



MANAGEMENT PLAN

January 2015

# MANAGEMENT PLAN FOR SAZANI ISLAND, ALBANIA

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*In partnership with :*



*With the support of :*



<b>LIST OF ACRONYMS .....</b>	<b>4</b>
<b>AUTHOR AND CITATION .....</b>	<b>5</b>
<b>ACKNOWLEDGEMENTS.....</b>	<b>5</b>
THE CONSERVATOIRE DU LITTORAL AND THE PIM INITIATIVE .....	6
CURRENT PROJECTS IN COOPERATION WITH ALBANIAN ORGANIZATIONS .....	6
<b>CONTEXT .....</b>	<b>6</b>
THE PRINCIPLES OF A MANAGEMENT PLAN .....	7
FRAMEWORK FOR THE PREPARATION OF A MANAGEMENT PLAN FOR SAZANI ISLAND .....	7
<b>INTRODUCTION .....</b>	<b>7</b>
<b>PART 1. DESCRIPTION OF THE AREA .....</b>	<b>9</b>
1.1. LOCATION AND BOUNDARIES.....	9
1.2. CURRENT LEGAL STATUS .....	13
1.3. LEGAL FRAMEWORK .....	14
1.4. THE PHYSICAL ENVIRONMENT.....	17
1.4.1. CLIMATE AND METEOROLOGY .....	17
1.4.2. GEOLOGY AND GEOMORPHOLOGY.....	18
1.5. THE BIOLOGICAL ENVIRONMENT .....	19
1.5.1. FLORA AND VEGETATION .....	19
1.5.2. FAUNA .....	27
1.6. THE HUMAN USES AND SOCIO-ECONOMIC ASPECTS .....	35
1.6.1. HISTORY AND CULTURAL HERITAGE.....	35
1.6.2. CURRENT HUMAN USES AND STAKEHOLDERS .....	37
1.6.3. SOCIO-ECONOMIC FEATURES, INCLUDING LAND TENURE .....	37
1.6.4. HUMAN-INDUCED IMPACTS.....	37
1.6.5. EXISTING FACILITIES AND CURRENT VISITOR USE .....	43
1.6.6. CURRENT GOVERNANCE AND MANAGEMENT FRAMEWORK .....	43
<b>PART 2. EVALUATION OF THE AREA AND ASSESMENT OF THE INSTITUTIONAL FRAMEWORK .....</b>	<b>44</b>
2.1. ASSESSMENT OF VALUES .....	44
2.1.1. ECOLOGICAL VALUES.....	45
2.1.2. CULTURAL VALUES .....	46
2.1.3. SOCIO-ECONOMIC VALUES.....	46
2.2. ASSESSMENT OF THE INSTITUTIONAL FRAMEWORK.....	47
2.3. ASSESSMENT OF THREATS AND PRESSURES .....	48
PAST THREATS AND PRESSURES.....	48
PRESENT THREATS AND PRESSURES.....	48
POTENTIAL AND FUTURE THREATS AND PRESSURES .....	48
INTERNAL ISSUES AND EXTERNALITIES.....	49
<b>PART 3. MANAGEMENT PROPOSALS .....</b>	<b>50</b>
3.1. VISION OF SAZANI AS A PROTECTED AREA AND OBJECTIVES OF THE MANAGEMENT PLAN.....	50
3.1.1. VISION AND GOALS OF THE PROTECTED AREA.....	50
3.1.2. GENERAL AND SPECIFIC OBJECTIVES OF THE MANAGEMENT PLAN .....	51
3.2. MANAGEMENT ADMINISTRATION AND MANAGEMENT ZONES .....	53
3.2.1. RATIONALE FOR PROTECTION .....	53
3.2.2. PROTECTED AREA MANAGEMENT ADMINISTRATION.....	54
3.2.3. PROPOSED MANAGEMENT ZONES.....	55
3.2.4. PROPOSED GENERAL REGULATIONS .....	62
3.3. MANAGEMENT PROGRAMMES AND ACTIONS.....	64

<i>PRE-REQUISIT : INSTITUTIONAL SET-UP, ADMINISTRATION AND GOVERNANCE PROGRAMME</i> .....	64
<i>2. CONSERVATION AND RESTORATION PROGRAMME</i> .....	67
<i>3. SUSTAINABLE DEVELOPMENT PROGRAMME</i> .....	71
<i>4. RESEARCH, MONITORING AND TRAINING COURSES PROGRAM</i> .....	73
<i>5. VALORIZATION OF THE SITE, EDUCATION AND PUBLIC AWARENESS PROGRAMME</i> .....	78
<i>6. CAPACITY BUILDING PROGRAMME</i> .....	81
<b>3.4. WORK PROGRAM</b> .....	84
<b>PART 4. MONITORING AND EVALUATION OF MANAGEMENT</b> .....	<b>94</b>
4.1. ANNUAL PLANNING: ANNUAL WORK PLANS AND ANNUAL BUDGETS .....	94
4.2. ANNUAL REPORTS .....	95
4.3. ASSESSMENT OF THE MANAGEMENT EFFECTIVENESS .....	96
<b>PART 5. REFERENCE LIST</b> .....	<b>97</b>
<b>ANNEX</b> .....	<b>100</b>

AA	Albanian Authorities
APAWA	Association for Protection of Aquatic Wildlife of Albania
CdL	Conservatoire du littoral, France
CO	Conservation Officer
CoM	Council of Ministers
DGFP	Directorate General for Forestry and Pastures
ES	PA Educational staff
GEF	Global Environment Facility
FAO	Food and Agriculture Organisation of the United Nations
FFEM	Fonds Français pour l'Environnement (French GEF)
HW	Head Warden
INCA	Institute for Nature Conservation in Albania
IUCN	International Union for Conservation of Nature
K-S	Karaburun-Sazan
LA	Local Authorities
MC	Management Committee
MedPo	Mediterranean Programme of the WWF
METT	Management Effectiveness Tracking Tool
MoARDW	Ministry of Agriculture, Rural Development and Water
MoD	Ministry of Defence
MoE	Ministry of Environment of Albania
MoEDTE	Minister of Economic Development, Trade and Entrepreneurship
MoUDT	Ministry of Urban Development and Tourism
MP	Management Plan
MPA	Marine Protected Area
NCA	National Coastal Agency
NGO	Non-Governmental Organisation
NHM	National Historical Museum
NP	National Park
NSM	Natural Sciences Museum
OLO	Outreach and Livelihoods Officer
PA	Protected Area
PAA	Protected Area Administration
PAD	Protected Area Director
RA	Regional Authorities
RG	Rangers
SEEP	Social Education and Environment Protection
TO	Technical Officer
UNDP	United Nations Development Programme
WCPA	World Commission on Protected Areas
WWF	World Wildlife Fund

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With the contributions of Albanian Authorities and partners, and experts mobilized by the Conservatoire du littoral/PIM Initiative

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## THE CONSERVATOIRE DU LITTORAL AND THE PIM INITIATIVE

For over 35 years, the Conservatoire du littoral has been implementing a land policy for the definitive protection of natural areas as well as the landscapes on sea and lake shores. With its long experience, it has developed in the last fifteen years cooperation actions in the Mediterranean countries so as to coach them in the development of integrated management and protection policies for coastal areas.

The Conservatoire du Littoral coordinates, since 2005, an international program for the promotion and assistance for the management of Mediterranean island micro-territories, known as the PIM Initiative for the Mediterranean Small Islands, which is financed by the *Fonds Français pour l'Environnement Mondial* (FFEM) (French Global Environment Facility), the *Agence de l'Eau Rhone Méditerranée-Corse* (french Water Agency for Rhone Mediterranean and Corsica) and the city of Marseilles. The PIM Initiative is developing a mechanism for the exchange and sharing of knowledge which is necessary for the emergence of good management practices of exceptional sites.

## CURRENT PROJECTS IN COOPERATION WITH ALBANIAN ORGANIZATIONS

Since 2011, the Conservatoire du littoral has proposed its assistance to the Albanian authorities and other local stakeholders involved in the integrated management of coastal areas and to define potential fields for cooperation in the years to come, notably on Sazani Island as a pilot site.

During 2012 and 2013, in the framework of PIM Initiative, and with the support of several Albanian organizations (Ministry of Environment, UNDP Albania, Universities of Tirana and Vlora, APAWA, etc.), two field mission have been organized on Sazani islands in 2012 and 2013 to carry out an ecological diagnosis (including inventories of terrestrial flora, avifauna, amphibians, reptiles, mammals, invertebrates, invasive species, and an assessment of land based pollution) as well as an evaluation of the ecological quality and characterization of rocky coastline around Sazani and part of Karaburun peninsula.

Benefiting from the French-GEF project "**Management models of coastal, insular and marine areas in the Mediterranean**" for 2014-2017, in 2014 the Conservatoire du littoral developed this proposal for a management plan for Sazani island, and over the next years it will collaborate with the Albanian authorities in the implementation of activities of ecological conservation (habitat restoration, management of invasive species, etc.) and on the preparation of management measures for welcoming visitors to the site.

## THE PRINCIPLES OF A MANAGEMENT PLAN

The management plan constitutes a key tool within the framework of the management process of a natural area. Its preparation is a key-step in the life of the site, for ensuring continuity and consistency of the management in space and time. For this reason, this process has to be shared with national and local stakeholders, so that the future management of the protected area is understood and facilitated.

As a strategic and technical instrument, the plan is essential for the implementation of the management programmes and actions, both in terms of conservation, restoration, education, public use, monitoring, research and sustainable development of the site, and also for the definition of the complementary studies needed to define the future of the territory.

## FRAMEWORK FOR THE PREPARATION OF A MANAGEMENT PLAN FOR SAZANI ISLAND

Under the framework of PIM Initiative on Small Mediterranean Islands, the management plan for Sazani Island is the result of a process carried out during the last three years (2012-2014). This has been done in coordination with the preparation of the Karaburun-Sazan National Marine Park management plan by UNDP, WWF Mediterranean Programme and INCA.

In autumn 2012 and spring 2013 two field missions were carried out by a team of Albanian and international researchers. The objective was to collect field data for different biodiversity compartments (flora and vegetation, invertebrates, amphibian, reptiles, birds, mammals and rocky shore marine communities<sup>1</sup>) and to carry out an assessment of land based pollution. The main objective was to gather and assess the maximum information possible in order to improve the scientific knowledge on the island as very few studies existed and the terrestrial biodiversity of the Island was largely unknown. The final aim was to provide the minimum baseline data to be able to prepare a proposal for a management plan, with the perspective of the declaration of Sazani as a protected area.

Based on the results of the field surveys, the management plan drafting process was initiated in May 2014, and a first mission to Vlora area and Sazani was carried out in June; a second mission was organized in September. The first mission allowed the management plan specialist to become familiar with the socio-economic situation of Vlora area and the environmental state of Sazani Island, as well as having interviews with some of the main stakeholders at national and local level (Ministry of Environment, the new National Coastal Agency, the Forestry Service Directorate, the national and local staff of the UNDP/GEF project on Marine and Coastal Protected Areas, University of Tirana, national and local NGOs, fishermen). The second mission in September was mostly devoted to the organization of a consultation workshop in Vlora (19 September 2014) that was attended by nearly 40 people from many different stakeholder groups: Ministries of Environment and of Defence, Local and Regional authorities, Forestry Service Directorate, Regional Environmental Directorate, UNDP project staff, scientific institutions, national and local NGOs, diving centres, fishermen, teachers, architects, international experts. The workshop was very useful as there was a good debate about the possible protection of Sazani and the majority of the participants from different backgrounds agreed that the protection of the island is a positive step not only for protecting the biodiversity but also as a contribution to the creation of new socio-economic opportunities.

The team involved in this process consists of 25 scientists of 12 different disciplines, from Albania, France, Italy and Spain. The coordination and leadership has been the responsibility of the Conservatoire du littoral.

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<sup>1</sup> The thematic reports of the PIM Initiative field missions to Sazani Island are available on: <http://www.initiative-pim.org/en/fiche-ile/ALSZ001/ile-docview>

Date	Event
September 2012	1 <sup>st</sup> scientific field mission
May-June 2013	2 <sup>nd</sup> scientific field mission
June 2014	1 <sup>st</sup> management plan mission Meetings with stakeholders
September 2014	2 <sup>nd</sup> management plan mission Stakeholders workshop and complementary field mission
November 2014	Submission of the draft management plan

*Summary of the main milestones of the project*

The present management plan is based on the standard structure for management plans in Albania established by the “Order n° 148, dated 21.02.2013”, for the Standard Structure of Protected Areas Management Plans in Albania. The plan is organized in four main parts:

**PART 1. DESCRIPTION OF THE AREA.**

Provides a full account of the physical, biological and historical features and an analysis of the socio-economic and cultural aspects, and includes a chapter on the human-induced impacts existing on the island. This description is based largely on data collected during the two scientific field missions of the PIM Initiative (2012 and 2013), completed with information gathered in the two field visits of the management planning experts in 2014, and from bibliographic sources.

**PART 2. EVALUATION OF THE AREA AND ASSESSMENT OF THE INSTITUTIONAL FRAMEWORK**

This part consists of three assessments: of the ecological, socio-economic and cultural values; of the institutional framework, and of the threats.

**PART 3. MANAGEMENT PROPOSALS**

Part 3 is the heart of the management plan. It defines the vision, goals and objectives of the management plan (chapter 3.1), proposes the management administration and the zoning system (chapter 3.2), details all the management programmes and actions proposed including stakeholders involved, priorities and timing (3.3), and a work programme for their implementation (3.4).

**PART 4. MONITORING AND EVALUATION OF MANAGEMENT**

Includes guidelines for preparing the annual work plans and annual budgets, and the annual reports, as a tool for monitoring the effectiveness and the adequate use of funds;

The purpose of the management plan is to define, organize, structure and facilitate the management actions proposed to be implemented on Sazani Island as a protected area. The plan is a ready-to-use tool that can be adopted and implemented as soon as the island is protected and the Protected Area Administration is established. The Plan is envisaged for a period of 10 years, during which two mid-term and one final evaluation and revision are proposed.

The management plan is addressed to the future managers of the protected area, but also to the relevant national, regional and local administrations and stakeholders that need to play an active role for the adequate implementation of the management, as the plan is not only a tool for biodiversity management and conservation but also a tool for socio-economic development of Vlora area.



### 1.1. LOCATION AND BOUNDARIES

The Albanian coastal area is about 427 km long, 273 km being on the Adriatic Sea and 154 km on the Ionian Sea.

Sazan (Sazani in Albanian, Saseno in Italian, Σάσων - Sáson in Greek) is the largest island of Albania with 570 ha (figure 1). The island is 4.8 km long North-South and 2 km wide East-West, with a maximum height of 342 meters at the north of the island and a coastline of about 15 km.

Sazan is strategically located at the entrance to the Bay of Vlorë, in the Strait of Otranto, the limit between the Adriatic and the Ionian Seas (figure 2) at 40°30' N, 19° 17' E. Sazani lies 6.5 nautical miles west from the city of Vlorë and (at the moment of writing this management plan) it is part of the administrative area of Qendër Commune, in the District of Vlorë, County of Vlorë. After the territorial reform Sazani will be part of the Municipality of Vlorë. The island is the property of the Albanian State at present, Sazani has no resident population as it is a military area and the Ministry of Defence keeps a small garrison of a few members on the island.



Figure 1. View on Sazani Island

(©Céline Damery, Conservatoire du littoral/PIM 2012)



Figure 2. Location of Sazani Island.

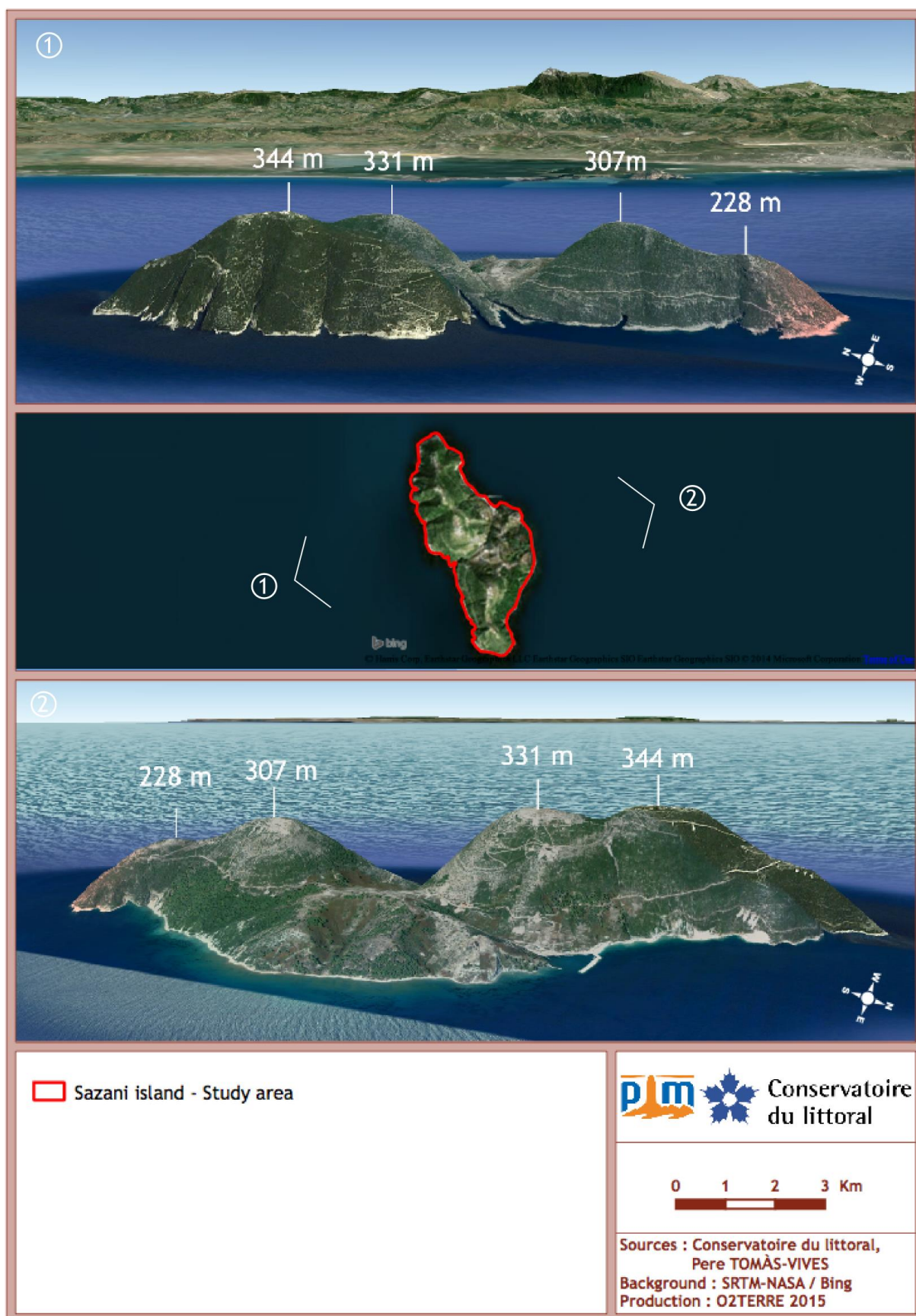


Figure 3. Topography of Sazani Island





Figure 4. Sazani Island toponymy

## 1.2. CURRENT LEGAL STATUS

In 2010, a marine area surrounding and Karaburun Peninsula and part of Sazani Island was declared as the Karaburun-Sazan Marine National Park by Decision of the Council of Ministers no. 289, dated 28.4.2010 (figure 5), covering a total area of 12,427.95 ha. This is the first marine protected area in Albania.



Figure 5. Karaburun-Sazan Marine National Park

The island of Sazani itself is not included in the National Park, so at present the terrestrial part of Sazani has no legal protection status. The marine area that is under protection as National Park (IUCN category II) covers 2,721.87, which is more than half of the island's surrounding waters, excluding Saint Nicholas Bay. The borders of this marine protected area around Sazani Island are defined by the following points (figure 6):

- Point 1: coordinates 4354004.14 N, 4487718.40 E.
- Point 2: coordinates 4355536.33 N, 4486707.03 E.
- Point 3: coordinates 4351587.21 N, 4485140.06 E.
- Point 4: coordinates 4357134.42 N, 4486668.09 E.
- Point 5: coordinates 4355142.57 N, 4486658.75 E.

