments of the site published |

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<tr>
<th>Outlined Management Actions</th>
<th>Priority</th>
<th>Responsible</th>
<th>Period</th>
<th>Duration</th>
<th>Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>‟ Conduct a full inventory and assessment of nature and culture monuments of the site</td>
<td>1</td>
<td>MA, MWC</td>
<td>2005</td>
<td>2 months</td>
<td></td>
</tr>
<tr>
<td>‟ Produce booklet and leaflets on natural and cultural monuments of the site</td>
<td>1</td>
<td>MA, MWC</td>
<td>2005-2006</td>
<td>90 days</td>
<td></td>
</tr>
<tr>
<td>‟ Design and implement pilot interventions to improve public access to selected natural and cultural monuments of the site (i.e. Oriku ancient town, Marmiroi church)</td>
<td>1</td>
<td>MC, MA, MWC</td>
<td>2005-2006</td>
<td></td>
<td>Architecture and Public works</td>
</tr>
<tr>
<td>‟ Promote restoration and rehabilitation of cultural heritage of the site</td>
<td>2</td>
<td>MA, MWC</td>
<td>Permanent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>‟ Open the public access to Oriku ancient town located within the territory of Pasha Limani military base</td>
<td>1</td>
<td>MA, MWC, MoE, MoD</td>
<td>2005</td>
<td></td>
<td>Agreement</td>
</tr>
<tr>
<td>Operational Objective no.5</td>
<td>Indicators</td>
<td></td>
<td></td>
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</tbody>
</table>
| Control and improve management of leisure and recreational activities. | ⇒ Parking places built  
⇒ Visitor centres at Llogora and Orikumi created  
⇒ Administration building and visitor centres equipped and operational (including water supply, electricity, waste management)  
⇒ Visitor guide and leaflets  
⇒ Number of guided tours by rangers and volunteer guides in the site  
⇒ Sport grounds  
⇒ Camping site  
⇒ Agreement between PA administration and legal hotel and restorants owners  
⇒ Waste management facilities in place  
⇒ Small bridges rehabilitated  
⇒ Road from Pasha Limani to Bristani bay improved  
⇒ Project design for building the by pass road over military base of Pasha Limani  
⇒ Trials/tracks demarkated and improved  
⇒ Signspots and notices |

<table>
<thead>
<tr>
<th>Outlined Management Actions</th>
<th>Priority</th>
<th>Responsible</th>
<th>Period</th>
<th>Duration</th>
<th>Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Establishment of parking places within recreational zones</td>
<td>1</td>
<td>MC, MA</td>
<td>2005</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Establishment and equipment of visitor centres (Llogora and Orikumi)</td>
<td>1</td>
<td>MA, MWC</td>
<td>2005-2006</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Creation of the Museum on nature and culture values of the Llogara-Karaburun NP</td>
<td>2</td>
<td>MA, MWC</td>
<td>2006</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Producing of visitor guide and leaflets showing tracks and walking routs where visitors can go</td>
<td>1</td>
<td>MA, MWC</td>
<td>2005-2006</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outlined Management Actions</td>
<td>Priority</td>
<td>Responsible</td>
<td>Period</td>
<td>Duration</td>
<td>Means</td>
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<tr>
<td>Make use of rangers and volunteers to guide visitors in the park (training program)</td>
<td>1</td>
<td>MA, MWC</td>
<td>Permanent</td>
<td></td>
<td>Training</td>
</tr>
<tr>
<td>Preparation of sport grounds</td>
<td>2</td>
<td>MA</td>
<td>2006-2009</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Design and production of signposts and notices</td>
<td>1</td>
<td>MC, MA</td>
<td>2005-2006</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Defining and proper demarcation of areas open to active and natural recreation</td>
<td>1</td>
<td>MA</td>
<td>2005-2006</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demarcation and improvement work of tracks/trials</td>
<td>2</td>
<td>MA</td>
<td>2006-2009</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Defining and proper demarcation of camping sites within recreational zones</td>
<td>1</td>
<td>MA</td>
<td>2005</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control and regulate food and accommodation facilities inside the active recreation zones</td>
<td>1</td>
<td>MA</td>
<td>Permanent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agreement with legal hotel and restaurants owners regarding management of wastes produced by leisure and recreational activities</td>
<td>1</td>
<td>MC, MA</td>
<td>2005</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rehabilitation of some damaged parts (small bridges) of the existing road along the eastern edge of Karaburun peninsula.</td>
<td>2</td>
<td>MA, MTA&amp;T, MoLG&amp;D, DGFP</td>
<td>2006-2007</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improve the road from Pasha Liman to Bristani bay</td>
<td>3</td>
<td>MA, MTA&amp;T, MoLG&amp;D</td>
<td>2007-2009</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Building a new bypass road over Military base of Pasha Limani in order to increase public access to the Karaburun peninsula and make possible recreational activities in this part of the site.</td>
<td>3</td>
<td>MA, MTA&amp;T, MoLG&amp;D</td>
<td>2008-2009</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Operative Objective no.6

Rehabilitation and improvement of traditional use of nature resource through introducing examples of best practices in sustainable use and management of nature and biological resources of the site.