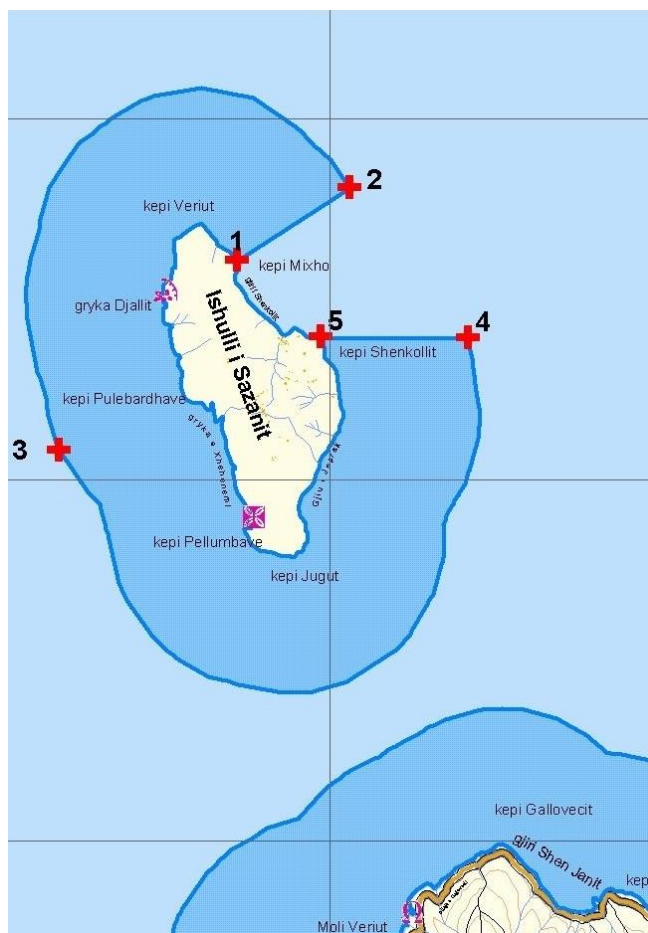


Figure 6. Limits of the Marine National Park around Sazani Island.

Regarding the administration and management of the Marine Protected Area, the Decision of the Council of Ministers no. 289 establishes that measures for ensuring the protection, monitoring and development of submarine ecotourism in the National Park Karaburun-Sazan will be taken by the Ministry of Environment in cooperation with the Ministry of Tourism, the Ministry of Defense and scientific and coastal institutions. The Decision assigns the management of Karaburun-Sazan National Park to the administration of the existing Protected Area Llogara-Karaburun, which is the Forestry Service Directorate.

### 1.3. LEGAL FRAMEWORK

The legal framework related to the protection of Sazani is defined by the international conventions and legislation applicable to protected areas and biodiversity. In this respect a list of the relevant legal instruments, together with a brief description of their main objectives and implications for the management of the protected area are presented in a synthetic tabular form (tables 1 and 2), as specified in the official Order n° 148 dated 21/02/2013 for the Standard Structure of Protected Areas Management Plans in Albania.



Agreements and policies	Year <sup>2</sup>	Objectives and implication relevant to the management of the PA
Convention on Biological Diversity (CBD 1992)	1994	Aims to conserve biological diversity, sustainable use of its components and fair and equitable sharing of benefits arising from genetic resources
CBD Aichi targets (to be met by 2020) <ul style="list-style-type: none"> <li>• Target 11</li> <li>• Target 12</li> </ul>	2010	<u>Target 11.</u> Include 17% of terrestrial and inland water, and 10% of coastal and marine areas in systems of protected areas <u>Target 12.</u> Prevent extinction of threatened species and improve their conservation status
Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (1975, amended in 1995)	1990 (2001 amendments)	Aims to protect the Mediterranean marine and coastal environment while boosting regional and national plans to achieve sustainable development
Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean (1995)	2001	Aims to promote the conservation and sustainable management of marine and coastal areas with natural or cultural values and to promote the conservation of endangered or threatened species
Bern Convention on the conservation of European wildlife and natural habitats (1979)	1999	Aims to conserve wild flora and fauna and their natural habitats and to promote European cooperation
Bonn Convention On the Conservation of Migratory Species of Wild Animals (1979)	2001	Aims to conserve terrestrial, aquatic and avian migratory species throughout their range
Eurobats: Agreement on the Conservation of Populations of European Bats (1991)	2001	Aims to protect all European bat species through legislation, education, conservation measures and international co-operation
Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES, 1975)	2003	Aim to ensure that international trade in wild animals and plants does not threaten their survival
United Nations Convention to Combat Desertification (1994)	2000	Aims to reverse and prevent desertification/land degradation and to mitigate the effects of drought in affected areas in order to support poverty reduction and environmental sustainability

Table 1. International legal instruments and policies relevant to the protection of Sazani Island

<sup>2</sup> Year of accession or ratification by Albania.

Legislation and regulations	Year	Objectives and implications relevant to the management of the PA
Law No.8906, dated 6.6.2002 “On protected areas” amended by Law No. 9868	2002 2008	Establishes the legal framework for the declaration, planning, administration, management and use of protected areas and their natural and biological resources
Law No. 9587, dated 20.07.2006, “On biodiversity protection”, amended by Law No. 37/2013	2006 (2013)	Aims at preserving and protecting biological diversity by regulating the sustainable use of its elements through the integration of the main elements of biodiversity in the strategies, plans, programmes and all levels of decision-making
Law No. 10006, dated 23.10.2008, “On wild fauna protection” amended by Law No. 41/2013	2008 (2013)	Aims to protect, manage and control wild fauna to ensuring the conservation of species, populations and their habitats
Law No. 9385, dated 4.05.2005, “On forests and the forestry service”, amended by several laws	2005	Establishes rules for the protection, administration, management and usage of forest land and its natural resources
Law No. 10253, dated 11.03.2010, “On Hunting”, amended by Law No. 43/2013	2010 (2013)	Legal framework for the development of hunting, its sustainable management, strict implementation of principles on ecosystems and ecological balances and protection of wild fauna species
Decision No.289, dated 28.4.2010, proclaiming Natural Park the natural maritime ecosystem at the Sazan island and the Karaburun peninsula, amended by Decision No.444	2010	Declares the maritime natural ecosystem of Sazan island and Karaburun peninsula as Marine National Park
Decision no. 266, dated 24.04.2003 “Concerning the administration of Protected areas”	2003	Specifies the tasks and functions of the administrative authorities of protected areas
Decision No. 267 concerning procedures regulating proposal and declaration of protected and buffer zones	2003	Regulates procedure for the declaration of protected and buffer areas.
Regulation No. 86 on committees for the management of protected areas	2005	Regulates the creation, functions and operation of the management committees protected areas
Order No 148, dated 21/02/2013, for the Standard Structure of Protected Areas Management Plans in Albania	2013	Establishes the contents of the management plans of protected areas

Table 2. National legal instruments relevant to the protection of Sazani Island



## 1.4. THE PHYSICAL ENVIRONMENT

### 1.4.1. CLIMATE AND METEOROLOGY

There is no meteorological data for Sazani Island, and the nearest locality with data is Vlora (table 3)<sup>3</sup>. The climate in Vlora is warm with little rainfall throughout the year, with an average annual temperature of 16.4°C and an average annual rainfall of 983 mm. The warmest month of the year is July with an average temperature of 24.3°C, and the lowest average temperature occurs in January: 9.1°C (figure 7). Vlora climate is categorized as *Csa* (Dry-summer subtropical or Mediterranean climate) according to Köppen-Geiger climate classification system. The difference in precipitation between the driest month and the wettest month is 145 mm. The average temperatures vary during the year by 15.2°C.

month	1	2	3	4	5	6	7	8	9	10	11	12
mm	134	105	82	64	54	27	16	25	59	109	161	147
°C	9.1	9.9	11.3	14.3	18.3	22.4	24.3	24.1	21.2	17.4	13.7	10.6
°C (min)	5.7	6.4	7.5	10.1	13.9	17.6	19.3	19.1	16.6	13.3	10.1	7.2
°C (max)	12.5	13.4	15.2	18.5	22.8	27.2	29.3	29.2	25.9	21.6	17.3	14.1
°F	48.4	49.8	52.3	57.7	64.9	72.3	75.7	75.4	70.2	63.3	56.7	51.1
°F (min)	42.3	43.5	45.5	50.2	57.0	63.7	66.7	66.4	61.9	55.9	50.2	45.0
°F (max)	54.5	56.1	59.4	65.3	73.0	81.0	84.7	84.6	78.6	70.9	63.1	57.4

Table 3. Climate data for Vlora

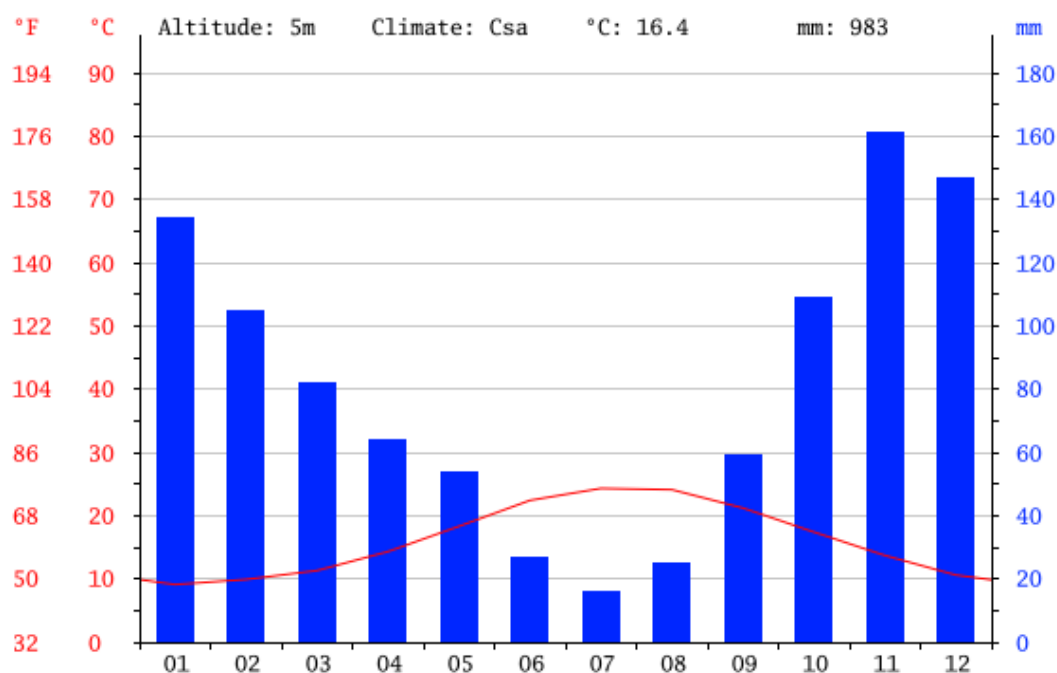


Figure 7. Climate graph of Vlora

<sup>3</sup> <http://en.climate-data.org/location/831>. Retrieved on 28/10/2014.

#### 1.4.2. GEOLOGY AND GEOMORPHOLOGY

Sazani Island is composed of limestone rocks of the Cretaceous period and in the eastern part partially of terrigenous and cleistogenic deposits<sup>4</sup>.

The western coast is fragmented and steep, with high cliffs up to 40 meters deep cut by a number of gorges, caves, and small bays, such as Bay of Paradise (Gjiri i Parajses) and the Devil Gorge (Gryka e Djallit). In the east, the coast has gentle slopes with St. Nicholas Bay ((Ggjiri i Shënkollit), where the harbor and military facilities are, as an important geomorphological feature, and more to the south-west slanted folds of limestone that plunge into the sea. The island has a rugged topography, with two main hills, at an altitude of 334 (northern hill) and 307 meters (southern hill) (figure 3).



Figure 8. Eastern coast of the island (©Céline Damery, Conservatoire du littoral, PIM2012)



Figure 9. Western coast of the island (©Céline Damery, Conservatoire du littoral, PIM2012)

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<sup>4</sup> Kashta *et al.* (2011)

## 1.5. THE BIOLOGICAL ENVIRONMENT

The terrestrial biodiversity of Sazani Island is largely unknown. Very few studies have been carried out and in most cases they were related to the marine environment. In autumn 2012 and spring 2013 two field missions were carried out by a team of Albanian and international scientists in the framework of the PIM Initiative. The objective was to collect field data for different biodiversity compartments: flora and vegetation, invertebrates, amphibian, reptiles, birds, mammals and rocky shore marine communities, and to carry out an assessment of land based pollution. These inventories have contributed enormously to obtain and gather a great amount of new data and to improve the scientific knowledge on the island that is of great value for defining management recommendation and preparing this management plan. This chapter is largely based on the different thematic reports of the PIM surveys.

### 1.5.1. FLORA AND VEGETATION<sup>5</sup>

#### a) FLORA

The flora and the vegetation of Sazani Island show the extremely unique character of this site and the great importance that it represents for the conservation of the very interesting terrestrial coastal heritage in Albania, in terms of its floristic composition, biogeographic position and the diversity of the plant communities present. The island of Sazani can play, like many other small islands in the Mediterranean, a key role as a refuge of biodiversity, essential for the conservation of the flora and the terrestrial coastal vegetation of this region; a region that has a major biogeographic interest at Mediterranean scale.

The total number of native and alien plant taxa that have been found on Sazani Island, considering ancient (1889, 1926, 1992-1995) and recent botanical surveys (2012 and 2013), is 435 ("total floristic richness"), of which 419 are native species and subspecies. However, during the two field missions in 2012 and 2013, 306 species and subspecies were recorded ("current floristic richness"), 288 of which are native and 18 introduced; of these 306, a total of 152 taxa are new for the island and 21 are new for the whole Albania (they had never been found before). Compared to other Mediterranean islands of an equivalent surface and altitude, Sazani has an average species richness of vascular plants.

The richness of Sazani flora is evident by the fact that it contains 8.2% of the vascular flora of Albania (estimated in 3500 native taxa) in an surface (5.7 km<sup>2</sup>) that is only 0.02% of the whole country (28.748 km<sup>2</sup>).

The flora and vegetation of Sazani also have a great biogeographic interest. The existence of floristic elements of various origins can be explained by its geographical position, a true crossroads and contact location between the western and eastern Mediterranean. At least 12 plants species have on the island the western limit of their distribution area. It is also important to notice the presence on Sazani of seven central Mediterranean plants with very limited distribution area (*Anchusella cretica*, *Bubon macedonicum*, *Campanula versicolor*, *Hypericum spruneri*, and the subendemic *Centaurea pawlowski* et *Scutellaria rupestris* subsp. *adenotricha* and *Verbascum guicciardii*).

In terms of endemic plants, only one true endemic species has been found, *Limonium anfractum*, and three subendemic: *Centaurea pawlowski*, *Scutellaria rupestris* subsp. *adenotricha* et *Verbascum guicciardii*. Another remarkable fact is the great abundance of certain species, in particular from the Labiatae family: *Teucrium capitatum* aggr. and *Scutellaria rupestris* subsp. *adenotricha*, very abundant in the rocky grasslands on the top of the hills. Other plants of special interest as they are new species for Albania are: *Serapias* aggr. *orientalis* (very rare orchid only present in rocky grassland northwest of the island), *Allium commutatum* (in open haloresistant formations), *Jacobaea maritima* (found only in one cliff locality on the eastern coast), and *Brassica cretica* subsp. *aegea* (present in both sea and inland cliffs).

During the two PIM missions, 18 alien plant species have been recorded on Sazani, but at present they cannot be classified as invasive species, as they do not cover a significant area in natural or semi-natural ecosystems. However, the presence in the harbour area of some planted species with high invasive

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<sup>5</sup> For more information: Médail, F., L.Charrier, M.Charrier and L.Kashta. 2014. *Terrestrial vascular flora and vegetation of the Sazani island (southern Albania): first assessment and main recommendations for land-management and plant biodiversity conservation*. Unpublished report. PIM Initiative. Conservatoire du littoral. Version 3 - 6/03/2014. <http://www.initiative-pim.org/en/node/54963>

capacity may require management measures to eradicate them because their presence represents a high potential risk in any protected area: the South African *Carpobrotus edulis* and the North American *Agave americana*. Other species that must be eradicated or monitored are: *Robinia pseudoacacia*, present in the village and around a few old buildings located further west, and three alien plants located near the harbour: *Euphorbia maculata* (which can threaten the native and very rare *Euphorbia peplis*), *Oxalis corniculata* and *Xanthium* sp., which may colonize the nearby temporary humid grasslands and the small back-beach south of the port.

FLORA
<ul style="list-style-type: none"> <li>• 435 plants species recorded (419 native)</li> <li>• 8-12% of the Albanian flora</li> <li>• 152 new species for Sazani</li> <li>• 21 new species for Albania</li> <li>• Great biogeographic interest: 12 species in their limit of distribution</li> <li>• 7 species with very limited distribution area in central Mediterranean</li> <li>• 1 endemic species: <i>Limonium anfractum</i></li> <li>• 3 subendemic species: <i>Centaurea pawlowski</i>, <i>Scutellaria rupestris</i> subsp. <i>Adenotricha</i>, <i>Verbascum guicciardii</i></li> <li>• 18 alien species (including the invasive <i>Carpobrotus edulis</i>, <i>Agave americana</i>)</li> </ul>
VEGETATION
<ul style="list-style-type: none"> <li>• Very interesting vegetation mosaic</li> <li>• Great diversity of habitats: 54 plant communities of 8 vegetation types</li> <li>• Important sea cliff and rocky shore communities,</li> <li>• and rocky grasslands</li> <li>• Main habitat types: pinewoods, Mediterranean scrub, grassy open areas, stony slopes</li> </ul>

Table 4. Main facts regarding the flora and the vegetation of Sazani from the 2012 and 2013 surveys (Médail *et al.* 2014)





a



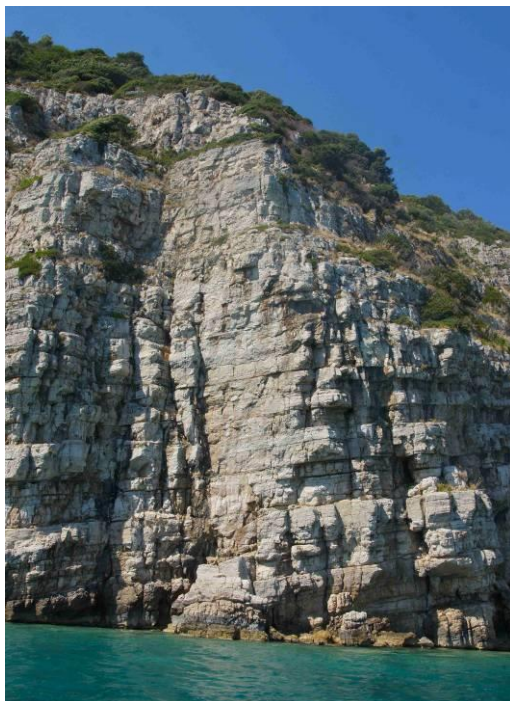
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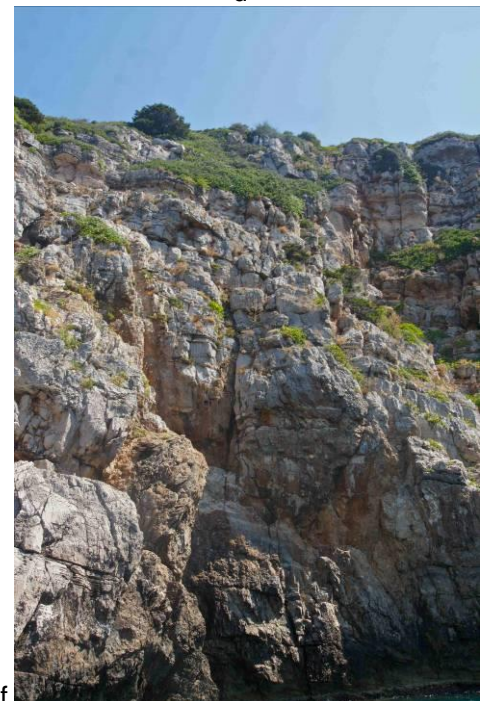
c



d



e



f

**Photo composition 1. Plant formations and species of the cliffs and maritim rocks of Sazan**

a : *Capparis orientalis* and *Allium commutatum* ; b : flower of *Capparis orientalis* ; c : ruderal flat area with *Allium commutatum* bud ; d : plant formation of *Capparis orientalis* et *Limonium anfractum*, south of the island; e & f : cliffs of the meridional part of the island with *Capparis orientalis*, *Juniperus phoenicea* subsp. *turbinata*, *Ephedra foeminea*, *Brassica cretica* subsp. *aegaea*, *Centaurea pawlowskii*, *Allium commutatum*, *Crithmum maritimum* (© F. Médail / IMBE).





**Photo composition 2.** Plants characteristic of calcareous cliffs and maritim rocks of Sazani island  
a & b : *Centaurea pawlowskii* ; b & c : *Brassica cretica* subsp. *aegaea* ; e & f : *Campanula versicolor*  
(© F. Médail / IMBE).