### Indicators
- Demostration projects (project designs, pictures taken in place)
- Local producers of bioproducts received trainings, including visits overseas, (training modules, pictures taken, list of participants)
- Facilities to primar treatment of the medicinal plants collected are created
- Laboratories/distillators to produce certified essences from oil bearing plants created
- Cultivation of medicinal, oil-bearing and industrial plants
- 3 major “lera” rehabilitated
- Communication channel between the sea and the Orikumi lagoon improved and maintained
- Seedplots or nurseries for seedlings created and supported
- Fancing of new afforestations and plantations from grazing in place

<table>
<thead>
<tr>
<th>Outlined Management Actions</th>
<th>Priority</th>
<th>Responsible</th>
<th>Period</th>
<th>Duration</th>
<th>Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Support development of Agrobusiness on milk processing and products</td>
<td>2</td>
<td>MA, Business sector</td>
<td>2005-2009</td>
<td></td>
<td>Training, Study tours</td>
</tr>
<tr>
<td>▪ Support Horticulture development</td>
<td>2</td>
<td>MA</td>
<td>2005-2009</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Support development of Medicinal plants</td>
<td>2</td>
<td>MA, MWC, Business sector</td>
<td>2005-2009</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Support to Organic farming and extension service</td>
<td>3</td>
<td>MA</td>
<td>2005-2009</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Support to sustainable grazing and livestock</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>  -Pasture improvement</td>
<td>2</td>
<td>MA</td>
<td>2005-2007</td>
<td></td>
<td></td>
</tr>
<tr>
<td>  -Rehabilitation of the “lera” (water points for livestock)</td>
<td>1</td>
<td>MA, MWC</td>
<td>2005-2007</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Support to responsible fishery and aquaculture</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>  -Improvement and maintenance of the</td>
<td>1</td>
<td>MA, MWC</td>
<td>2005-2006</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outlined Management Actions</td>
<td>Priority</td>
<td>Responsible</td>
<td>Period</td>
<td>Duration</td>
<td>Means</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------------------------</td>
<td>----------</td>
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<td>---------------</td>
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<td>---------</td>
</tr>
<tr>
<td>communication channel between Orikumi lagoon and the sea</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Support to sustainable Forestry</td>
<td>1</td>
<td>MA, MWC, DGFP</td>
<td>Permanent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Creation and/or supporting creation of seedplots/nurseries in support to afforestations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Fire and desease prevention and control</td>
<td>1</td>
<td>MA, DGFP</td>
<td>Every year</td>
<td>3 months/y</td>
<td></td>
</tr>
</tbody>
</table>
**Operational Objective no.7**

Promote and develop microprojects for eco-tourism and other forms of eco-development of the site.