New taxa	Family	Biogeographical status in Albania	First mention in Albania	Status on Sazani island
<i>Allium commutatum</i> Guss.	Amaryllidaceae	Native species, micro-insular specialist	Mission PIM 2012	Quite common on rocky coastal habitats of the south
<i>Anthemis auriculata</i> Boiss.	Asteraceae	Native species, Eastern limit of distribution	Mission PIM 2013	Very rare
<i>Arabis planisiliqua</i> (Pers.) Rchb.	Brassicaceae		Mission PIM 2012	
<i>Asparagus albus</i> L.	Asparagaceae		Mission PIM 2013	
<i>Brassica cretica</i> Lam. subsp. <i>aegaea</i> (Heldr. & Halácsy) Snogerup <i>et al.</i>	Brassicaceae	Native species, north-eastern limit of distribution	Barina <i>et al.</i> (2011)	Quite common on coastal cliffs
<i>Carduus tenuiflorus</i> Curtis	Asteraceae	Native species?, Western limit of distribution	Mission PIM 2013	Common on ruderal habitats around the harbour and the old village
<i>Centaurea pawlowskii</i> Phitos & Damboldt	Asteraceae	Native species, Eastern limit of distribution	Mission PIM 2012	Quite common on coastal and inland cliffs
<i>Delphinium hellenicum</i> Pawl.	Ranunculaceae	Native species, north-eastern limit of distribution	Missions PIM 2012 & 2013	Very rare on ruderal grasslands above the harbour
<i>Euphorbia maculata</i> L.	Euphorbiaceae	Alien species	Mission PIM 2012	Common on the gravel soil near the harbour
<i>Inula cf. aschersoniana</i> Janka	Asteraceae	Native species, Eastern limit of distribution	Mission PIM 2012	Rare on coastal and inland cliffs
<i>Jacobaea maritima</i> (L.) Pelser & Meijden subsp. <i>maritima</i>	Asteraceae	Native species, Eastern limit of distribution	Mission PIM 2012	Very rare on a coastal cliff of the eastern coast
<i>Limonium arduatum</i> P. Artelari	Plumbaginaceae		Mission PIM 2013	
<i>Lotus cytisoides</i> L.	Fabaceae		Barina <i>et al.</i> (2011)	
<i>Ononis mitissima</i> L.	Fabaceae	Native species	Mission PIM 2013	On a grassland in the southern part
<i>Ornithogalum arabicum</i> L.	Asparagaceae		Mission PIM 2013	
<i>Orobanche lavandulacea</i> Rchb.	Orobanchaceae	Native species	Bárina & Pifkó 2008b; Malo & Shuka 2008a	Very rare on a coastal cliff of the eastern coast, on <i>Bituminaria bituminosa</i>
<i>Polypogon subspatheus</i> Req.	Poaceae	Native species	Mission PIM 2012	On some annual grasslands
<i>Scolymus cf. maculatus</i> L.	Asteraceae		Mission PIM 2013	
<i>Serapias orientalis</i> (Greuter) H. Baumann & Künkele	Orchidaceae	Native species	Mission PIM 2013	On a rocky grassland in the north-eastern part
<i>Urtica membranacea</i> Poir.	Urticaceae		Mission PIM 2013	
<i>Veronica persica</i> Poir.	Scrophulariaceae		Mission PIM 2013	

Table 5. List of new vascular plant species for the flora of Albania, discovered during the PIM missions in 2012 and 2013 (Médail *et al.* 2014)

## b) VEGETATION

The island of Sazani is characterized by very diverse vegetation, forming a mosaic of many different plant communities in a relatively small area (570 hectares). During the two field missions, 54 plant communities have been identified that can be grouped in eight major types of vegetation; based on the field data collected a vegetation map has been prepared (figure 10).

Compared to nearby continental situations (Karaburun Peninsula and the coast south of Vlora) the island hosts several communities with an original character. It is important to highlight the importance of the sea and inland rupicolous communities (rocky and cliff formations), and certain rocky grasslands. These vegetation types are locally very diverse and they have a strong biogeographic interest.

### Vegetation of sea cliffs and rocks

The sea cliffs and rocky shores are home to a halophile flora rich in many taxa of great biogeographic importance. These communities are well represented on the southern part of the island and are composed mainly by the endemic *Limonium anfractum* and *Lotus cytisoides*, which is very rare in Albania. The rocky ledges, fairly ruderal as they are used as resting points for seabirds, host a aerohaline grassland community dominated by *Allium commutatum*, a specialist of small islands and new to Albania, and *Lotus cytisoides* (very rare in Albania), with *Malcolmia maritima*, *Euphorbia linifolia*, *Beta vulgaris* subsp. *maritima*. It must also be mentioned the high frequency of *Capparis orientalis* in the clefts of sea rocks where it grows even a few meters from the sea, under strong seawater splash. The sea limestone cliffs well exposed to the sun, especially those of the southwest coast and to a lesser extent northeast, are home to a community of *Brassica cretica* subsp. *aegaea*, *Centaurea pawlowskii*, *Campanula versicolor*, in association to a number of interesting perennial species: *Aurinia saxatilis* subsp. *orientalis*, *Ephedra foeminea*, *Echinops sphaerocephalus* subsp. *albidus*, *Inula* cf. *aschersoniana*. This plant community is probably synendemic to Sazani Island as its species composition has not been found elsewhere on the near continent.

### Chasmophytic vegetation of inland rocks and cliffs

The inland small cliffs, rocks and rocky banks can harbour again (but more sparsely and in smaller areas) some species whose ecological optimum is the sea cliffs mentioned above: *Brassica cretica* subsp. *aegaea*, *Centaurea pawlowskii*, *Campanula versicolor*. These are combined with a xero-thermophile flora with *Euphorbia dendroides*, *Putoria calabrica*, *Prasium majus*, *Phagnalon rupestre*, *Piptatherum caeruleum*, etc.

### Perennial rocky communities

On the limestone rocks, mainly of the south coast, and on the frequent landslides on the slopes surrounding the three hills, various types of vegetation are present, from rocky grasslands to low open scrub, both of which can form mosaics. The steppe grasslands and the rocks in the southern part are characterized by a community of *Hypparhenia sinaica* with *Drimys numidica*, *Ornithogalum arabicum*, *O. narbonense* and *Verbascum guicciardii*, forming mosaic with scrubs *Pistacia lentiscus*, *Phlomis fruticosa*, *Salvia fruticosa* and *S. officinalis*. The scrubs with chamaephytes down the slopes and rocky ledges on top of the hills are rather spectacular facies dominated by Labiatae (*Teucrium capitatum* aggr., *Teucrium flavum* and *Scutellaria rupestris* subsp. *adenotricha*).

### Forest habitats (figure 11)

The majority of the island is covered by a thermophile shrubs in different successional phases, and in some areas they are in a pre-forest stage. In the absence of disturbance (e.g. forest fires) in the future the global dynamics should lead to two main types of forests:

- Sclerophyllous forests with Holm Oak (*Quercus ilex* subsp. *ilex*) in areas more xero-thermophiles and on superficial rocky soils, and
- Mixed deciduous forests with Hop Hornbeam (*Ostrya carpinifolia*) and South European flowering ash (*Fraxinus ornus*), sometimes mixed with *Quercus ilex*, in more humid and cool conditions and on deeper soils. A reduced area of this formation, but in a progressive colonization process, exists on one of the eastern slopes to the NE of the island.



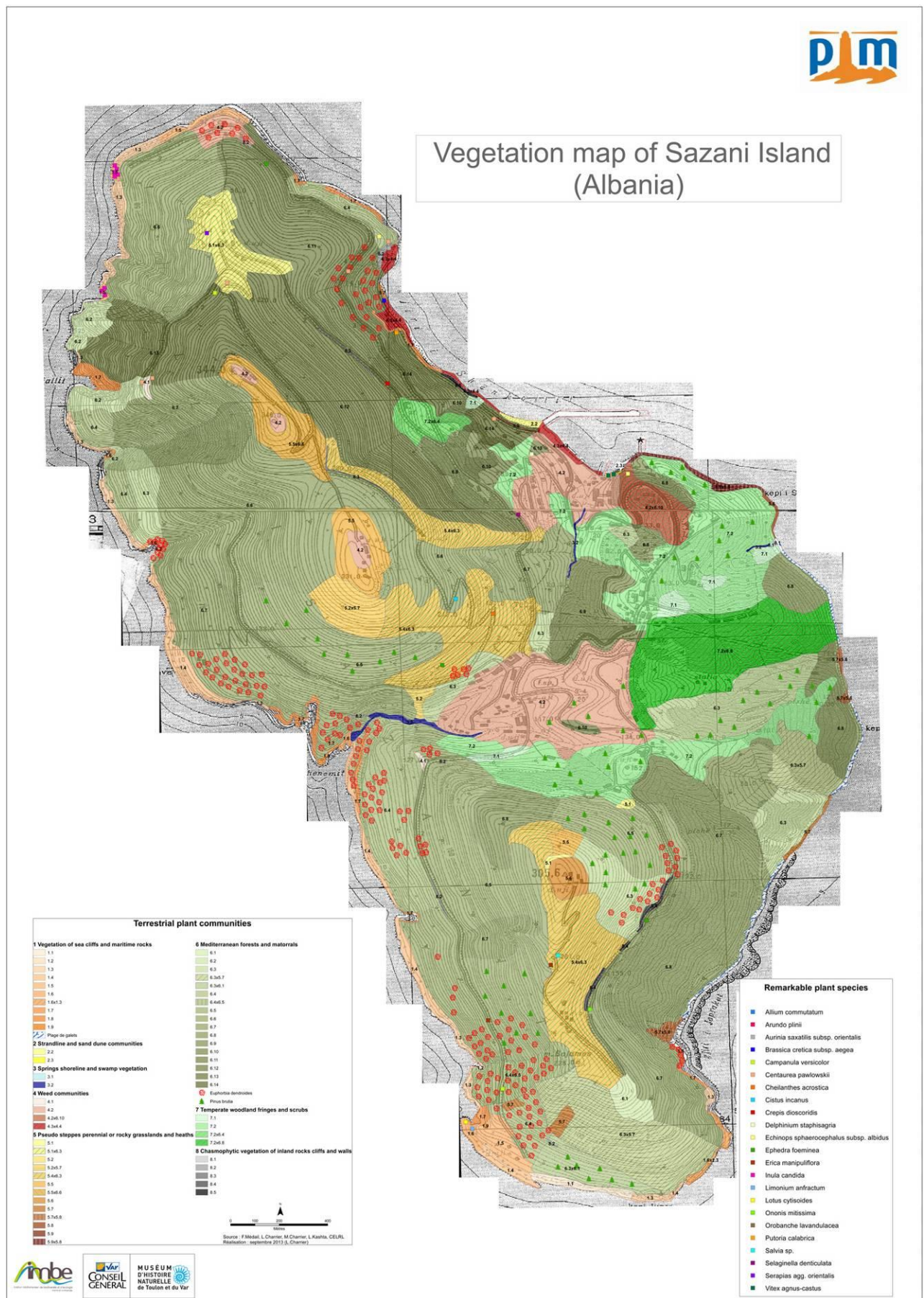


Figure 10. Vegetation map of Sazani Island and location of remarkable plant species (Médail et al. 2014)



The fact that other woody deciduous trees, especially the Mount Tabor's oak (*Quercus ithaburensis* subsp. *macrolepis*) are absent from Sazani is surprising, as it is well represented on the north-east coast of Karaburun Peninsula, only a few kilometers away.

The plantations of Brutia Pine (*Pinus brutia*) and Mediterranean Cypress (*Cupressus sempervirens*) suffer a general aging, without any adequate regeneration happening because the dense shrub sub-strata of these artificial stands and cannot guarantee sufficient regeneration niche of these heliophile trees.

#### Important habitats closed by proliferating native species

Some proliferating plant species, in principle native plants but with strong expansion and competition capabilities, occupy large areas of the island; this is the case of bracken (*Pteridium aquilinum*) and bramble (*Rubus plicatus*) that can form fairly extensive mono-specific facies, and also other ruderal plants (favored by disturbance and soil rich in nitrogen and phosphorus compounds) as the inulea *Dittrichia viscosa* and *D. graveolens*. This spatial occupation and spread on abandoned land or around derelict buildings is a sign of "ecological malfunctions".

The high density of some of these facies, including the inextricable thickets of bramble, lead to a closure of the grassy areas which could be detrimental to the maintenance of certain habitats for the fauna. This is particularly true on the banks of the few temporary streams of the island which are becoming closed by the strong development of woody plants and vines (bramble and smilax) and wildlife cannot access the little available water. In these cases, soft management measures could be envisaged to restore a sufficient opening of these habitats, for instance in the Devil's Valley (central-western coast), now completely inaccessible.



Figure 11. Pine Forest (©Céline Damery, Conservatoire du littoral/PIM2012)

## 1.5.2. FAUNA

### a) INVERTEBRATES<sup>6</sup>

One hundred and twenty-two species of arthropods were recorded on Sazani Island during the PIM mission in 2012, including one species of Myriapoda, five Arachnida, three woodlice (Crustacea), and 113 insects. Among the insect, 40 are beetles, 16 butterflies, 22 heteroptera, 20 orthoptera and related groups, five dragonflies and 10 hymenoptera (table 6). Of these 122 species, nine are new for Albania (table 7).

Subphylum/Class /Order	Group	No. species	New species for Albania
MYRIAPODA	Millipedes, Centipedes...	1	
ARACHNIDA	Spiders, scorpions	5	1
CRUSTACEA	Woodlice	3	
INSECTA		113	8
Coleoptera	Beetles	40	3
Hemiptera (Heteroptera)	Bugs	22	3
Lepidoptera	Butterflies	16	
Orthoptera and neighbouring groups	Grasshoppers, crickets, mantids, stick insects...	20	
Odonata	Dragonflies, damselflies	5	
Hymenoptera	Wasps, ants	10	2
<b>TOTAL</b>		<b>122</b>	<b>9</b>

Table 6. Groups of Arthropods recorded on Sazani during the PIM mission in May 2013 (Based on Ponel *et al.* 2013)

Subphylum/Class /Order	New species
ARACHNIDA	<i>Rhacochelifer aculatus</i> (L. Koch, 1873)
INSECTA	
Coleoptera	<i>Ernobius parens</i> (Mulsant & Rey 1863) <i>Carphoborus pini</i> Eichhoff 1881 <i>Allophylax picipes</i> (Olivier 1811)
Hemiptera (Heteroptera)	<i>Lygus italicus</i> Wagner 1950 <i>Nysius helveticus</i> (Herrich-Schäffer 1850) <i>Ortholomus punctipennis</i> (Herrich-Schäffer 1838)
Hymenoptera (Formicidae)	<i>Messor wasmanni</i> Krausse 1910 <i>Tetramorium semilaeve</i> André 1883

Table 7. Species of Arthropods new for Albania (Based on Ponel *et al.* 2013)

<sup>6</sup> For more information: Ponel, Ph., F. Médail and D. Pavon. 2012. *Les invertébrés terrestres de l'île de Sazani (Albanie)*. Note naturaliste de l'Initiative PIM. Conservatoire du littoral. <http://www.initiative-pim.org/en/node/54107>

## b) AMPHIBIAN AND REPTILES<sup>7</sup>

The herpetological population of Sazani recorded during two field missions in 2012 and 2013 consists of one species of amphibian and eight reptiles (table 8).

The Green toad *Bufo viridis* (figure 12) is the only amphibian found on Sazani (a subadult was recorded in the central part); the fact that has only been recorded once suggests that it is fairly uncommon. Among the reptiles, the Mediterranean house gecko *Hemidactylus turcicus* is very common in all parts of the island where there are suitable shelters (stone, walls, ruins), from sea level to the top of the hills.

The Eastern Hermann's tortoise *Testudo hermanni boettgeri*, endemic to the Mediterranean, is included in the IUCN Red List as Near Threatened (NT) (figure 13). This species seems to occupy the majority of habitats on the island, although it is relatively rare in relation to the densities observed on the continent. Some informations indicate that this tortoise was subject to the introduction and exchange between the Italian and Albanian residents in the past, and probably exported to Italy. A single shell of the Balkan pond turtle *Mauremys rivulata* was found in a small valley south of the port. The presence of a permanent population of this species on the island is very unlikely, given the lack of permanent water points.



Figure 12 (left). Green toad (©Vincent RIVIERE, PIM2012)

Figure 13 (right). Eastern Hermann's tortoise *Testudo hermanni boettgeri* (©Vincent RIVIERE, PIM2012)

The European legless lizard *Pseudopus apodus* (figure 14) appears to be confined to mesophilic habitats, herbaceous edges and abandoned land formerly cultivated.

The presence in high densities of Dalmatian Algyroides *Algyroides nigropunctatus nigropunctatus* (figure 15) is the most remarkable feature among the eight reptiles; this species is present in most rocky, natural or anthropogenic habitats throughout the island, the highest densities being found on the plateaus and old residential areas. The high densities of this species, endemic to the Balkans, Greece and Italy, are particularly interesting in view of its rarity on the continent. It perfectly illustrates the phenomena associated with insularity. In an island environment with fewer competitors for space and resources, the species tends to broaden the range of habitats where it operates and becomes particularly abundant on Sazani while it is rare on the continent. This makes the Dalmatian Algyroides an important element of the natural heritage of the island.

The Balkan wall lizard *Podarcis taurica* seems able to use a wide range of habitats, while remaining more attached than Algyroides to residential areas. Like the latter, it is also considered rare across the Bay of Karaburun.

The Eastern Montpellier snake *Malpolon insignitus* is clearly the most abundant snake on the island, especially on the outskirts of the port sector and adjacent buildings. The other snake present is Balkan whip snake *Hierophis gemonensis*, probably one of the most common in the Balkan Peninsula. However, it seems clearly less abundant than the Montpellier snake.

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<sup>7</sup> For more information: Peyre, O., V. Rivière and C. Damery. 2013. *Ile de Sazani (Albanie). Inventaires herpétologiques, préconisation de gestion et de suivis*. Note naturaliste de l'Initiative PIM. Conservatoire du littoral. <http://www.initiative-pim.org/en/node/53398>





Figure 14 (left). European legless lizard *Pseudopus apodus* (©Vincent RIVIERE, PIM2013)  
Figure 15 (right). Dalmatian Algyroides (©Vincent RIVIERE, PIM2012)

	Species	Albanian name	English name	Bern Convention Appendix <sup>8</sup>	Habitat Directive Annex <sup>9</sup>
<b>AMPHIBIANS</b>					
Bufonidae	<i>Bufo viridis</i>	Thithlopa e gjelber	Green toad	II	IV
<b>REPTILES</b>					
Gekkonidae	<i>Hemidactylus turcicus</i>	Hardhuca me venduza	Mediterranean house gecko	III	
Testudinidae	<i>Testudo hermanni boettgeri</i>	Breshka	Eastern Hermann's tortoise	II	II, IV
Geoemydidae	<i>Mauremys rivulata</i>	Breshkujca qafëshiritore	Balkan pond turtle	II	IV
Anguidae	<i>Pseudopus apodus</i>	Bullari	European legless lizard	II	
Lacertidae	<i>Algyroides nigropunctatus nigropunctatus</i>	Zhapi me pllaka	Blue-throated keeled lizard	II	IV
	<i>Podarcis taurica</i>	Hardhuca bari	Balkan wall lizard	II	IV
Colubridae	<i>Malpolon insignitus</i>	Biroja	Eastern Montpellier snake	III	
	<i>Hierophis gemonensis</i>	Shigjeta e shkurter	Balkan whip snake	II	

Table 8. Species of Amphibians and Reptiles recorded during the PIM missions and their international protection status (adapted from Peyre *et al.* 2013)

<sup>8</sup> Bern Convention Appendix II: Strictly protected fauna species; Appendix III: Protected fauna species.

<sup>9</sup> Habitats Directive Annex II: Species requiring designation of Special Areas of Conservation; Annex IV: Species in need of strict protection.

### c) BIRDS<sup>10</sup>

During the second PIM mission in spring 2013, 39 (possibly 40)<sup>11</sup> bird species have been recorded, from ten orders, the passerines (song birds and crows) being the most common (table 9). Among the species recorded, 28-29 are certainly or very probably breeding on the island. Six species were most likely erratic (Shag, Golden Eagle, Yellow-legged Gull) or migrating (Bee-eater, Garden Warbler, Isabelline Shrike and Golden Oriole), and for four more species (Sparrowhawk, Hobby, Barn Swallow and Black-eared Wheatear) it was not possible to determine their local status, although breeding on the island remains possible (table 10).

Order	Group	No. species
Passeriformes	Song birds and crows	23
Accipitriformes and Falconiformes	Birds of prey	5
Columbiformes	Pigeons	3
Apodidiformes	Swift and swallows	3
Strigiformes	Owls	2
Caprimulgiformes	Nightjars	1
Charadriiformes	Gulls	1
Coraciiformes	Bee-eaters	1
Pelecaniformes	Cormorants	1

Table 9. Bird groups recorded on Sazani during the PIM mission in May 2013 (Borghesi 2013)

The coastal habitats (in particular on the western side) support breeding populations of Rock Dove, up to three species of swifts (with remarkable numbers of mainly Alpine Swift), Kestrel, Crag Martin, Blue Rock Thrush, Raven and Jackdaw. Seabirds are rare if not absent breeders in Sazani, while islands are among the most common sites they prefer. Only Yellow-legged Gulls, Shag have been recorded near the island with no sign of nesting. No shearwaters were recorded close to Sazani and only very few Cory's Shearwaters between Vlora and the island.

The complex landscape pattern (mosaic of pinewoods and oaks, Mediterranean scrub, grassy open areas, stony slopes) hosts a rich and diverse community of breeding songbirds. Blue Tit is probably one of the commonest passerines breeding on Sazani, together with Greenfinch, Blackbird, Subalpine Warbler and Eastern Olivaceous Warbler. Moreover, ruins, bunkers and buildings are occupied by nesting Red-rumped Swallow, House Martin and House Sparrow. Such variable environmental conditions do rather recall mainland habitats than typically more uniform insular landscape.

The island hosts much nocturnal bird activity, with three especially important species: Nightjar, Scops Owl, and Eagle Owl. The insectivorous Nightjar (*Caprimulgus europaeus*) and Scops Owl (*Otus scops*) seem to be very common and widespread especially in the woods and the overgrown areas near the port. There seems to be a significant population of Eagle Owl (*Bubo bubo*) throughout most of the island, in particular in the central, central-west and southeast forested areas (figure 15); besides, it might be possible that it also nests on the rocky coasts.

<sup>10</sup> For more information: Borghesi F. 2013. *The breeding bird community of Sazani island (Albania): state of knowledge and management recommendations*. Naturalist note of PIM Initiative. <http://www.initiative-pim.org/en/node/47569> (English); <http://www.initiative-pim.org/en/node/56614> (Albanian)

<sup>11</sup> The uncertainty is due to doubtful identification of Pallid Swift (*Apus pallidus*) from Common Swift (*Apus apus*) in late spring, under the local field conditions.

Taxon	Phenological status
<i>Phalacrocorax aristotelis desmarestii</i>	E
<i>Accipiter nisus</i>	M?, B?
<i>Buteo buteo</i>	B
<i>Aquila chrysaetos</i>	E
<i>Falco tinnunculus</i>	B
<i>Falco Subbuteo</i>	M?, B?
<i>Larus michahellis</i>	E
<i>Columba livia</i>	B
<i>Streptopelia decaocto</i>	B
<i>Streptopelia turtur</i>	B
<i>Otus scops</i>	B
<i>Bubo bubo</i>	B
<i>Caprimulgus europaeus</i>	B
<i>Apus apus/pallidus</i>	B
<i>Apus melba</i>	B
<i>Merops apiaster</i>	M
<i>Ptyonoprogne rupestris</i>	B
<i>Hirundo rustica</i>	M? B?
<i>Delichon urbicum</i>	B
<i>Cecropis daurica</i>	B
<i>Oenanthe hispanica melanoleuca</i>	M? B?
<i>Monticola solitaries</i>	B
<i>Turdus merula</i>	B
<i>Iduna pallida</i>	B
<i>Sylvia cantillans albistriata</i>	B
<i>Sylvia melanocephala</i>	B
<i>Sylvia borin</i>	M
<i>Parus caeruleus</i>	B
<i>Oriolus oriolus</i>	M?, B?
<i>Lanius isabellinus</i>	M
<i>Garrulus glandarius</i>	B
<i>Corvus monedula</i>	B
<i>Corvus corone cornix</i>	B
<i>Corvus corax</i>	B
<i>Passer domesticus</i>	B
<i>Fringilla coelebs</i>	B
<i>Carduelis chloris</i>	B
<i>Carduelis carduelis</i>	B
<i>Carduelis cannabina</i>	B

Table 10. List of bird species recorded during the PIM mission in May 2013 and their phenological status (Borghesi 2013) (B=Breeding, M=Migrating, E=Erratic)



a



b



c



d



e



f



g



h

### Photo composition 3. Selection of Bird species of Sazani island

a : Eagle-owl (©Fabrizio Borghesi) ; b : Phalacrocorax aristotelis desmarestii (©Fabrizio Borghesi) ; c : Apus melba (©Fabrizio Borghesi) ; d : Cecropis daurica (© Yann Ponthieux) ; e : Nightjar eggs (© Ivano Fabbri) ; f : Sylvia cantillans (©Didier Buysse) ; g : Iduna pallida (©Didier Buysse) ; h : an old nest of House Martin *Delichon urbicum* occupied by House Sparrow *Passer domesticus* (©Fabrizio Borghesi)



Eagle Owl has not been recorded in the Albanian coastal area. On Sazani, Eagle Owl could interact with at least a part of the bird community, depending on the fluctuations of mammals on the island. The presence of a significant population of this large predator may explain the absence of Peregrine Falcon as a breeder on local cliffs, and possibly even the absence of any seabird colony on the island.

The very abundant population of rabbits and the diffuse presence of rats even in the most extreme corners of the island, support the significant resident population of birds of prey, including Kestrel, Common Buzzard and the most common Eagle Owl. On the other hand, this large amount of prey for predators (including swallows and swifts) seem to attract also non-resident birds of prey, such as falcons, hawks and Golden Eagle. The wide population of rats and rabbits may also be the reason of the presence of five corvid species which act as scavenger of other birds' prey scrap (Jackdaw being by far the most common).

The remarked abundance of Red-rumped Swallow in Sazani fits what is known from the rest of Vlorë district and confirms this area being a national hotspot for this species. Greenfinch and Subalpine Warbler were very common on the island, but they seem to be practically absent around Vlorë according to previous studies.

Most of the ecological issues regarding the avifauna of the island are far from being fully understood. The preservation of coastal habitats, as potential breeding sites for seabirds and raptors, is of paramount importance, especially the cliffs and inlets along the western coast. It is very important that the favourable habitats for rare species, e.g. Eagle Owl and Nightjar, are well preserved as their conservation is a main concern for the international scientific community.

#### d) MAMMALS

##### BATS<sup>12</sup>

Eight species of mammals are considered native to Sazani Island, and they are all bats. Only one cave species, *Plecotus kolombatovici* (figure 16) has been recorded (one individual captured in a bunker) despite the high potential of the island in refuges (tunnels, bunkers, buildings) and the number of species known to occur in the nearby continental areas.

Figure 16. *Plecotus kolombatovici* (© Philippe Théou)



Four species were recorded with ultrasound detector around the houses of the harbour and in the northern part of the island, where an old tunnel is now permanently flooded with slightly brackish water. The bats observed did not come from the tunnel (where at least sporadic presence of pigeons should be noted), but came from other sites on the island. These species are: *Pipistrellus pipistrellus*, *P. kuhlii*, *Tadarida teniotis* and a species of *Myotis* (table 11).

The most abundant species by far is *Pipistrellus kuhlii* / *nathusii*<sup>13</sup>, being found around the houses and the bunkers to the north. *Tadarida teniotis* seems quite abundant in the vicinity of the old houses and stays overnight on the island. During the two field missions, several records of *Myotis* were collected; these are signals of a species of "small" *Myotis*. However, given the small number of contacts it is not possible to identify the species.

<sup>12</sup> For more information: Théou, Ph. and F. Bego. 2013. *Etude des populations de chiroptères de l'île de Sazani (Albanie)*. Note naturaliste de l'Initiative PIM. Conservatoire du littoral. <http://www.initiative-pim.org/en/node/47572> (French); <http://www.initiative-pim.org/en/node/56616> (Albanian).

<sup>13</sup> It was not possible to distinguish which of the two species was recorded using the ultrasound bat detector, as no social call was recorded, so both species names are retained.

Species	Albanian name	English name	Bern Convention Appendix <sup>14</sup>	Habitat Directive Annex <sup>15</sup>
<i>Pipistrellus pipistrellus</i>	Pipistrel i zakonshem	Common Pipistrelle	III	IV
<i>Pipistrellus kuhlii / nathusii</i>	Pipistrel i Kuhliti	Kuhl's/Nathusius' pipistrelle	II	IV
<i>Pipistrellus pygmaeus</i>		Soprano pipistrelle	II	IV
<i>Myotis sp.</i>		Mouse-eared bat	II	II or IV
<i>Tadarida teniotis</i>	Lakuriq nate bisht-lire	European free-tailed bat	II	IV
<i>Plecotus kolombatovici</i>		Mediterranean long-eared bat	II	IV
<i>Hypsugo savii</i>		Savi's pipistrelle	II	IV
<i>Nyctalus leisleri</i>		Lesser noctule or Leisler's bat	II	IV

Table 11: Species of bats recorded during the PIM missions and international protection status (adapted from Theou & Bego 2013)

This relative low presence of bats on Sazani can perhaps be explained by the scarcity of fresh water on the island, as well as the relatively recent occupation of the main military infrastructures. The amount of insects on the island can also cause some competition between different species of bats present, and prevent the presence of more species. Moreover, the populations of cave species known on the near continent are far from very important which may lead to low competition on the continent in terms of refuges and food. This lack of competition may explain why at present none species of certain genus (e.g. *Rhinolophus*) has yet crossed the sea to find a more favorable habitat on the island.

#### MAMMALS (EXCEPT BATS)<sup>16</sup>

Six species of mammals have been recorded on the island: a native steppe mouse *Mus spicilegus* (?<sup>17</sup>) and five introduced: dog, rat, rabbit, donkey and horse.

At least a pack of feral dogs is present on the island; it seems well established and structured and it defends a well-defined territory on the hills to the north. Feral dogs should certainly prey on rabbit but also on lizards, turtles and snakes when the resource becomes scarce. It cannot be excluded that it also contributes to the current absence of certain bird species nesting belowground (e.g. shearwaters). On the other hand, these feral dogs may pose a risk to the future visitors to the protected area, so control measures will have to be considered. Also a pair of domestic dogs and its offspring of 3-4 puppies were present at the harbour.

The black rat (*Rattus rattus*) is present in most of the island. It is easily located by the piles of pine cones eaten mostly entirely (in the manner of squirrels). These piles are often found at the base of platforms, abandoned nests of crows and raptors or simple bunches of pine needles stuck in the canopy that the rodents used as resting or feeding site.

<sup>14</sup> Bern Convention Appendix II: Strictly protected fauna species; Appendix III: Protected fauna species.

<sup>15</sup> Habitats Directive Annex II: Species requiring designation of Special Areas of Conservation; Annex IV: Species in need of strict protection.

<sup>16</sup> For more information: Pascal, M. 2012. *Étude de la faune mammalienne de l'île de Sazani (Albanie)*. Note naturaliste de l'Initiative PIM. Conservatoire du littoral. <http://www.initiative-pim.org/en/node/47571> (French); <http://www.initiative-pim.org/en/node/56615> (Albanian).

<sup>17</sup> Species subject to confirmation; only one specimen of mouse was captured on Sazani during the field missions: an adult breeding male weighing 8 grams, a very low weight compared to a house mouse.

The island hosts a large wild population of rabbits (*Oryctolagus cuniculus*, domestic form). This species plays a key ecological role on the island, as it is the main prey for several important species such as the Eagle Owl. The qualitative and quantitative impact of browsing by rabbits and black rats on the composition of various plant formations of the island is still unknown but it is likely to be significant, at least in certain areas. If a control programme of rats or rabbits is organized as part of the management of the future protected area it is very important to previously evaluate the potential impact in terms of reduction of prey for Eagle Owl and the effects on the vegetation due to the reduction/eradication of the main herbivores of the island.

Two donkeys and a mare are also present, most of the time at the harbour area (figure 17); their impact on the functioning of the island ecosystems is most likely to be negligible.

Figure 17. One donkey and the mare (©Michel Pascal)



## 1.6. THE HUMAN USES AND SOCIO-ECONOMIC ASPECTS

### 1.6.1. HISTORY<sup>18</sup> AND CULTURAL HERITAGE

In view of its position between the Adriatic and the Ionian Sea, the island has always been a strategic military defence point. The history of the occupation of the island is very complex, notably during the 20<sup>th</sup> century, and the presence of military buildings, bunkers and a network of trenches and galleries are witness of the important military uses of the area.

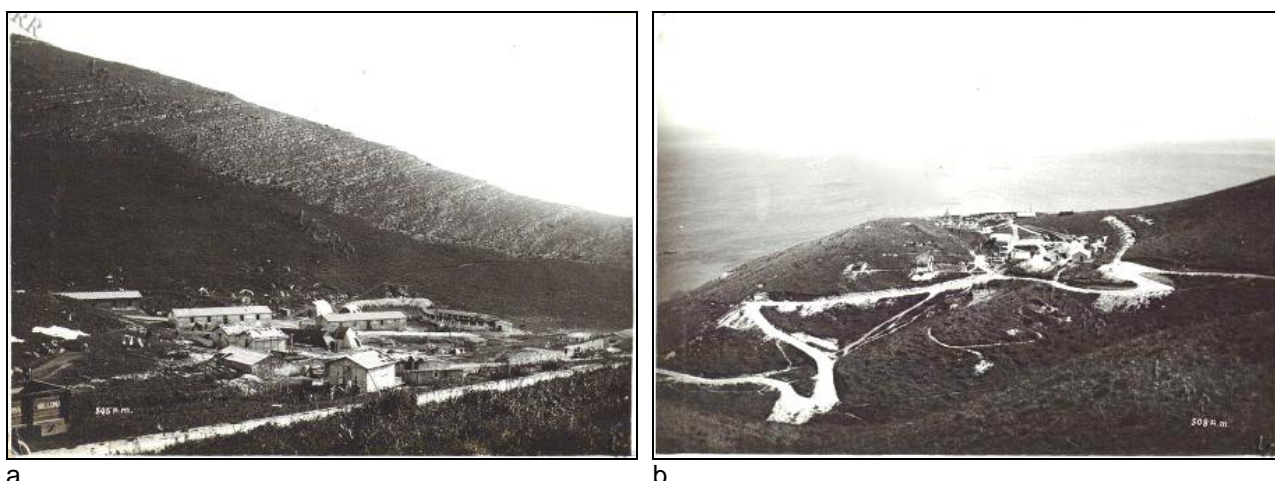
In the 15<sup>th</sup> century, Sazani was a territory of the Ottoman Empire; later became under the control of the Venetians (17<sup>th</sup> century) and of the British with the rest of the Ionian Islands (early 19<sup>th</sup> century). In 1864, Great Britain handed the Ionian Islands over to Greece and this country claimed Sazani territory, which remained under the Ottoman Empire until the Balkan wars in 1912-1913, when Greece occupied the island and subsequently abandoned in 1913. At this moment, Sazani was recognized as territory of Albania.

In 1915, and upon the Treaty of London, Italy proceeded to the temporary occupation of the entire region of Vlora including the island of Sazan. In 1920 this situation was ratified by the Protocol of Tirana between Albania and Italy. Italy constructed a military base, a lighthouse and naval fortifications and established several families of fishermen; a large headquarters building of the Italian Army was built in 1929 on the central plateau. During World War II, after the capitulation of Italy in 1943, Germany occupied Albania until 1944, when it was took over by Albanian forces. After the peace agreements, in 1947 Sazani returned to the sovereignty of Albania, already under a communist regime. During the Cold War, Albania relied heavily on the Soviet Union and the island was used as a sentinel for the naval base of Pasha Liman, located at the foot of Mount Karaburun. This defensive function of the island was maintained after the Soviets left in 1961, until the fall of the communist regime in Albania in 1991. An Italian-Albanian joint base was created in 1997 for control purposes; finally the Italian forces left the island some years ago and at present the Albanian Navy maintains a small garrison at the harbour.

In the 1970s, the island was inhabited by some 300-400 families of members or employees of the Army and the Navy. In parallel with the development of the military base, all the necessary facilities and infrastructures to afford for this permanent population (up to 2,000 people, according to some sources) were constructed forming a true village: housing blocks, houses, a hospital, a power house and the electricity supply network, a water supply system, two schools, a library, a cinema, a cultural centre with

<sup>18</sup> Nathanaili (2002)

a party hall, a football field, and obviously a large road network to access all these areas around the island. Furthermore, hundreds of defence bunkers, several kilometres of tunnels and trenches, many military buildings and facilities were constructed all over the island.



**Photo composition 4.** Photos of Sazani island during the Italian military occupation, in 1918. a : "Parco minatori" ; b : creation of roads and military buildings near San Nicolo gulf at the north-eastern part of the island (archives from MCRR).

In the middle of the 1980s the families left Sazani and the village was abandoned; currently the island is not inhabited. The remains of the numerous buildings, most of them in derelict state, can still be seen today almost everywhere.

All these recent historical events have caused a great artificialization of Sazani Island, with many areas being severely degraded. However, the facts that the island has been uninhabited for more than 30 years and that most of the human activities were stopped since then have allowed the regeneration of parts of it, also facilitated by the resilience of the natural ecosystems. Today very interesting fauna and flora populations as well as important habitats are present on the island as demonstrated by the results of the two field missions of the PIM Initiative. Sazani has a great potential for recovering and improving many ecological functions provided that an adequate and solid management addressed to their conservation and restoration is implemented.

It is very important to mention that the history of Sazani dates back of the Greek and the Roman periods, and that since then different cultures have certainly left their footprint. These important historical features remain largely unknown and unexposed, as there is currently little information available so they need to be investigated. The presence of two churches, archaeological remains, ancient buildings, shipwrecks, past land uses, etc. among many other cultural features, need to be documented. The protection of Sazani should encourage, facilitate and support research in these important fields, in order to make them widely known in the near future.

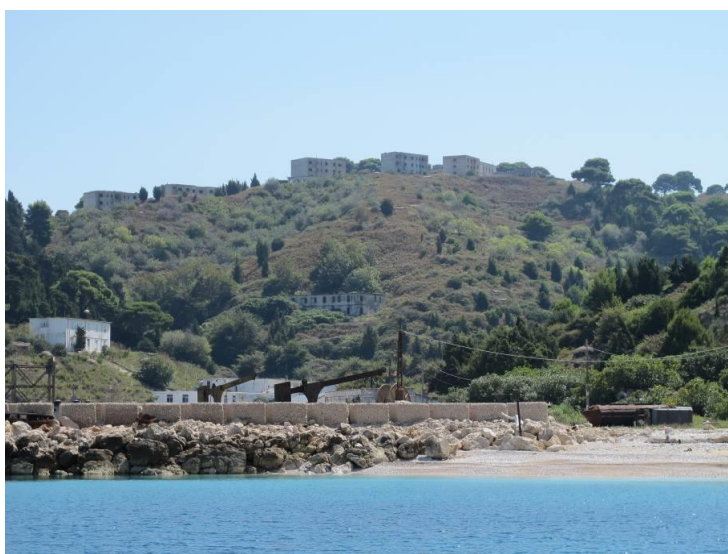


Figure 18. View on buildings from the harbour



### 1.6.2. CURRENT HUMAN USES AND STAKEHOLDERS

As mentioned before, at present, only a small garrison of the Albanian Ministry of Defence exists on the island. No civil population live there and no economic activity exists on or from the island (farming, livestock, fishing, tourism or others). The access to the island is controlled and ruled by the Albanian Ministry of Defence, and it is possible only by authorization from the Ministry and the Border Police. An additional permit is needed from the Ministry of Environment in case of research or environmental activities. There is no regular transport to the island, but access by boat can be provided by local fishermen, after the authorizations have been obtained.

### 1.6.3. SOCIO-ECONOMIC FEATURES, INCLUDING LAND TENURE

Under the current status, there are no socio-economic activities related to Sazani Island. At present, the island does not play any role in the socio-economic development, as it does not generate any income to the local community or any social benefit.

The whole of the 570 hectares of Sazani are state-owned land, with no private properties on the island and no resident population. As mentioned above, the fact that the island is currently managed by the Ministry of Defence makes access very controlled and regulated.

### 1.6.4. HUMAN-INDUCED IMPACTS

As mentioned before, the recent history of Sazani is characterized by a succession of changes with many different actors involved and most of the time, in contexts linked to war conflicts or international disputes. As mentioned above, these changes have supposed the construction of many infrastructures and facilities during the 20<sup>th</sup> century that have caused great impacts.

#### A) VISUAL IMPACTS

They are the most noticeable; they are caused the countless bunkers that are widespread throughout the island and the numerous derelict buildings and structures that can be seen from far away all over Sazan, in particular those that can be found around the coast and those in the central part: village, hospital, Italian Army headquarters, many smaller buildings, isolated constructions, etc. Another cause of visual impact is the aerial electric lines, some of them out of use that cross several parts of the island.

#### B) HABITAT FRAGMENTATION

Due to the different large networks of linear infrastructures that cut across the different habitats, such as the road network, tracks, trenches, and also to the buildings themselves.