<table>
<thead>
<tr>
<th>Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>⇒ Master plan of territorial planning and tourism development prepared and approved</td>
</tr>
<tr>
<td>⇒ Strategy for ecotourism development prepared and approved</td>
</tr>
<tr>
<td>⇒ Promotional materials (booklets, leflets, posters) on eco-tourism and eco-developments (including use of solar and wind energy)</td>
</tr>
<tr>
<td>⇒ Microproject designs for eco-tourism, agrotourism and cultural tourism development</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Outlined Management Actions</th>
<th>Priority</th>
<th>Responsible</th>
<th>Period</th>
<th>Duration</th>
<th>Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation of the Master Plan of territorial planning and tourism development in the site (Contribution of Co-Plan is expected).</td>
<td>1</td>
<td>MC, MA, MWC and CO-Plan</td>
<td>2005-2006</td>
<td>90 days</td>
<td></td>
</tr>
<tr>
<td>Prepare a strategy for ecotourism development in the site</td>
<td>1</td>
<td>MC, MA, MWC and CO-Plan</td>
<td>2005-2006</td>
<td>60 days</td>
<td></td>
</tr>
<tr>
<td>Promote potentials of the site for ecotourism and nature recreational activity (publications).</td>
<td>2</td>
<td>MA, MWC, Business sector</td>
<td>Every year</td>
<td></td>
<td>Publications</td>
</tr>
<tr>
<td>Promote potentials of the site for eco-developments (i.e. fishery and aquaculture, silvo-pastoralism, medicinal plants, organic farming).</td>
<td>2</td>
<td>MA, MWC, Business sector</td>
<td>Every year</td>
<td></td>
<td>Partnership</td>
</tr>
<tr>
<td>Promote eco-tourism activities in the sea waters (scuba diving, windsurfing, sportfishing, boat tours)</td>
<td>2</td>
<td>MA, MWC, Business sector</td>
<td>Every year</td>
<td></td>
<td>Partnership</td>
</tr>
<tr>
<td>Design and implement micro-projects in support to ecotourism, agrotourism and culture tourism development.</td>
<td>3</td>
<td>MA, MWC, Business sector</td>
<td>2006-2009</td>
<td></td>
<td>Partnership</td>
</tr>
<tr>
<td>Promote use of solar and wind energy</td>
<td>2</td>
<td>MA, MWC, Business sector</td>
<td></td>
<td></td>
<td>Lobbing, Partnership</td>
</tr>
</tbody>
</table>
### Operational Objective no.8

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

<table>
<thead>
<tr>
<th>Outline Management Actions</th>
<th>Priority</th>
<th>Responsible</th>
<th>Period</th>
<th>Duration</th>
<th>Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Develop and conduct awareness raising and community participation programme on nature and biodiversity conservation and management</td>
<td>1</td>
<td>MA (EO(^{17})), MWC</td>
<td>Every year</td>
<td>12 days/y</td>
<td>Campaigns, Communications, Press release</td>
</tr>
<tr>
<td>- Produce brochure, posters, information leaflets and calendars on nature, landscape and culture values of the site.</td>
<td>1</td>
<td>EO, MWC</td>
<td>Every year</td>
<td>60 days/y</td>
<td></td>
</tr>
<tr>
<td>- Produce and display a calendar of environmental, social and culture events for the site.</td>
<td>1</td>
<td>EO, MWC</td>
<td>Every year</td>
<td>5 days/y</td>
<td></td>
</tr>
<tr>
<td>- Produce a newsletter (four times a year) on the progress of implementation of the management</td>
<td>2</td>
<td>EO, MWC</td>
<td>Every year (4 times/y)</td>
<td>80 days/y</td>
<td></td>
</tr>
</tbody>
</table>

\(^{17}\) EO- Education Officer
<table>
<thead>
<tr>
<th>Outlined Management Actions</th>
<th>Priority</th>
<th>Responsible</th>
<th>Period</th>
<th>Duration</th>
<th>Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>Produce a program on guided walks, talks and events.</td>
<td>1</td>
<td>EO</td>
<td>Every year</td>
<td>5days/y</td>
<td></td>
</tr>
<tr>
<td>Maintain and improve school gardens as educational resource for nature conservation.</td>
<td>2</td>
<td>MA</td>
<td>Every year</td>
<td>5days/y</td>
<td></td>
</tr>
<tr>
<td>Employment of a public relation/education officer as part of the PA administration.</td>
<td>1</td>
<td>MWC, DGFP</td>
<td>Permanent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Review and improve existing walking routs inside the zones open to public access.</td>
<td>2</td>
<td>MA</td>
<td>Permanent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improve road access, walking routs and tracks to improve public access and enjoyment to nature.</td>
<td>3</td>
<td>MA</td>
<td>Permanent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provide with signs and signposts along the walking routs and tracks, as well as with information on the site for culture and nature monuments.</td>
<td>2</td>
<td>MA</td>
<td>Permanent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Produce and show the emblema of the “Llogara-Karaburun” protected area (National park) in all entrances and information centres of the park area.</td>
<td>1</td>
<td>MoE, MC, MA</td>
<td>2005-2006</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Encourage developers to enhance and create wildlife habitats on development zones.</td>
<td>3</td>
<td>MA</td>
<td>Permanent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Support to local NGOs and media on awareness raising activities</td>
<td>2</td>
<td>MA, MWC</td>
<td>Permanent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operational Objective no.9</td>
<td>Indicators</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------------------</td>
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<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
| Build up working relationship and partnership between PA authority and local community, local users and private sector. | ⇒ Minutes of meetings and round tables
⇒ Informal meetings with Orikumi municipality authorities
⇒ List of participants, pictures
⇒ Agreements between MA/PA Administration and local users/stakeholders
⇒ Seminars and trainings received by users associations and groups and environmental NGOs (pictures taken, training modules)
⇒ Web-pages in the internet created for main users associations and groups and environmental NGOs
⇒ Increased number of projects proposed and implemented by environmental NGOs |