#### C) LAND DEGRADATION AND EROSION

The extremely large network of roads, tracks and pathways,, that crosses the island from north to south, from east to west and from the sea to the top of all the hills, has created many embankments that suffer from intense erosion mostly due to rainfall and water runoff. Also the creation of other embankment not linked to roads but to buildings and constructions, and the disposal of debris in the open slopes causes evident erosion problems.

#### D) VEGETATION DEGRADATION

In the past, many areas have been subject to a very intense use, such as transit of vehicles or troops, construction of the village, housing blocks, military structures (bunkers, trenches, tunnel portals, etc.), roads and tracks, and other infrastructures (radar, etc.). In these areas, the vegetation cover is strongly degraded; this is the case of the summits of all the hills, the central plateau and the village, among many others.

## E) INTRODUCTION OF ALIEN INVASIVE SPECIES

Although 18 alien species have been recorded, they are not considered to be a major impact at present; however, some species pose a threat as they have very strong invasive character (*Carpobrotus edulis*, *Agave americana*), are widespread around the island (*Robinia pseudoacacia*) or because they can replace native species in the very rare beach habitats (*Euphorbia maculata*, *Oxalis corniculata*, *Xanthium sp.*).

## F) WASTE AND POLLUTION<sup>19</sup>

This is one of the most important impacts as many different types of waste and some pollutants are present around the whole island. This is the result of many years of heavy occupation and intensive use and lack of adequate waste management. During the PIM field mission of May 2013 a pollution and waste survey was carried out. The following subjects were covered:

- Waste assessment.
- State of conservation of buildings and their interests.
- Gamma radiation pollution.
- Soil pollution preliminary evaluation.

### Waste

Most of the abandoned buildings (not including bunkers) were visited and the quantities of the main waste present in the buildings and their immediate surroundings were estimated and classified by types. Table 12 and figure 8 show the results of the assessment and the zones surveyed. The most abundant type of waste is metal with an estimate of 62.2 Tonnes, followed by non-hazardous waste with 13.1 Tonnes. Among the hazardous waste, 170 m<sup>2</sup> of asbestos are present and 40 kg (0.04 Tonnes) plus eight barrels of other hazardous waste.

ZONES		Metal (Tonnes)	Non Hazardous Waste (Tonnes)	Hazardous Waste (except asbestos) (Tonnes)	Hazardous Waste Asbestos (m <sup>2</sup> )
T	Est sector	10.6	1.1	---	10
a					
b	Harbour	8.5	1.3	---	110
t					
e	Village	14.8	7.8	0.01	20
	Centre	28.3	2.9	0.03 + 8 barrels	30
T	<b>TOTAL</b>	<b>62.2</b>	<b>13.1</b>	<b>0.04 + 8 barrels</b>	<b>170</b>
a					

Table 12. Estimation of the different types of waste recorded. PIM mission 2013 (Lambeaux 2013)

The non-hazardous waste is composed of wood, plastic, glass, rubble, mattresses, building debris. Hazardous waste includes the materials and substances mentioned below, and they must be evacuated to the continent by a specialized company and with special equipment:

- Three barrels of calcium hypochlorite: labelled as Oxidant (O), Corrosive (C), Harmful (Xn), Dangerous for the environment (N), R-phrases: R8, R22, R31, R34, R50.
- Five barrels full of undefined substances (likely to be toxic).
- Asbestos: on broken roofs or disposed as debris. A large proportion (65%) of asbestos is found in the harbour area (110 out of 170 Tonnes); this makes it easier to remove and export it from the island
- Batteries: 40 units.
- Ammunition: some apparently unexploded pieces of ammunition are present in some galleries.

<sup>19</sup> For more information: Lambeaux, J-L., 2013. *Sazani island (Albania): pollution and waste field survey*. Expertise Report. l'Initiative PIM. Conservatoire du littoral. <http://www.initiative-pim.org/en/node/54117>

### Gamma radiation pollution

External exposure measurements were carried out using a portable DG5 gamma survey meter, based on the use of a scintillation detector (Novelec). Measurements were taken in each study area (figure 19). Background gamma level on the island pier is 50 counts/second. Only the three very concrete locations present values greater than the background level:

- Harbour area, building at location 1: 120 c/s.
- Central area, building at location 1: 180 c/s.
- Central area, building basement at location 2: 200c/s.

For the exact location, see Annex Lambeaux 2013. These increased levels do not show real radioactive pollution but they are probably due to the presence of certain building materials like lead pipes.

### Soil pollution

The study consisted in the observation of pollution indications and the collection of five soil samples. One sample was taken from a scoria soil (waste incineration residue) and the other four were randomly sampled on surface soils (15cm) to quantify the background level. Only metals were analyzed. In general, the results show a relatively high background level but with no predictable effect on the public or on the environment. One of the samples, from a clearly polluted soil from the central plateau, shows limited anomalies compared with the background levels for Zn, Ni, S, Ba and Cu.

### State of conservation of buildings and their interest

In generally, the abandoned buildings present poor architectural concern. Most of them are in bad state. Some building may represent heritage sites for the Island history. Moreover, a few could be conserved and adapted for uses such as visitor facilities, offices or workshops and warehouse.

The table 13 presents the list of buildings which may have an interest (not including bunkers), considering four criteria: conservation state, architectural interest, historical and technical interest.

Some large bunkers in the east sector could also be preserved (figure 20).



Figure 20. A large bunker at the north of the harbour - location 1 (© Jean-Louis-Lambeaux)



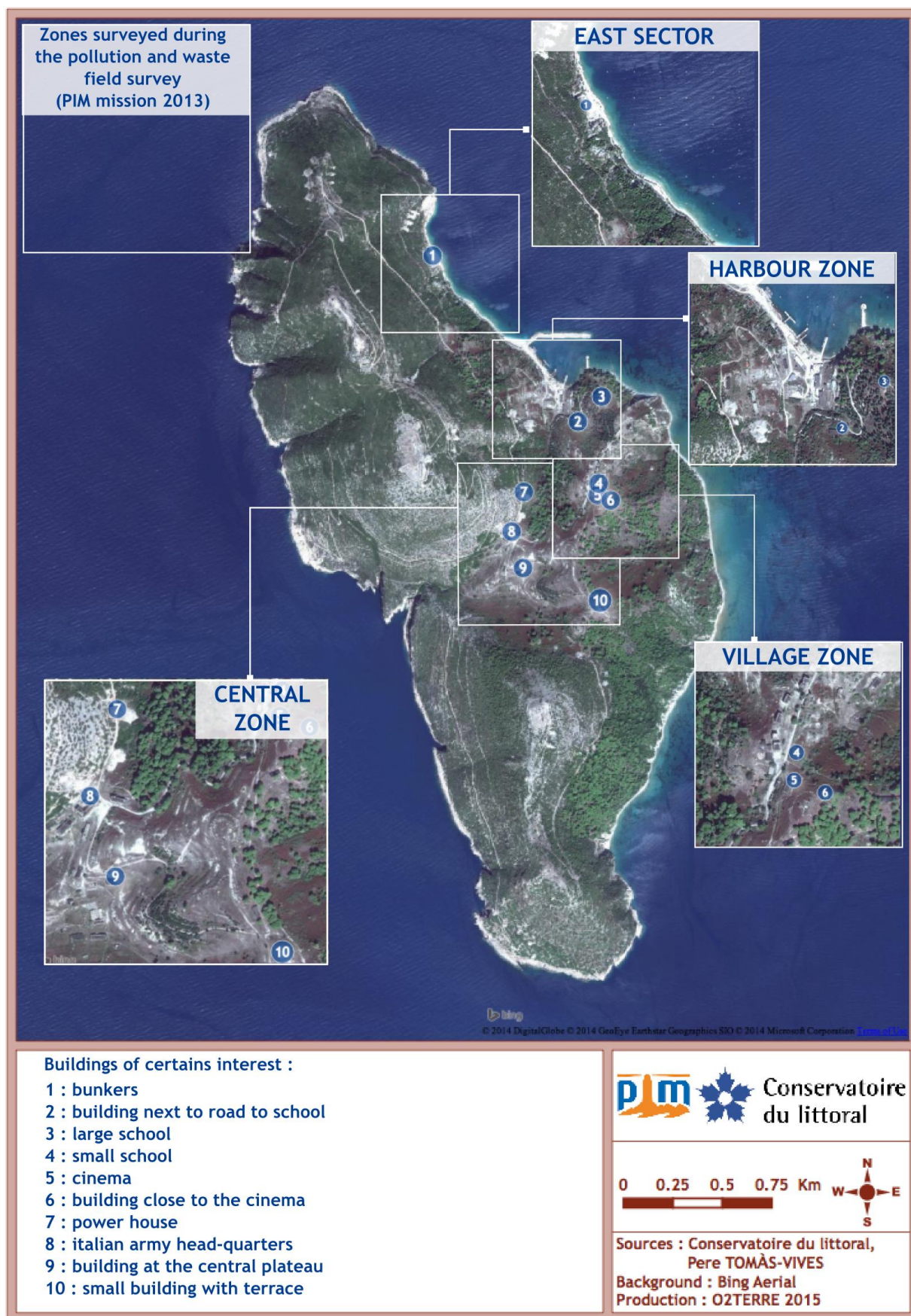


Figure 19. Zones surveyed during the pollution and waste field survey (Lambeaux, PIM mission 2013) and inventory of buildings of certain interest



Location	Building	Conservation state	Architectural interest	Historical interest	Technical interest
Harbour zone - location 2	Building next to road to school	Average	+	-	+ / close to the pier
Village zone - location 3	Large School	Average	-	+	-
Village zone - location 4	Small school	Average	+	++	-
Village zone - location 5	Cinema	Average	-	+	+
Village zone - location 6	Building close to the cinema	Quite good	-	-	++
Central zone - location 7	Power house	Average	++	++	-
Central zone - location 8	Italian Army headquarters	Average and bad locally	++	++	+
Central zone - location 9	Building at the central plateau	Average	-	-	++
Central zone - location 10	Small building with terrace	Average	+	+	-

Table 13. Buildings of certain interest. PIM mission 2013 (Lambeaux 2013)



**Photo composition 5.** Photos of buildings of interest (©Jean-Louis Lambeaux, PIM2013)  
a : Large school ; b : small school ; c & d : cinema ; e & f : power house ; g & h : italian head-quarters

### Conclusions

In general terms, this preliminary pollution and waste diagnosis does not reveal any major risk for public health or ecosystems. The main challenge consists on the management of the impacts on landscape due to abundant metal waste disseminated around soils and ruins.

Dangerous waste (batteries, asbestos, chemicals, powder filled barrels, ammunition, etc.) must be evacuated to the continent under special conditions and by specialized staff and equipment.

Most of the buildings have no interest to be preserved or restored and could be demolished, so the island would recover part of its natural landscape. If demolition of some buildings is carried out it will generate a lot of inert debris that could be used locally on the island to fill the basements of some of the buildings (the Italian Army HQ for example) or exported to the continent. A few buildings have been identified that have cultural or historical interest or average/good conservation state, and that could have a potential for restoration and future use.

#### **1.6.5. EXISTING FACILITIES AND CURRENT VISITOR USE**

All the facilities and infrastructures currently existing on Sazani are used and managed by the Ministry of Defence. At present there are no protected area facilities on the island. Access is very restricted and it is controlled by the Ministry of Defence and the Border Police; only under exceptional circumstances (research, monitoring) authorization is granted. For this reason, there is no current visitor use of the island.

#### **1.6.6. CURRENT GOVERNANCE AND MANAGEMENT FRAMEWORK**

As it has been mentioned, the governance of Sazani is current the responsibility of the Ministry of Defence, as it is the only structure with permanently present on the island.



## PART 2. EVALUATION OF THE AREA AND ASSESMENT OF THE INSTITUTIONAL FRAMEWORK

### 2.1. ASSESSMENT OF VALUES

Sazani Island is in a relatively **good state of conservation**, to a large extent thanks to the presence of the Ministry of Defense, which has ensured the island's inaccessibility (authorization is needed to land) and the lack of high pressures linked to inhabitants, and it has allowed the preservation of the natural habitats.

Sazani is the largest island of Albania, which makes this site unique and with **exceptional biodiversity values** at national level, and is located in an ecological and social strategic and very important crossroads position between the Eastern and the Western parts of the Mediterranean region. For this reasons, Karaburun-Sazan area has been long considered as one of the **ecological hotspots in the central Mediterranean** by different international organizations and programmes concerned with the conservation and sustainable development of coastal and marine areas.

The richness of this island with its magnificent landscapes, high quality habitats and their abundant biodiversity, both on land and in the sea, its history and the existing built heritage, give it a **strong potential for various types of conservation activities integrating both tourism and education**. Sazani could even play a **structuring role in the management of the whole Karaburun-Sazani protected area** generating positive economic impacts and benefits to the local population, through green tourism, "reserve effect" on fisheries, etc.





### 2.1.1. ECOLOGICAL VALUES

As all island, Sazani is at the connexion between the terrestrial, coastal and marine environments. These three main ecological milieu are strongly interrelated and are interdependent one another. The unique flora and fauna as well as the habitats present on land are totally influenced by the adjacent sea. Plants have adopted particular survival strategies to adapt to the very severe and harsh conditions of wind, salinity and temperature; many bird species depend on marine resources for nourishing; particular behavioural, feeding or breeding strategies are developed by certain fauna species; islands are true laboratories of the evolution where natural selection in very strict conditions lead to the appearance of new species and subspecies; marine species of invertebrates, fish or mammals (such as the highly endangered Monk Seal) need island environments for shelter, spawning or breeding. These are only a few facts that make the islands excellent sites for developing a unique biodiversity and special ecological relations.

The case of Sazani has some added ecological values. First, the great biogeographic interest of the flora and vegetation due to its unique and privileged geographical situation, a true crossroads between the Adriatic and the Ionian Seas, and between the eastern and the western Mediterranean. Hence, the presence of species of diverse origins that converge on the island, including at least 12 species in the western limit of their distribution area and seven central Mediterranean plants with very limited distribution area (see chapter 1.5 for more details). Second, the richness of Sazani flora is evident: 8.2% of the flora of Albania is present on the island, in a surface that is only 0.02% of the whole country. 435 plants species have been recorded in the few existing surveys, of which 419 are native and a few are endemic. A total of 152 taxa found in the most recent surveys (2012 and 2013) are new for the island and 21 are new for the whole Albania (table 14). Third, the vegetation is very diverse, forming a rich mosaic of many different plant communities (54) in a relatively small area (570 hectares).

Only the two recent surveys (2012 and 2013), with a duration of less than one week each, have allowed to record 122 species of arthropods (of which nine are new for Albania), one species of amphibian, eight reptiles, 39 birds and eight species of native mammals (table 14). Important features regarding the fauna populations are: significant high densities or abundance of certain reptile species (Blue-throated keeled lizard, Mediterranean house gecko) compared to the continental populations; high diversity of groups that exploit the rich mosaic of different vegetation types; abundance of prey that supports important resident populations of certain owls, raptors and other predators, and even attract other migratory species that use the island as hunting ground; special geographic situation for migratory birds along the Adriatic flyway; and important populations of certain bird species, such as the European Nightjar, Red-rumped Swallow, Alpine Swift and the magnificent Eagle Owl, one of the three world's largest owls and that has not been recorded in the Albanian coastal area.

Group	Number of taxa	Taxa new for Albania
Vascular plants (native)	419	21
Arthropods	122	9
Amphibians	1	
Reptiles	8	
Birds	39	
Mammals (native: bats)	8	
TOTAL	597	30

Table 14. Species richness of Sazani Island (data from the PIM Initiative reports)

### 2.1.2. CULTURAL VALUES

Being located at a strategic position in the limit between the Adriatic and the Ionian Seas, Sazani has been subject to influence of many different cultures and nations, from the Greeks and Romans 2,000 years ago to the more rapid changes that occurred in the last few centuries, and in particular in the 20<sup>th</sup> century. This history constitutes in this sense an important interest in term of historical, cultural and military heritage and the remains of numerous buildings (housing blocks, schools, cinema, hospital, power house...) can still be seen today and have a historical significance.

All of these cultures and nations have left their footprint on the island, but they remain largely unknown. There is a need for investigating how they affected the island and the role and position that Sazani paid in the different historical times. The presence of two churches, archaeological remains, ancient buildings, shipwrecks, past land uses, etc. among many other cultural and historical features need to be documented. The protection of Sazani should encourage, facilitate and support research in these important fields, in order to make them widely known to the society in the near future.



Figure 21. Existing buildings are the remaining traces of the recent history of the island  
(©Céline Damery, Conservatoire du littoral/PIM2013)

### 2.1.3. SOCIO-ECONOMIC VALUES

Under the present status, Sazani has not many socio-economic values to the society. However, the designation of Sazani as a protected area would certainly contribute to generate new economic activity and social dynamics, linked to a gradual, regulated and controlled opening to visitors (daily visit and boat tour around the island), in particular if the island is managed in coordination with the Marine Protected Area of Karaburun-Sazani. Sazani and Karaburun Protected Area may become an innovative demonstration model for managing and conserving these valuable island and marine ecosystems while ensuring a long-term community involvement and sustainable socio-economic development, based on ecotourism<sup>20</sup>.

The whole protected area of marine and island ecosystems of Karaburun-Sazani will become in the medium-long term integrated into the local socio-economic tissue and will be a new key element for the development of sustainable ecotourism. If adequately managed, the preservation of this unique site

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<sup>20</sup> It is the case of many other marine-terrestrial protected areas such as Cabrera National Park in Spain and Port-Cros National Park in France, among many others.

would certainly benefit the local community and the Albanian society as a whole as they would be allowed to visit the island and to discover its natural and cultural values and its unique history, and to identify them as part of the local, regional and national heritage.

The area has a strong potential for generating new “green jobs” in the short and medium terms, as new positions will be required, either directly by the creation of a management administration (protected area director, technical and educational staff, rangers...) or indirectly by the development of new business linked to ecotourism (private tour guides, boat companies, diving centres, agencies, etc.). Besides, the island will offer a new and exceptional added value to the current offer of places to visit in Vlorë area.

The role of the Regional and Local Authorities would be very important, as they are the administrations most directly related to the citizens. They can play the leading role in the promotion of more sustainable socio-economic dynamics in the region/municipalities (e.g. best practice codes, environmentally friendly tourist industry and transport, etc.) that can be boosted by the creation of the protected area.

Finally, the preservation, restoration and enhancement of the natural and cultural assets of the island will be a very important contribution to the Albanian, Mediterranean and global biodiversity conservation.



Figure 22. Discovery of Sazan island heritage (© Céline Damery, Conservatoire du littoral/PIM2013)

## 2.2. ASSESSMENT OF THE INSTITUTIONAL FRAMEWORK

The institutional framework is complex. On one side, the proposal for declaring a protected area on an island that currently has a military status requires the agreement of a shared vision and compromise, which can only be a reality under a strong commitment and a full coordination effort between the different institutions concerned : the Ministries of Defence and of Environment, the National Coastal Agency, the Regional and Local Authorities, and national and local stakeholders.

The territorial reform currently under way in Albania will change the administrative situation of Sazani Island, transferring it to Vlorë municipality. This should be seen as a positive development that should facilitate reaching a consensus among all the relevant institutions on the future status of the island and on considering its high natural, historical and cultural values as an added value to the whole local and Albanian society. The role of the Regional and Local Authorities is very important, as they can play the leading role in the promotion of more sustainable socio-economic activities in the region/municipality that can be boosted by the creation of the protected area.

The declaration in 2010 of the Marine National Park of Karaburun-Sazani by the Government of Albania demonstrates a strong commitment to the conservation of the marine natural resources of the area. It makes full sense that the island that is surrounded by the National Park is also protected and managed together with the marine part, so to have one coherent conservation strategy for the whole area.

The designation of Sazani island as a protected area and a coherent management unit for (the MPA and the island) would allow Albania to have a great variety of habitats protected and properly managed (mountain, forest, coast, marine, wetlands and also islands), and to contribute to reaching the Aichi target of «10% of marine and coastal protected areas preserved and well-managed».

### 2.3. ASSESSMENT OF THREATS AND PRESSURES

The threats and pressures over Sazani Island must be analyzed separately, according to the moment: past, present and future.

#### PAST THREATS AND PRESSURES

Past threats and pressures have been analyzed in depth in chapter 1.6. They can be divided into two types:

- Those due to the human presence in general: the many buildings existing of civil use, including the numerous housing blocks, the power house, the hospital, the two schools, cinema other infrastructures, the central road linking the harbour the village and the main civil infrastructures, abandoned aerial lines, etc.

They cause a clear and strong visual impact and if some of them are to be demolished, a large amount of debris will be generated and will have to be treated, mostly by exporting to mainland.

- Those strictly due to military activities and uses: the hundreds of bunkers, the long trenches, the large degraded areas on top of all the summits, the vast road and secondary track network crossing all the island, the great amount of waste dispersed throughout the island, chemical and toxic substances, ammunition, etc.

The impacts caused have already been described: visual impacts, degradation of the vegetation, land degradation and soil erosion, habitat fragmentation, introduction of alien invasive species, presence of large amounts of waste and of toxic and polluting substances and materials, etc. Again the eradication or mitigation of these impacts is very complex and it will require significant amount of work and funding.

#### PRESENT THREATS AND PRESSURES

The current activities on the island are limited, and mostly concentrated to the harbour area and some areas where infrastructures are still in use, such as the top of the highest hill (where the radar is located). Occasional military training may happen and its impact is not evident due to the strong existing modification of most areas.

It has to be mentioned that, at the moment, the military status of the island and the presence of the Ministry of Defence prevents major new irreversible changes happen.

#### POTENTIAL AND FUTURE THREATS AND PRESSURES

There are projects to create large and intensive tourist development infrastructures on the island, which could generate damages of Sazani environment. Today, with the current military status, it is unlikely that they happen.

As to all coastal areas, global climate change is a real threat that may cause significant ecological changes, not only due to sea level rise but also related to the arrival of new and exotic species due to the



global warming of the sea. This is a process that has already been confirmed in the Mediterranean with many marine and terrestrial species of fauna (fish, invertebrates) and flora (mainly algae) having arrived and colonized large parts of the Mediterranean coastal and marine environments causing detrimental effects to the local communities and species.

### INTERNAL ISSUES AND EXTERNALITIES

Among the internal issues that suppose constraints or limitations of different levels related to the current and future status of Sazani, it is important to mention the high ecological and historical values, the military presence, the current need for obtaining several authorizations for visits and the need to developed collaboration between the different administrations and stakeholders that may intervene in the future management of the island.

The external factors (externalities) are the pressures for large tourist development, the interest of the local community in having access to the island and in developing ecotourism activities related to it, the global movement towards the conservation and sustainable development of coastal and marine areas (that are highlighted by the Convention on Biological Diversity Aichi Targets<sup>21</sup>), the current global economic situation affecting Albania and Europe, and the availability of funding to implement an adequate restoration and conservation management.

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<sup>21</sup> **Target 11:** “By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.”  
**Target 12:** “By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.”

From the protection of a natural area to a project of valorization of a territory, a preparation is needed to ensure both the conservation of the heritage (natural, historical, cultural, landscape...) and the attractiveness for visitors. This is the purpose of the management plan.

Based on the diagnosis and the evaluation of the potentialities of Sazan island, the scenario proposed is drafted considering a future designation of Sazani island as a natural protected area and the implementation of a coordinated management between the future island protected area and the Karaburun-Sazan Marine National Park. This pre-requisite will allow the implementation of socio-economic activities in link with public welcoming (daily visits, guided tours, scubadiving activities, ...) compatible with the conservation of natural, historical and cultural heritage of Sazani. In parallel, the island would become an innovative management model as "centre of excellence" for conservation, scientific research and training on coastal and marine environments. The development of activities of awareness raising (valorization and interpretation on the site, education of a large public) and communication will enhance the promotion of Sazan Protected Area and its uniqueness.

### 3.1. VISION OF SAZANI AS A PROTECTED AREA AND OBJECTIVES OF THE MANAGEMENT PLAN

#### 3.1.1. VISION AND GOALS OF THE PROTECTED AREA

The proposed vision of the protected area is:

*To conserve, restore and enhance the remarkable heritage of Sazani Island while providing opportunities for sustainable economic and ecological benefits to the local community in Vlora region and developing a centre of excellence for conservation, research and training.*

The proposed long term goals of the protected area are:

1. The preservation, restoration and enhancement of the natural and cultural assets of the island as a contribution to Albanian, Mediterranean and global biodiversity conservation.
2. The recognition of Sazani heritage as added values for the development of new and alternative sustainable socio-economic activities, in particular ecotourism, and for education an awareness raisins.
3. The development of an innovative demonstration model as a centre of excellence for managing and conserving valuable island, coastal and marine ecosystems and ensuring the long-term community involvement.

The vision, goals and objectives are in line with those of the whole Karaburun-Sazani Marine Protected Area.

### 3.1.2. GENERAL AND SPECIFIC OBJECTIVES OF THE MANAGEMENT PLAN

Based on the long term goals, the general and specific objectives of the Management Plan are:

#### **PRE-REQUISIT/GENERAL OBJECTIVE 1. DESIGNATION OF THE PROTECTED AREA OF SAZAN**

"To declare Sazan island as a protected area and ensure the implementation of an efficient and effective management in coordination with Karaburun-Sazan Marine National Park."

##### Specific objective 1.0

To declare Sazani island as a protected area

##### Specific objective 1.1

To appoint Protected Area Management Administration

##### Specific objective 1.2

To create a Management Committee

##### Specific objective 1.3

To provide logistic facilities and equipments

##### Specific objective 1.4

To establish planning tools

#### **GENERAL OBJECTIVE 2. CONSERVATION AND RESTORATION OF SAZANI HERITAGE**

"To guarantee the long-term conservation of historical and cultural values of Sazani Island and to ensure suitable conditions for public welcoming in accordance with biodiversity conservation."

##### Specific objective 2.1

To maintain and restore the historical and cultural values to a good conservation state, while preventing any risk for visitors.

##### Specific objective 2.2

To restore the degraded areas, in order to recover their original biodiversity values and functions.

##### Specific objective 2.3

To eradicate and/or minimize any activity or existing feature that generates impacts and to prevent them in the future (e.g. pollution, waste, visual impacts, etc.).

##### Specific objective 2.4

To achieve, enhance and maintain a good conservation status of the habitats, flora and fauna.

#### **GENERAL OBJECTIVE 3. SUSTAINABLE DEVELOPMENT ACTIVITIES IN FAVOR A PUBLIC WELCOMING ON THE SITE**

"To support and promote the development of new sustainable activities contributing to the socio-economic development of the local community in Vlora region, by allowing a controlled and progressive access of public to the site."

##### Specific objective 3.1

To support the creation of new business and job opportunities linked to ecotourism, using the Karaburun-Sazan protected areas as major natural, historical and cultural tourist assets.

##### Specific objective 3.2

To promote the Karaburun-Sazan area and its protected areas as an added value for sustainable tourism.

#### **GENERAL OBJECTIVE 4. RESEARCH, MONITORING AND TRAINING COURSES**

"To make the island a "coastal centre of excellence" by supporting and facilitating applied scientific research, monitoring and training courses on the management of island, coastal and marine environments."

##### **Specific objective 4.1.**

To support and facilitate applied scientific research and training on the management of island, coastal and marine protected areas.

##### **Specific objective 4.2.**

To increase knowledge about the nature, history and cultural values, by supporting and promoting inventories and scientific research.

##### **Specific objective 4.3.**

To assess the status and trends of the natural, historical and cultural values, by undertaking specific monitoring programmes

#### **GENERAL OBJECTIVE 5. VALORIZATION OF THE SITE, EDUCATION AND PUBLIC AWARENESS ACTIONS**

"To highlight Sazani heritage and raise awareness among the local and national population to communicate on the importance and uniqueness of Sazani island and the need for its conservation."

##### **Specific objective 5.1**

To organize the public welcoming on the site and communicate on the nature, the history and the cultural values of Sazan.

##### **Specific objective 5.2**

To inform and make aware the local and national population about Sazan Protected Area

##### **Specific objective 5.3**

To acquaint and create awareness among the educational community about the natural, historical and cultural heritage of Sazan and to facilitate its use as an educational resource.

#### **GENERAL OBJECTIVE 6. CAPACITY BUILDING**

"To increase capacity among technical staff and local stakeholders involved in the conservation of Sazani island."

##### **Specific objective 6.1**

To increase capacity among the management staff of the protected area and stakeholders that will be directly or indirectly involved in its management, through capacity building and training programmes.

##### **Specific objective 6.2**

To promote capacity building and training programmes addressed to the local community in Vlora region in fields related to new sustainable economic activities.



## 3.2. MANAGEMENT ADMINISTRATION AND MANAGEMENT ZONES

### 3.2.1. RATIONALE FOR PROTECTION

The Law No. 8906 *for protected areas* (2002), as amended by Law No. 9868 (2008), establishes the legislative framework concerning the declaration, planning, administration, management and use of protected areas and their natural and biological resources. It also aims at the facilitation of conditions for the development of environmental tourism, for the information and education of the general public and for economic profits, direct or indirect, by the local population, by the public and private sector (article 1).

According to article 2 of Law 8906, “Protected areas are set to provide the preservation and regeneration of natural habitats, species, natural reserves and landscapes”.

Article 4 establishes six categories of protected areas, based on the IUCN Categories. For each Category of Protected Area, the Law defines the criteria for designation and lists a series of specific regulations.

The Categories of Protected Area are the following:

- a) Strictly natural reserve / Scientific reservation (IUCN Category I).
- b) National Park (IUCN Category II).
- c) National Monument (IUCN Category III).
- d) Nature Managed Reservation / Natural park (IUCN Category IV).
- e) Protected Landscape (IUCN Category V).
- f) Protected areas of managed resources / Protected areas with multi-purpose utilization (IUCN Category VI).

The IUCN Guidelines for Applying Protected Area Management Categories<sup>22</sup> establish the criteria for applying each of the Categories.

Article 4/1 (added by Law no. 9868) establishes a set of criteria for declaring a protected area (at least one criterion must be fulfilled):

- a) to have high species and / or habitats diversity;
- b) to have low density of species and / or habitats;
- c) to have representativeness;
- d) to have at least the minimum of the size of the ecosystem;
- e) to have naturalism, heritage and integrity;
- f) to have scientific value;
- g) to be ecologically sensitive / vulnerable species
- h) to be characterized by distinctiveness / endemic species;
- i) not to be compromised by the interference of human activities;
- j) to have the opportunity for the conservation of wild life.

Sazani island meets at least seven criteria out of ten: a, c, e, f, g, h and j; therefore, the area clearly deserves to be protected by legal designation.

The designation of Sazani as a natural protected area would provide the island with the adequate legal status needed to ensure both the preservation of its natural and historical values, the development of socio-economic activities with the welcoming of visitors, and the development of the "center of excellence", while still compatible with the presence of the Ministry of Defence. An appropriate protection status (with a clear definition of zoning and regulations) should be defined, allowing the organization of integrated management activities on the island and the surrounding waters.

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<sup>22</sup> Dudley 2008

### 3.2.2. PROTECTED AREA MANAGEMENT ADMINISTRATION

Any protected area needs a Protected Area Management Administration and a Management Committee to ensure the achievement of its objectives. For an integrated and efficient management of the whole Karaburun-Sazan protected area, the following aspects should be developed in parallel:

- Creation of a Management Administration
- Provision of logistic facilities (offices on mainland and on the island, accommodation for staff and associated experts/organisations, etc.) and sufficient means, resources and equipment (vehicles, boats, communications, etc.) to efficiently manage the protected area.
- Allocation of an annual budget.
- Creation of a Management Committee.

#### **Protected Area Management Administration and staffing needs**

The Protected Area Management Administration is the the key actor responsible for the management of the protected area, through the implementation of the management plan under the advice of the Management Committee. It plays a key role in any issue related to community development and to ensure their involvement in the management. Its functions include any activity related to the conservation, restoration, education, interpretation, public use by visitors, ecotourism, communication, research, monitoring and training concerning the protected area.

The Protected Area Administration needs to be provided with sufficient means and resources, both human and material to efficiently manage the protected area. It should be composed at least of (see Programme 1 in chapter 3.3):

- Protected Area Director (PAD): responsible for the overall management, direction, supervision and representation of the protected area.
- Technical staff (2): in charge of coordinating and supervising the implementation of the programmes included in the management plan, and of assisting the PAD in staff supervision and training. At least two technical officers are needed, one Conservation Officer and one Outreach and Livelihoods Officer.
- Support staff (2): one accountant and one secretary.
- Rangers: responsible of control and surveillance and who should be present in the field. At least four (4) rangers (who will work in two shifts) are needed; one of the rangers shall be nominated as Head Warden (HW) as the responsible for the team.
- Educational staff (2): in charge of educational, interpretation and eco-tourism activities. A minimum of two educational staff are needed.

#### **Management Committee**

The Management Committee guarantees the participation of the public administrations and relevant local stakeholder groups in the management of the protected area. The main role is to advise and supervise the management, including evaluation and (eventually) endorsement of the planning and reporting tools, the management programmes and main management actions. The Management Committee is composed by national and local stakeholders, such as representatives of Government departments, Regional and Local Authorities, scientific institutions, NGOs, private sector, local community groups and associations, individual experts, etc.

The creation of one single Management Committee for the island protected area and the Karaburun-Sazan Marine National Park or the creation of one Management Committee for the island integrated with the Management Steering Committee of the existing MPA, would guarantee that both the marine area and the island are managed in an integrated way, and that the management is fully coordinated, coherent and most efficient.

### 3.2.3. PROPOSED MANAGEMENT ZONES

Zoning is a key management tool for defining multiple uses in protected areas. It consists of identifying areas for specific activities such as preservation of key habitats or species, research, restoration, education, public use, tourism, etc. Zoning allows reducing conflicts between different potential users, improving the effectiveness of management and the quality of activities such as education or tourism. In this respect, zoning is a tool for compromise between the needs of conservation and the needs of users.

In a zoning scheme different levels of protection are defined: there are areas under strict protection and areas with increasingly fewer restrictions, for example areas allocated for education or recreation activities. The boundaries of the different zones should be identified by the management plan and clearly delineated on maps.

According to article 4/2 (added by Law no. 9868), the territory of the protected area is divided into subzones, according to the importance of habitats and ecosystems present. The Internal zoning of a protected area may contain:

- a) Central area.
- b) Recreation area.
- c) Area of traditional use.
- d) Area of sustainable development.
- e) Other subzones which suit the territory.

The zoning adjusts the protection scale to the features of each subzone, taking into account the nature of the area, the types of human activities taking place and their impact on nature.

The Ministry of Environment has produced the document *“Guideline on the approach and criteria for zoning of the territory within a protected area”*. The goal of this guideline is to establish a commonly recognized standard of zoning for Albanian protected areas. At the same time it will indicate the concrete path for the zoning process within a protected area considering location, typical features of biogeographical regions, protection status of the area, using a simple and understandable language for all stakeholders.

The main objectives for zoning, according to this Guideline are:

- To ensure protection for critical and/or flagship habitats and species, ecosystems and ecological processes;
- To divide conflicting human activities;
- To protect landscape and/or cultural values of the protected area allowing for a rational human use spectrum;
- To preserve appropriate areas or particular human uses through minimizing impacts of these uses on the protected areas;
- To keep some parts of the protected area in their natural state, undisturbed by human influence, only for scientific research and education purpose.

The Guideline also sets the criteria that must be considered in defining management subzones:

- Biological and landscape values.
- Ecological sensitivity.
- Internal and external factors influencing the management.
- Existing protection management and infrastructures.
- Existing wildlife.
- Existing tourism infrastructures.
- Sustainable use concept.
- Physical attributes necessary for management.
- Requirements of management support activities, as research.

The management subzones defined by the Guideline are the following:

- a) Core zone (CZ), first level of protection.
- b) Effective management zone (EMZ), second level of protection.
- c) Traditional Use Zone (TUZ), third level of protection.
- d) Recreation Zone (RZ), third level of protection
- e) Sustainable Development Zone (SDZ), third level of protection.
- f) Buffer Zone (BZ).

In all categories, enforcement of the regulations is ensured by the Protected Area Administration patrolling and implementation of strictly defined rules and approaches.

The state and conditions of Sazani, and the absence of traditional uses on the island, make not necessary to apply categories c) Traditional Use Zones. Within the Sustainable Development Zone, the areas currently used by the Ministry of Defense are integrated. These areas are subject to a (more or less) intense human use at present, without important natural values, and where infrastructures are located.

In this context, the following management subzones are proposed (figure 23):

- a) Core Zone (CZ).
- b) Effective Management Zone (EMZ).
- c) Recreation Zone (RZ).
- d) Sustainable Development Zone (SDZ).



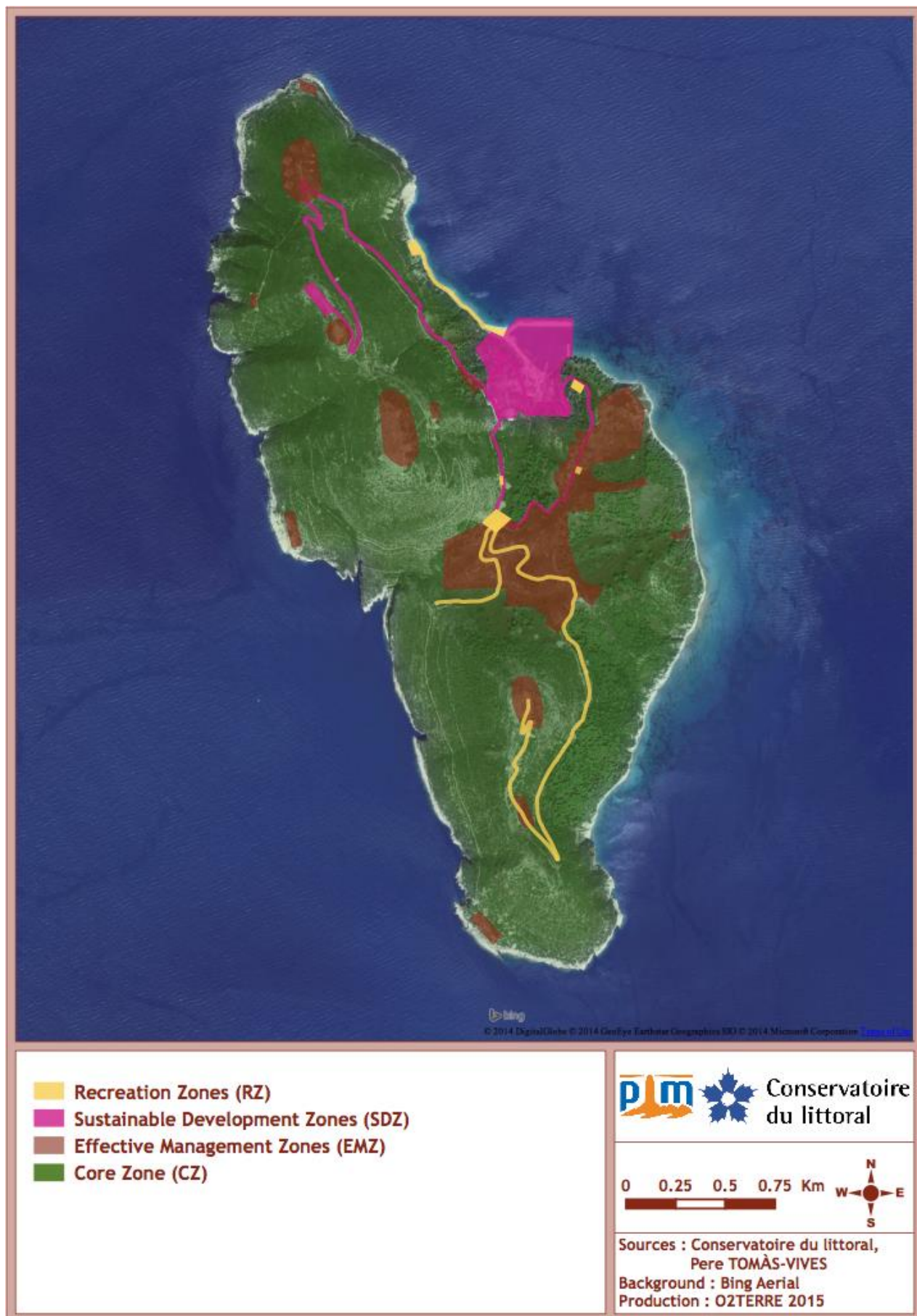


Figure 23. Proposed zonation of Sazani Island

### a) CORE ZONES (CZ)

The guideline defines the Core Zones (CZ) as areas of “very high nature performance, with little or no disturbance from human activities. The priority is the conservation of nature, biodiversity, endangered species, nature monuments, unique land and seascape, extraordinary natural geomorphologic and paleontological features characteristics without any permanent support intervention. These areas are managed in a way that preserves their natural status, maintains dynamic evolution of genetic resources and are used only for scientific purposes. This zone benefits from strict protection character” (first level of protection).

In Core Zones, the following regulations apply:

- Natural processes with minimal management interventions are allowed.
- No infrastructure development is allowed.
- Scientific research and low level monitoring is allowed with a special permit.
- Public access is limited and recreational use is excluded; daily visits are strictly limited in number and sites.
- Guided tours are allowed only on specified trails with very low impact on a small part of the area covering a maximum 10% of it, under guidance of the protected area staff at a level that serves better physical and spiritual wellbeing and preserves wild nature qualities of the area for present and future generations.
- Socio-economic and recreational activities are totally forbidden.