<table>
<thead>
<tr>
<th>Outlined Management Actions</th>
<th>Priority</th>
<th>Responsible</th>
<th>Period</th>
<th>Duration</th>
<th>Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establish the dialog between various local stakeholders</td>
<td>1</td>
<td>MC, MA, MWC</td>
<td>Permanent</td>
<td></td>
<td>Round tables, informal meetings</td>
</tr>
<tr>
<td>Establish good working relationship between PA administration and Orikumi municipality</td>
<td>1</td>
<td>MA</td>
<td>Permanent</td>
<td></td>
<td>Informal meetings</td>
</tr>
<tr>
<td>Help and support local initiatives on community based development and sustainable management of nature resources</td>
<td>2</td>
<td>MA, MWC</td>
<td>Permanent</td>
<td></td>
<td>Provide assistance, contacts</td>
</tr>
<tr>
<td>Build partnership with local user associations, NGOs and private sector</td>
<td>1</td>
<td>MA</td>
<td>Permanent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improve co-operation between central and local government institutions</td>
<td>1</td>
<td>MA, MWC</td>
<td>Permanent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organizing seminars and trainings on design of the</td>
<td>2</td>
<td>MA, MWC</td>
<td>Every year</td>
<td>5 days/y</td>
<td>Training</td>
</tr>
<tr>
<td>Outlined Management Actions</td>
<td>Priority</td>
<td>Responsible</td>
<td>Period</td>
<td>Duration</td>
<td>Means</td>
</tr>
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<td>---------------------------------------------------------------------------------------------</td>
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<td>----------------------------</td>
</tr>
<tr>
<td>Business plan and project proposals</td>
<td>2</td>
<td>MA, MWC</td>
<td>Every year</td>
<td>5 days/y</td>
<td>Training modules</td>
</tr>
<tr>
<td>• Organizing seminars and trainings on sustainable use of natural resources</td>
<td>2</td>
<td>MA, MWC</td>
<td>Every year</td>
<td>5 days/y</td>
<td>Training modules</td>
</tr>
<tr>
<td>• Assistance to create web-pages in the internet</td>
<td>3</td>
<td>MA, MWC</td>
<td>Permanent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Logistical support and providing twinning opportunities with other NGOs of the Mediterranean region</td>
<td>3</td>
<td>MWC, MA</td>
<td>Permanent</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Operational Objective no.10

**Operational Objective:** Build up local capacities in planning, management and monitoring of natural and biological resources.

**Indicators:**
- Trainings received by local staff (list of participants, training modules)
- 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

### Outlined Management Actions

<table>
<thead>
<tr>
<th>Outlined Management Actions</th>
<th>Priority</th>
<th>Responsible</th>
<th>Period</th>
<th>Duration</th>
<th>Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ 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)</td>
<td>1</td>
<td>MWC, ECAT-Tirana</td>
<td>Every year</td>
<td>3 days/year</td>
<td></td>
</tr>
<tr>
<td>▪ Training on public participation and community involvement on nature resource management</td>
<td>2</td>
<td>MWC, REC-Tirana</td>
<td>Every year</td>
<td>4 days/year</td>
<td></td>
</tr>
<tr>
<td>▪ Produce guidelines on public and local community participation in the process of design and implementation of the management plan</td>
<td>2</td>
<td>MWC, REC-Tirana</td>
<td>2005-2006</td>
<td>90 days</td>
<td></td>
</tr>
<tr>
<td>▪ Creation of a communication/public relation center and employment of a communication officer as a full staff member of the PA administration</td>
<td>1</td>
<td>MWC, MA</td>
<td>2005</td>
<td>9 months</td>
<td></td>
</tr>
<tr>
<td>▪ In service training of PA personnel</td>
<td>1</td>
<td>MWC, REC-Tirana, Universities</td>
<td>Every year</td>
<td>5 days/year</td>
<td></td>
</tr>
<tr>
<td>▪ Training the members of the Management Committee</td>
<td>1</td>
<td>MWC, REC-Tirana</td>
<td>Every year</td>
<td>3 days/year</td>
<td></td>
</tr>
</tbody>
</table>
## Operational Objective no.11