The proposed Core Zone of Sazani (figure 24, dark green areas) comprises all the land that maintains a good natural state, with little disturbance from human activities, where natural processes need minimal management intervention and with no infrastructure development. It includes the areas that are not contained within any of the other zoning categories (see below).



Figure 24. Proposed Core Zone (CZ)

## b) EFFECTIVE MANAGEMENT ZONES (EMZ)

According to the guideline, these are areas of “high nature performance with very important natural habitats or biotopes of rare and endangered species. The priority is preservation of biodiversity, natural and scenic areas of national and international importance for spiritual, scientific, educational purpose integrating protected area management with the sustainable and balanced use. They should also include patterns of physiographic regions, biotic communities, genetic resources and species in as highly as possible natural status to ensure ecological viability and diversity”.

This category is applied to areas including ecosystem, landscape values and other natural values where activities that are not against the protection purpose and management objective can occur. In this context, only educational environmental ecotourism is allowed following clear rules and limitations for permitted areas and trails. Other socio-economic activities are not allowed and these zones receive the second level of protection.

In Sazani, the proposed Effective Management Zones (figure 25, light green areas) contain specific areas or features that have been subject to modification in the past and that with the implementation of intensive management actions can be restored to more natural conditions.

EMZ include all the urban areas and their surroundings, areas with concentration of waste and in particular: the village, and other areas with concentration of buildings. The restoration of these areas shall be based on specific and detailed sectoral plans based on comprehensive and exhaustive surveys (see Conservation Programme in chapter 3.4):

- A Decontamination Plan. The goal is to remove all existing waste from all parts of the island.
- Master Plan for the urban areas. The village, other buildings and the tracks will be the object of this Master Plan in order to assess their values and conservation state, and to decide about their future.
- A Restoration Plan. The degraded areas will be subject to restoration works on the basis of a detailed Landscape Study.

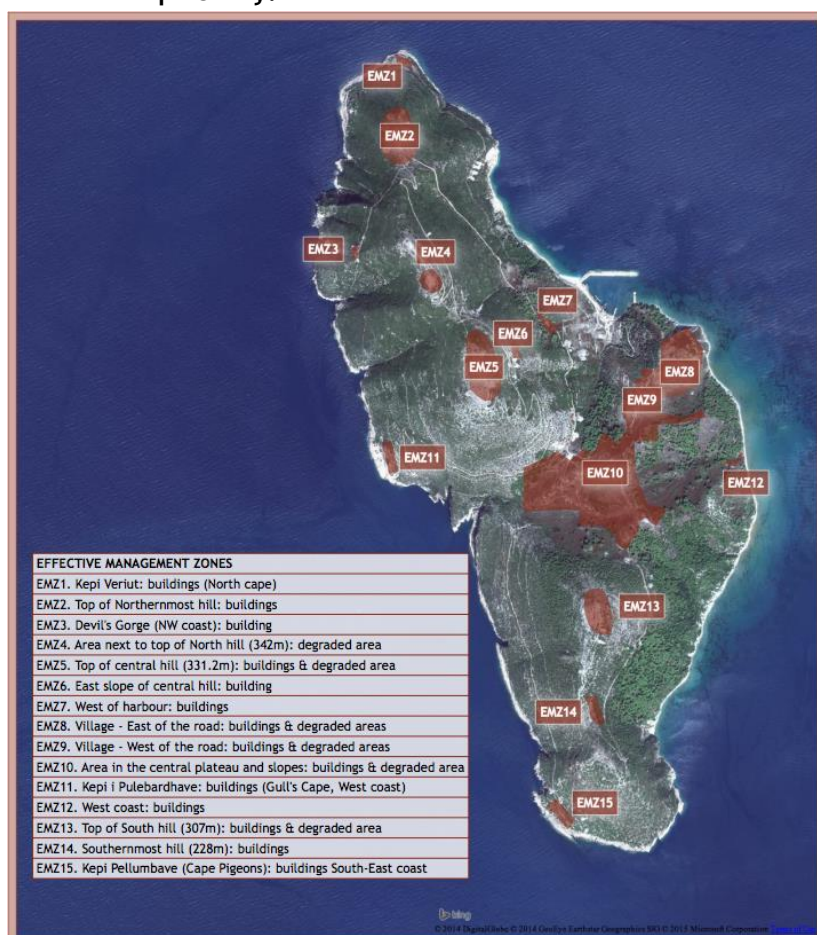


Figure 25. Proposed Effective Management Zones (EMZ)



### c) RECREATION ZONES (RZ)

These are areas with a “good nature performance. [...] containing suitable terrestrial, aquatic and marine areas where the combination of activities, traditional products of the community, businesses and tourism is in line with the nature and biodiversity conservation standards. This zone should enable invulnerability of harmonic interaction of nature and culture through preservation of landscape quality, continuous traditional use of land, building traditions and social and cultural and traditional customs manifestation, and avoiding and preventing where necessary land use types and occurrence of activities that are inappropriate in size and/or content.”

The zone should also enable public enjoyment through tourism and recreational activities according to the character and size of the main features of the area, promote scientific and educational activities that will help the long term development and wellbeing of local people, and provide wide public support to nature conservation. The main goals here are to provide economic benefits and contribute to the improved livelihood of local people by using natural goods and services or benefits coming from appropriate forms of tourism.

The zone encloses wide potentials for education, wilderness recreation, sports and facilities that respect the protected area functions, ecological values, natural and cultural landscape and the national master territorial plan approved by National Territorial Council. The third level of protection is applied to this zone

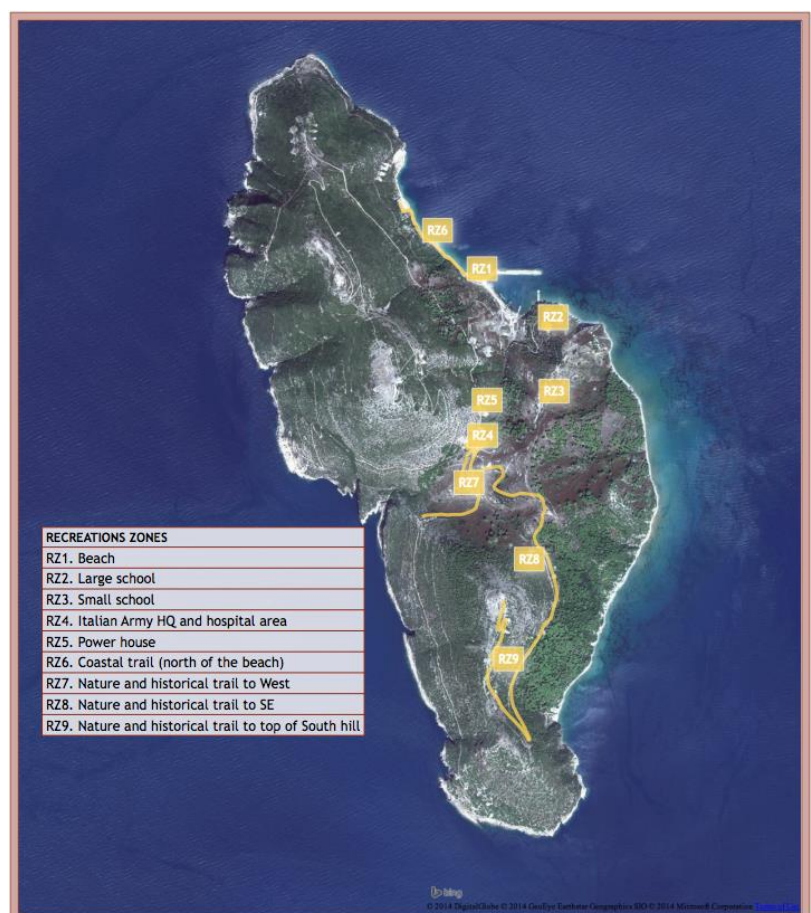
The enforcement is enabled in cooperation with local authorities and Protected Area Administration patrolling and implementing strictly defined rules and approaches.

The proposed Recreation Zones (figure 26, yellow areas) include all the areas that will be used by visitors:

- The beach (RZ1)
- The buildings and infrastructures that can be used for public welcoming (at present or in the future). As a provisional proposal, the buildings and infrastructures proposed to be Recreation Zones are the two schools (RZ2 and RZ3), the area around the Italian Army headquarters and the hospital (RZ4) and the power house (RZ5).
- The coastal footpath and the two first bunkers north of the harbour.
- The nature and historical trails proposed.

Previous to any use, these sites must be decontaminated and safety measures fully implemented. Restoration works of these buildings must be undertaken as part of the Master Plan before they can be open to the visitors.

Figure 26. Proposed Recreation Zones (RZ)





#### d) SUSTAINABLE DEVELOPMENT ZONE (SDZ)

As mentioned above, the Sustainable Development Zones are areas that at present are subject to a (more or less) intense human use, without important natural values, and where important infrastructures or facilities exist.

The proposed Sustainable Development Zones (figure 27, red zones) are the areas, buildings and infrastructures that are currently used by the Ministry of Defense. These include:

- The area of the harbour and military facilities (SDZ1).
- The top of the Northern hill where the communication infrastructures are located (SDZ2).
- The main roads currently under regular use: circular road (SDZ3) and road to the North (SDZ4).

The current activities and uses of these areas by the Ministry of Defense will continue; the Protected Area Administration premises on the island (offices, accommodation, etc.), and public welcoming facilities (information point and other services for visitors, notably in link with economical activities) will be located in the Sustainable Development Zone of the harbour. Any new infrastructure needed for the operation of the residents (harbour operations, sewage waters depuration, energy production, solid waste treatment, etc.) will be located within the Sustainable Development Zones.

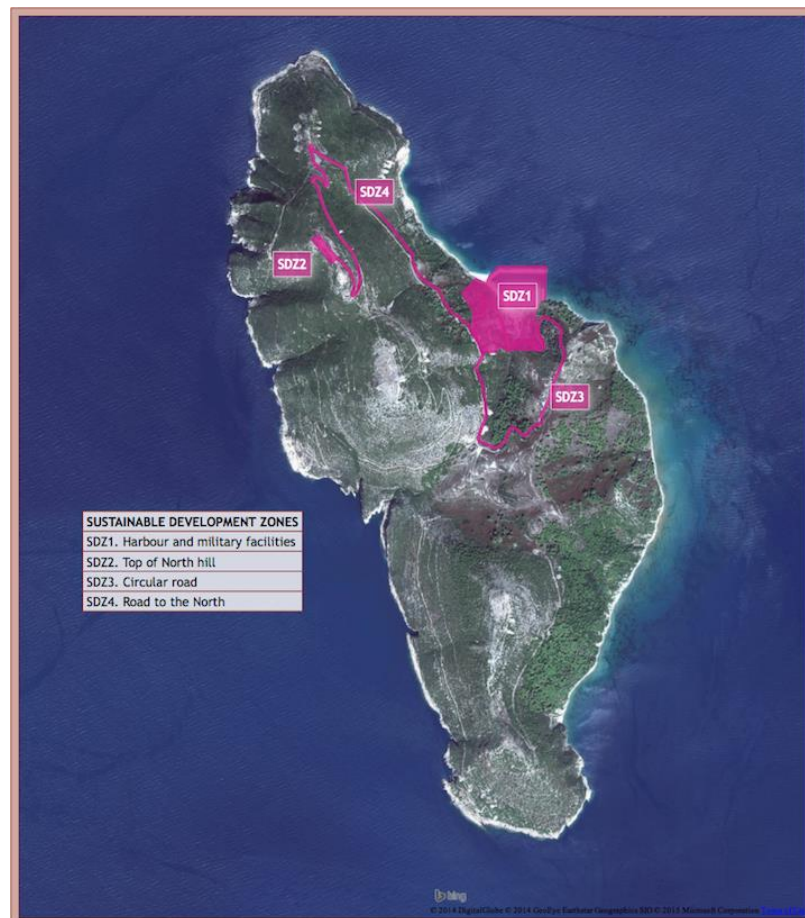


Figure 27. Proposed Sustainable Development Zones (SDZ)

### 3.2.4. PROPOSED GENERAL REGULATIONS

To ensure an effective and efficient management of Sazani Island, a series of activities have to be regulated. As mentioned above, the Protected Area Administration is the body responsible for ensuring enforcement of the regulations by patrolling and implementation of strictly defined rules and approaches.

The proposed general regulations are the following:

#### ACTIVITIES PROHIBITED

- a) Intensive activities and land uses.
- b) Kill, harm, harass, or intentionally disturb autochthonous wildlife, including live capture and collecting their eggs or offspring, and their breeding, wintering or resting grounds.
- c) Cutting, collection altering or destroying native flora species or vegetation; except for authorized resident staff for specific management purposes or for firewood of selected tree species and in predefined areas.
- d) Introduction of any alien animals and plant species, especially invasive ones or when they can cause changes to the biodiversity of the area.
- e) Hunting.
- f) Planting alien plants, except organic farming of fruit and vegetable garden plants by authorized resident staff and only in the General Use Zones of the harbour area.
- g) Grazing or livestock rearing, except by authorized resident staff and only in the General Use Zones of the harbour area.
- h) Lighting fires at any time.
- i) Camping and mountain climbing.
- j) Mining, including sand or gravel collection or extraction.
- k) Mass events (sports, tourist activities, etc.). Only daytime visits are allowed always accompanied by protected area staff or by licensed tourist guides.
- l) Organization of competitions of any type (sports or others) on the island.
- m) Storage or use of any type of chemical substances. Only the Protected Area Administration and the Ministry of Defence is allowed to use/store chemical substances, provided that they are always stored in sites specially prepared, conditioned and protected for that purpose in the General Use Zone of the harbour area. Strict safety measures must always be taken to avoid any spill or any damage to biodiversity, to other natural values, to cultural values or to people.
- n) Construction of any type, except authorized works in the General Use Zone of the harbour area.
- o) Construction of roads, new tracks, aerial lines, advertisement boards or any infrastructure that may cause ecological, landscape or visual impact. The impact of existing infrastructures will be minimized.
- p) Circulation of any vehicle outside the roads defined as General Use Zones, except vehicles of the Protected Area Administration and the Ministry of Defence.
- q) Disposal, burning or dumping on land or in the sea of any type of waste. Only the Protected Area Administration and the Ministry of Defence is allowed to temporary store non-hazardous inert waste in sites specially prepared, conditioned and protected for that purpose. Strict safety measures must always be taken to avoid any damage to biodiversity, to other natural values, to cultural values or to people.
- r) Possession or use of any type of weapons, except those of the Protected Area Administration and the Ministry of Defence.
- s) Any other activity that may cause changes in the biodiversity, structure and functioning of the ecosystems, cause an ecological, landscape or visual impact or damage the land surface.

## ACTIVITIES THAT NEED AN ENVIRONMENTAL PERMIT

- a) Exploitation and use of water resources, including aquifers, sources, streams, etc. Water from sources can only be used for drinking providing that they are not overexploited.
- b) Scientific research and monitoring.
- c) Storage or use of chemical substances by the Protected Area Administration and the Ministry of Defence, always stored in sites specially prepared, conditioned and protected for that purpose in the General Use Zone of the harbour area. Strict safety measures will always be taken to avoid any spill or any damage to biodiversity, to other natural values, to cultural values or to people
- d) Constructions in the General Use Zone of the harbour area. They must always be integrated in the landscape and must not cause any ecological, landscape or visual impact.
- e) Restoration of buildings located in the Recreation Zones to create education, interpretation and visitor facilities. They must always be integrated in the landscape and must not cause any ecological, landscape or visual impact.
- f) Establishment of facilities for public use and recreation (toilets, pick-nick area, shade hut, etc.) at or near the harbour. They must always be integrated in the landscape and must not cause any ecological, landscape or visual impact.
- g) Establishment and operation of facilities for military and defense purposes.
- h) Any other activity that is not explicitly prohibited (see above).
- i) Any other activity that can be added by the Environment Administration.

## ACTIVITIES THAT NEED AUTHORIZATION BY THE PROTECTED AREA ADMINISTRATION

- a) Organic farming of fruit and vegetable garden plants by resident staff and only in the General Use Zones of the harbour area.
- b) Grazing or livestock rearing by resident staff and only in the General Use Zones of the harbour area.
- c) Collection or cutting of trees or other plants by resident staff for management purposes and for firewood (only selected tree species) and in predefined areas.
- d) Placement of information boards, signs and indications.
- e) Non-military flights with helicopters, balloons, delta planes, etc. above the protected area
- f) Performance of activity of seasonal tourism structures which do not ultimately occupy land.
- g) Any other activity that can be added by the Protected Area Administration.

When the Protected Area Administration detects any violation of the objectives of declaring the protected area, it may limit or stop temporarily any of the permitted activities.

### 3.3. MANAGEMENT PROGRAMMES AND ACTIONS

The management of the protected area is structured in six different programmes each of them grouping the specific management actions to be implemented in each management area. All the management programmes and actions are structured according to the general and specific objectives of the management plan.

#### PRE-REQUISIT : INSTITUTIONAL SET-UP, ADMINISTRATION AND GOVERNANCE PROGRAMME

In link with General Objective 1 : "To declare Sazan island as a protected area and ensure the implementation of an efficient and effective management in coordination with Karaburun-Sazan Marine National Park."

This programme includes all the actions needed to declare Sazani as a protected area, and to create the management structures (Administration, Management Committee) that will be in charge of the implementation of the management plan and of running the protected area: administration, undertaking, coordinating, monitoring and supporting the implementation of the actions proposed in the management plan. After the designation of the protected area, the creation of the Protected Area Administration is the highest priority as it will be the key actor that will facilitate and ensure the implementation of the whole management plan, and will play a key role in any issue related to biodiversity conservation and socio-economic development. The creation of a management Committee, fully coordinated with the one of Karaburun-Sazan Marine National Park, will ensure the involvement of all the public administrations and local stakeholder groups in the management of the protected areas.

#### 1.0. Declaration of Sazani Island as a protected area<sup>23</sup>

##### *1.0.1. Develop a proposal for the declaration of Sazani Island as a protected area*

DESCRIPTION: To propose a legal protections status for Sazani Island.

COORDINATION: Albanian Authorities

STAKEHOLDERS INVOLVED: Albanian Authorities

PRIORITY: High (1)

TIME FRAME: Year 1

##### *1.0.2. Establish a consultation process*

DESCRIPTION: Organize a consultation process in order to allow the different stakeholders to express their opinions, needs and expectations in relation to the process of the declaration of the protected area, and to take into account those that can be compatible with the protection status.

COORDINATION: Albanian Authorities

STAKEHOLDERS INVOLVED: Government departments, Regional and Local Authorities, scientific institutions, NGOs, private sector, local community groups and associations, etc.

PRIORITY: High (1)

TIME FRAME: Year 1

##### *1.0.3. Approve the declaration of Sazani Island as a protected area, including the Regulations*

DESCRIPTION: Provide Sazani Island with a legal protections status and regulations in order to guarantee an integrated management of the island at land and at sea (in link with Karaburun-Sazan MPA).

COORDINATION: Council of Ministers

STAKEHOLDERS INVOLVED: Council of Ministers

PRIORITY: High (1)

TIME FRAME: Year 1

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<sup>23</sup> According to the provisions of the Law no. 8906, dated 6.6.2002, for Protected Areas, and Law no. 9868, dated 4.2.2008, on some supplements and changes in Law no. 8906, dated 6.6.2002 "for Protected Areas"; and the provisions of the Decision no. 267, dated 24. 04. 2003, concerning procedures regulating proposal and declaration of protected and buffer zones.



### 1.1. Protected Area Administration<sup>24</sup>

Any protected area needs to have a clearly designated management structure that will be responsible for the administration, undertaking, coordinating, monitoring and supporting the implementation of the actions proposed in the management plan. The creation of a Protected Area Administration is the highest priority as it will be the key actor that will facilitate and ensure the implementation of the whole management plan, and play a key role in any issue related to community development and ensuring their involvement in the management. A Management Committee must also be created to ensure the involvement of all the public administrations and local stakeholder groups in the management of the protected area

#### *1.1.1. Appoint the protected area technical staff: Director, technical officers and support staff*

DESCRIPTION: Provide the protected area with the human resources necessary for the adequate management and for the supervision of the rest of the staff.

The Protected Area Director (PAD) will lead the implementation of the management plan, and intervene and resolve any issue regarding the protected area; he/she will also be in charge of the overall administrative management, including human resource management, staff supervision and training, as well as the representation of the PA.

The Technical Officers will coordinate and supervise the implementation of the programmes included in the management plan; they will also assist the PAD in staff supervision and training. At least two (2) Technical Officers are needed, one Conservation Officer (CO) and one Outreach and Livelihoods Officer (OLO).

Support staff is also needed: an accountant and a secretary.