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

<table>
<thead>
<tr>
<th>Outlined Management Actions</th>
<th>Priority</th>
<th>Responsible</th>
<th>Period</th>
<th>Duration</th>
<th>Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research on poorly studied or unknown taxa</td>
<td>2</td>
<td>MC, MA, MWC</td>
<td>2005-2006</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mapping Corine biotopes of the site</td>
<td>2</td>
<td>MC, MA, MWC</td>
<td>2006</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Further Research on endemic and endangered species</td>
<td>1</td>
<td>MC, MA, MWC</td>
<td>2005-2006</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monitoring of water quality (physical parameters and bio-indicators)</td>
<td>1</td>
<td>MC, MA, MWC</td>
<td>Every year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monitoring of medicinal plants</td>
<td>1</td>
<td>MC, MA, MWC</td>
<td>Every year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monitoring of species of economical use</td>
<td>2</td>
<td>MC, MA, MWC</td>
<td>Every year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monitoring of invasive species</td>
<td>2</td>
<td>MC, MA, MWC</td>
<td>Every year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monitoring of wintering waterbirds of Orikumi lagoon</td>
<td>1</td>
<td>MC, MA, MWC</td>
<td>Every year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monitoring of wintering and nursery colonies of cave-dwelling bats</td>
<td>2</td>
<td>MC, MA, MWC</td>
<td>Every year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Establishment of Database and GIS on wetland and coastal ecosystems of the site</td>
<td>1</td>
<td>MWC</td>
<td>2005-2006</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

⇒ Research and surveys on endemic and endangered species (*Hypericum haplophyloides*, *Leucojum valentinum* subsp. *Vlorense*, *Limonium anfractum*, monk seal (*Monachus monachus*) and sea turtles (*Caretta caretta*).
⇒ Monitoring data collected and published (water quality and bioindicators, medicinal plants, invasive species, wintering waterbirds, wintering and nursery colonies of bats)
⇒ Map of Corine Biotopes
⇒ MEDWET Database and modest GIS operation established
4.4.2 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.

- **Steps 1. Validation of the Management Plan by the Steering Committee**
  (December 2004)

- **Step 2. Formal Approval of the Management Plan**

- **Step 3. Set up of the Management Committee (MC)**

- **Step 4. Set up of the Management Authority (MA) by the MC**
  - Director and the key Senior staff

- **Step 5. Implementation Plan of the MP and mobilizing funds to implement it**
  - Actions
  - Costs
  - Responsibilities/tasks

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 Ravena) 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.

4.4.3 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).

4.4 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, while the full plan review is undertaken on a five-year cycle. This timescale is considered to be the normal time period of a plan of this type. 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. It should be done based on an evaluation system, including sets of indicators, evaluation criteria, received “feedbacks”. The Management Committee may also rely on opinion surveys and periodic inquiries, including the use of a well structured evaluation questionnaire.
APPENDIX 1. Management Plan team members

National Team

Prof. Asoc. Dr. Ferdinand Bego  National Co-ordinator
Mr. Llazar Gjonça  Site Manager
Mr. Skender Mejdiaj  Local Moderator
Prof. Dr. Murat Xhulaj  Botanists
Prof. Dr. Idriz Haxhiu  Zoologist
Prof. Asoc. Dr. Stavri Lame  Hydroulics
Prof. Asoc. Dr. Maxhun Dida  Forestry
Prof. Asoc. Dr. Aleksander Filloko  Fishery
Mrs. Edlira Dersha  Environmental Education
Mr. Naim Zoto  Environmental Education
Mr. Kanan Braho  Agriculture
Mr. Sotir Dhamo (Co_Plan-GTZ)  Socio-Economics and Landscape 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 Hydroulics (Biological Station of Tour du Valat, France)
APPENDIX 2. Culture and Nature Monuments of the site

A. Nature Monuments

1. Mbihipja e Çikes
2. Mbihipja aktive e Dukatit
3. Shkeputje e re aktive e Llogarase
4. Grama bay and cave
5. Coral riffs of “Gryk a Djallit”
6. Falezat e Sazanit
7. Haxhi Aliu cave
8. Duk Gjoni cave
9. Flag shaped Pine tree - Llogara
10. Platanus tree of Dukati
11. Platanus tree of Old Tragjasi
12. Platanus trees of Izvori (Tragjas)

B. Culture monuments

1. Ancient town of Oriko
2. Church of Marmiroi
3. Grama bay and cave
4. Castle of Gjon Bocarit
5. Old Tragjasi village
6. Fortress of Dervish Aliut
7. Castle of Sofes
8. Aquaduct of Feruni
9. Tombs of Dukati
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