COORDINATION: Albanian Authorities

STAKEHOLDERS INVOLVED: Albanian Authorities

PRIORITY: High (1)

TIME FRAME: Year 1

#### *1.1.2. Appoint a Head Warden and rangers*

DESCRIPTION: Provide the staff necessary to guarantee the permanent surveillance and adequate control of the protected area, and who shall work in full coordination and share duties with the MPA. They will patrol the protected area in order to ensure that harmful or illegal activities do not take place, to prevent impacts, control all the activities in the field, deal with different users of the protected area, and support the implementation of the management actions. The rangers will be based on the Island and will work in shifts; at least four (4) rangers are needed in order to guarantee two shifts. A Head Warden (HW) shall be nominated among the rangers as the responsible for the team.

COORDINATION: Albanian Authorities

STAKEHOLDERS INVOLVED: Albanian Authorities

PRIORITY: High (1)

TIME FRAME: Year 1

#### *1.1.3. Appoint educational staff*

DESCRIPTION: Provide the protected area with an education team that will be responsible for guiding school groups around the protected area, as well as organizing educational and public awareness activities in collaboration with schools, the Local Authorities, NGOs and interested stakeholder groups. A minimum of two (2) educational staff are needed.

COORDINATION: Albanian Authorities

STAKEHOLDERS INVOLVED: Albanian Authorities

PRIORITY: High

TIME FRAME: Year 2

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<sup>24</sup> According to the provisions of Decision no. 266, dated 24.04.2003 concerning the administration of protected zones.

## 1.2. Management Committee

The management of the protected area needs to allow participation of the different stakeholder groups and to receive expert advice and supervision. For this a Management Committee is needed.

### *1.2.1. Create a Management Committee, including key national and local stakeholders directly involved with the PA*

DESCRIPTION: Ensures the involvement of all the public administrations and local stakeholder groups in the management of the protected area. The main role of the Management Committee is to advise and supervise the management of the protected area, including evaluation and (eventually) endorsement of the planning and reporting tools (Annual Work Plan, Annual Budget and Annual Report), the management programmes and main management actions.

The creation of one single Management Committee for the island and for the Karaburun-Sazan Marine National Park or their full coordination and integration will guarantee that both the marine area and the island are managed in an integrated way, and that the day-to-day management is fully coordinated, coherent and most efficient.

COORDINATION: Albanian Authorities

STAKEHOLDERS INVOLVED: representatives of Government departments, Regional and Local authorities, scientific institutions, NGOs, private sector, local community groups and associations, individual experts, etc.

PRIORITY: High (1)

TIME FRAME: Year 1

## 1.3. Administration, logistic facilities and equipment

Adequate and sufficient facilities and equipment are essential for the management structure to be able to undertake its functions. These facilities range from accommodation facilities for staff to an office equipped, vehicles and communication equipment.

### *1.3.1. Provide accommodation facilities for staff including logistic support*

DESCRIPTION: Provide the protected area staff with adequate accommodation for the time they will stay on the Island. This will include any logistic support required that should be organized in a sustainable way (water and electricity supply, waste treatment...)

COORDINATION: Albanian Authorities

STAKEHOLDERS INVOLVED: Albanian Authorities

PRIORITY: High (1)

TIME FRAME: Year 1-2

### *1.3.2. Provide a Protected Area Office on the island and the necessary equipment*

DESCRIPTION: Provide the Protected Area Administration with adequate office premises at the harbour and technical equipment needed to undertake its tasks (office furniture, computers and peripheral hardware, software, internet access, communication equipment, etc.).

COORDINATION: Albanian Authorities

STAKEHOLDERS INVOLVED: Albanian Authorities

PRIORITY: High (1)

TIME FRAME: Year 1-2

### *1.3.3. Provide vehicles to the Protected Area Administration*

DESCRIPTION: Provide the PA Administration with adequate and sufficient means of transportation around the protected area, both in the terrestrial and the marine parts. This is necessary for the rangers in order to undertake their control tasks in an efficient manner. The rest of the management team (manager, technical officers and administration staff) also need to be able to use transport means while in duty. The vehicles will also be essential in case of an emergency. The vehicles proposed are 1 off-road vehicle, motorbikes and 1 boat.

COORDINATION: Albanian Authorities

STAKEHOLDERS INVOLVED: Albanian Authorities

PRIORITY: High (1)

TIME FRAME: Year 1-2

*1.3.4. Provide fire extinction equipment*

DESCRIPTION: Provide the PA Administration with adequate and sufficient means to face any possible fire on the Island (mobile tanks and pumps, uniforms, tools, etc.).

COORDINATION: Albanian Authorities

STAKEHOLDERS INVOLVED: Albanian Authorities

PRIORITY: High (1)

TIME FRAME: Year 1-2

*1.3.5. Provide field equipment*

DESCRIPTION: Provide the PA Administration with adequate and sufficient field equipment (uniforms, photographic cameras, GPS, tablets, maps, binoculars, etc.)

COORDINATION: Albanian Authorities

STAKEHOLDERS INVOLVED: Albanian Authorities

PRIORITY: High (1)

TIME FRAME: Year 1-2

#### **1.4. Planning tools**

*1.4.1. Establish a Surveillance Plan, including an emergency protocol*

DESCRIPTION: Design and implement a Surveillance Plan for controlling and patrolling the protected area, both the terrestrial and the marine parts. The system will include protocols for different activities and situations, such as: i) patrolling the terrestrial area, ii) patrolling the marine area, iii) emergencies.

COORDINATION: PAD & HW

STAKEHOLDERS INVOLVED: Rangers

PRIORITY: High (1)

TIME FRAME: Year 1-2

*1.4.2. Prepare the Annual Work Plan and Annual Budget*

DESCRIPTION: The management plan will be implemented through Annual Work Plans that will identify the management actions to be carried out each year and the priority of each action within the year, and it will include an Annual Budget. This will allow the PA Administration and the different stakeholders involved in each action to clearly understand their roles, responsibilities and expected results, as well as the costs. The draft Annual Work Plan and draft Annual Budget must be prepared each year by the PA Administration before to the end of the previous year and submitted to the Management Committee for advice and endorsement.

COORDINATION: PAD

STAKEHOLDERS INVOLVED: All PA staff

PRIORITY: High (1)

TIME FRAME: Year 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

## **2. CONSERVATION AND RESTORATION PROGRAMME**

In link with GENERAL OBJECTIVE 2 : "To guarantee the long-term conservation of historical and cultural values of Sazani Island and to ensure suitable conditions for public welcoming in accordance with biodiversity conservation."

The Conservation Programme consists of all the management actions related to the restoration, conservation and maintenance of a good conservation status of the natural, historical and cultural values of the protected area. This is to offer to the good conditions for welcoming visitors on the site (including safety issues) and reduce the past and potential future impacts of human presence on environment.

## 2.1. Management of the built heritage

*Specific objective 2.1 : To maintain and restore the historical and cultural values to a good conservation state, while preventing any risk for visitors.*

### 2.1.1. Undertake a Study on landscaping and site valorization

DESCRIPTION: The Landscape Study will allow to evaluate the landscape quality of the site, its potentialities and its issues in term of heritage valorization (natural, historical, cultural), and will integrate propositions regarding the identification of buildings vocation (information point, visitor center, unit of management staff, logistical base and facilities for research and training programs, sanitation...), the definition of discovery paths and appropriated signposting system, as well as proposal of museography and equipments required.

COORDINATION: PAA

STAKEHOLDERS INVOLVED: Albanian Authorities, external experts

PRIORITY: High (1)

TIME FRAME: Year 1-2

### 2.1.2. Prevent public access to degraded buildings

DESCRIPTION: In order to guarantee the security of visitors, measure will be taken to prevent access to the buildings and features (bunkers, tunnels) that may pose a risk; these measures may include perimeter fencing of degraded buildings, delimitation of paths, sign posting and warnings, etc. In all cases, visitors will only be allowed to visit the island in organized groups led by PA educational staff, rangers or licensed tour guides.

COORDINATION: PAA

STAKEHOLDERS INVOLVED: External contract / Educational staff, rangers, tour guides

PRIORITY: High (1)

TIME FRAME: Year 1-10

### 2.1.3. Develop and implement a Master Plan for the existing buildings

DESCRIPTION: The Master Plan will be the basis for defining the fate and the potential future uses of the different buildings existing on Sazani. It will include:

- An evaluation of the values of the buildings: architectonic, historical, cultural and biodiversity.
- An inventory of buildings with architectonic, historical, cultural or biodiversity interest.
- An assessment of their conservation state.
- Proposals for buildings to be restored conserved or demolished.
- Allocation of potential future uses to buildings restored or conserved.
- Establishment of measures for providing breeding sites for birds, bats and other species in restored buildings.
- Adoption of sustainable architectural solutions, including collection of roof water, solar energy, sustainable isolation, green depuration for individual sewage treatments, noise attenuation (if needed), etc.

COORDINATION: PAA

STAKEHOLDERS INVOLVED: Albanian Authorities, external contract

PRIORITY: Medium (1)

TIME FRAME: Year 2-3 (development), 3-10 (implementation)

### 2.1.4. Restore the buildings which have architectonic, historical or cultural values

DESCRIPTION: Based on the Master Plan, restore those buildings that have specific values and that can be used as Protected Area facilities or education/interpretation resources. Based on the preliminary survey and assessment carried out in 2013, the following buildings could be restored: large and small school, Italian headquarters, power house, second large bunker north of the harbour.

COORDINATION: PAA

STAKEHOLDERS INVOLVED: Albanian Authorities, external contracts

PRIORITY: Medium (2)

TIME FRAME: Year 3-10



## **2.2. Restoration and land management**

*Specific objective 2.2 : To restore the degraded areas, in order to recover their original biodiversity values and functions.*

### **2.2.1. Develop and implement a Decontamination Plan**

DESCRIPTION: The Decontamination Plan will include all the actions for the removal and treatment of all types of waste existing on the whole island, including: metal (tanks, cars, ammunition debris, plates...), hazardous waste (asbestos, chemicals, batteries, powder filled barrels, unexploded ammunition...), and other inert non-hazardous waste (wood, plastic, glass, rubble and building debris)

COORDINATION: PAA

STAKEHOLDERS INVOLVED: Albanian Authorities, external Contract

PRIORITY: High (1)

TIME FRAME: Year 1-2 (development), 3-7 (implementation)

### **2.2.2. Develop and implement a Waste Management System**

DESCRIPTION: A system for waste management should be established and implemented, including (but not limited to) separate collection (for glass, paper, plastic, metals and cans, oils, hazardous waste, etc.), exportation of this waste to a recycling centre or waste treatment centre in Vlora, and composting of organic matter on the island (in a non-sensitive area).

COORDINATION: PAA

STAKEHOLDERS INVOLVED: Albanian Authorities, residents, visitors

PRIORITY: High (1)

TIME FRAME: Year 1-2 (development), 4-10 (implementation)

### **2.2.3. Develop and implement a Restoration Plan**

DESCRIPTION: The Restoration Plan will consist of the necessary management actions to restore degraded areas on the island. It will be prepared involving experts from all fields and taking into consideration landscape and soil restoration.

COORDINATION: PAA

STAKEHOLDERS INVOLVED: Albanian Authorities, external contract

PRIORITY: High (1)

TIME FRAME: Year 2-3 (development), 4-8 (implementation)

## **2.3. Eradication and prevention of impacts**

*Specific objective 2.3 : To eradicate and/or minimize any activity or existing feature that generates impacts and to prevent them in the future (e.g. pollution, waste, visual impacts, etc.).*

### **2.3.1. Replace existing facilities by new low-impact facilities**

DESCRIPTION: Those existing facilities and infrastructures that may cause an impact will be replaced by low-impact facilities: solar panels on roofs for energy production, green filters for wastewater treatment, underground lines...

COORDINATION: PAA

STAKEHOLDERS INVOLVED: Albanian Authorities, external contracts

PRIORITY: Medium (2)

TIME FRAME: Year 3-7

### **2.3.2. Conduct annual campaigns of manual cleaning of the shoreline**

DESCRIPTION: Each year a soft campaign for manual cleaning will be organized, to remove all artificial waste of beaches and coves.

COORDINATION: PAA

STAKEHOLDERS INVOLVED: NGOs, volunteers, MoD

PRIORITY: High (1)

TIME FRAME: Year 1-10

### **2.3.3. Develop and implement a Fire Prevention Plan**

DESCRIPTION: The Fire Prevention Plan will include the measures to prevent any potential forest fire and the protocols to extinguish them.

COORDINATION: PAD, CO, HW

STAKEHOLDERS INVOLVED: HW, rangers, MoD

PRIORITY: High (1)

TIME FRAME: Year 1-2 (development), 3-10 (implementation)

#### 2.3.4. *Remove and/or prevent other impacts*

DESCRIPTION: Any other impacts existing on the island will be identified and removed, and prevention measures will be taken to avoid them occurring in the future, e.g. soil erosion, pollution, aerial lines, paved roads, forest fires, etc.

COORDINATION: PAA

STAKEHOLDERS INVOLVED: Albanian Authorities, external contracts

PRIORITY: Medium (2)

TIME FRAME: Year 4-10

## 2.4. Habitat and species management

Specific objective 2.4 : *To achieve, enhance and maintain a good conservation status of the habitats, flora and fauna.*

#### 2.4.1. *Implement habitat protection and restoration measures*

DESCRIPTION: Measure will be undertaken to recover a good conservation status of important habitats. These will include:

- Temporary streams (e.g. Devil's Valley): manual clearing of vegetation in order to open the habitat.
- Freshwater springs: manual clearing of vegetation.
- Beach: protection and restoration of beach vegetation.

COORDINATION: CO & HW

STAKEHOLDERS INVOLVED: rangers, scientists, NGOs, volunteers, etc.

PRIORITY: Medium (2)

TIME FRAME: Year 3-10

#### 2.4.2. *Eradicate alien plant species*

DESCRIPTION: Exotic plant species will be subject to eradication measures, in particular the following species: *Carpobrotus edulis*, *Agave americana*, *Robinia pseudoacacia*, *Euphorbia maculata*, *Oxalis corniculata*, *Xanthium sp.*

COORDINATION: CO & HW

STAKEHOLDERS INVOLVED: rangers, scientists

PRIORITY: Medium (2)

TIME FRAME: Year 3-5

#### 2.4.3. *Eradicate alien animal species*

DESCRIPTION: Alien animal species (dogs, rats) will be subject to eradication programmes using methods innocuous to other species. Previous to taking eradication measures an evaluation of the consequences should be undertaken (see below).

COORDINATION: CO & HW

STAKEHOLDERS INVOLVED: rangers, scientists

PRIORITY: High (1)

TIME FRAME: Year 2-4

#### 2.4.4. *Prevent any introduction of alien species*

DESCRIPTION: Introduction of any exotic species to the island is forbidden; control measures will be taken at the harbour to prevent the arrival of any alien plant or animal species.

COORDINATION: CO & HW

STAKEHOLDERS INVOLVED: rangers

PRIORITY: High (1)

TIME FRAME: Year 2-10

#### 2.4.5. *Conserve, restore and create water points*

DESCRIPTION: Existing water points (ponds, paddles) will be conserved and, if needed, managed, and new ones may be created to provide drinking water for the fauna and habitat for plants, amphibians, invertebrates and other groups.

COORDINATION: CO  
STAKEHOLDERS INVOLVED: rangers, volunteers  
PRIORITY: Medium (2)  
TIME FRAME: Year 3-5

#### 2.4.6. *Establish access restrictions to areas important for remarkable flora and fauna*

DESCRIPTION: Access to areas important for birds or for bats will only be allowed for management, research and monitoring activities; among others, access restrictions apply to the following areas:

- Birds: cliffs and inlets along the western coast, plain meadows in central Sazani, forests areas, buildings.
- Bats: forest areas, bunkers, buildings tunnels, third large bunker north of the harbour.

COORDINATION: PAD, CO & HW  
STAKEHOLDERS INVOLVED: HW, rangers  
PRIORITY: High (1)  
TIME FRAME: Year 2-10

### 3. SUSTAINABLE DEVELOPMENT PROGRAMME

In link with GENERAL OBJECTIVE 3 : " To support and promote the development of new sustainable activities contributing to the socio-economic development of the local community in Vlora region, by allowing a controlled and progressive access of public to the site."

The Sustainable Development Programme includes all the actions addressed to create, organize and regulate opportunities for socio-economic development among the local community in Vlora region and beyond. This will be done through the development and implementation of ecotourism activities on the island (based on the organization of one-day visit for tourist boats - tours around the island and debarkment of passengers on the island-, guided tours, scubadiving activities, visits by private leisure boats... ) and the promotion of the Karaburun-Sazan Protected Areas as an added value for sustainable tourism in Albania.

#### 3.1. Implementation of ecotourism activities on the island

*Specific objective 3.1 : To support the creation of new business and job opportunities linked to ecotourism, using the Karaburun-Sazan protected areas as major natural, historical and cultural tourist assets.*

##### 3.1.1. *Undertake a technical and financial feasibility study and a market study*

DESCRIPTION: A feasibility study and a market study are needed to establish the technical and financial requirements for implementing an Ecotourism Plan.

COORDINATION: PAA  
STAKEHOLDERS INVOLVED: External experts  
PRIORITY: High (1)  
TIME FRAME: Year 1-2

##### 3.1.2. *Develop an Ecotourism Plan*

DESCRIPTION: Based on the feasibility study and the market study, develop an Ecotourism Plan. The implementation of the Ecotourism Plan should include at least the actions below (see actions 3.1.3 to 3.1.8).

COORDINATION: PAA  
STAKEHOLDERS INVOLVED: AA, LA, stakeholders / external contract  
PRIORITY: High (1)  
TIME FRAME: Year 1-2

##### 3.1.3. *Establish and implement a system for organizing one-day visits of tourist boats*

DESCRIPTION: The system should include (at least): the organization of boats shuttles with tours around the island and disembarkation of passengers on the island -with licence system for the boats-, periods to organize the visits, identification of visiting areas, time schedules for landing, maximum number of simultaneous visitors on land, and group size for inland visits.

COORDINATION: PAA

STAKEHOLDERS INVOLVED: educational staff, rangers, boat companies, tourist guides

PRIORITY: High (1)

TIME FRAME: Year 2 (development), 3-10 (implementation)

#### *3.1.4. Establish and implement a system for organizing scuba diving activities*

DESCRIPTION: The system should include (at least): identification of diving areas near the seafalls of the island western coast, periods, licensing system for the diving centres, maximum number of simultaneous divers allowed. The system will be established based on the regulations of the Marine Protected Area.

COORDINATION: PAA

STAKEHOLDERS INVOLVED: rangers, diving centres

PRIORITY: Medium (2)

TIME FRAME: Year 3 (development), 4-10 (implementation)

#### *3.1.5. Establish and implement a system for organizing visits by private leisure boats*

DESCRIPTION: The system should include (at least): identification of anchoring areas (e.g. harbour), a permit system for leisure boats sailing and anchoring, maximum number of simultaneous boats allowed. The system will be established based on the regulations of the Marine Protected Area.

COORDINATION: PAA

STAKEHOLDERS INVOLVED: rangers, educational staff

PRIORITY: Low (3)

TIME FRAME: Year 4 (development), 5-10 (implementation)

#### *3.1.6. Establish a certification and licensing system of tour guides*

DESCRIPTION: The system should include training and evaluation, including requirements, topics, exams, functions of licensed guides, etc.

COORDINATION: PAA

STAKEHOLDERS INVOLVED: candidates

PRIORITY: Low (1)

TIME FRAME: Year 2

#### *3.1.7. Develop and implement a "Code of Best Practice" for tourist activities in Vlora region*

DESCRIPTION: A "Code of Best Practice" shall be developed, including sustainable tourism practices in relation to the use of natural resources (biodiversity, water, energy, land uses, waste treatment ...). The Code will be developed following a strong consultation process involving: Regional and Local Authorities, boat companies, diving centres, hotel industry, NGOs and other relevant stakeholders.

COORDINATION: PAA

STAKEHOLDERS INVOLVED: Regional and Local Authorities, boat companies, diving centres, hotel industry, NGOs, other interested stakeholders

PRIORITY: Medium (2)

TIME FRAME: Year 3-4 (development), 5-10 (implementation)

#### *3.1.8. Support and create incentives for the creation of local business on ecotourism*

DESCRIPTION: Programmes to encourage and support the creation of local business by local stakeholders need to be created involving the Minister of Economic Development, Trade and Entrepreneurship (MoEDTE), Regional and Local Authorities.

COORDINATION: PAA

STAKEHOLDERS INVOLVED: MoEDTE, local stakeholders, Regional and Local Authorities,

PRIORITY: Medium (2)

TIME FRAME: Year 2-10

### **3.2. Promotion at national and international level**

*Specific Objective 3.2. To promote the Karaburun-Sazan area and its protected areas as an added value for sustainable tourism.*

#### *3.2.1. Facilitate the promotion of the Protected Area in national and international media*

DESCRIPTION: Facilitate the creation of media products about the Protected Area by local, national and international media, including for example TV documentaries, articles in newspapers, nature and travel magazines, etc.



COORDINATION: PAA

STAKEHOLDERS INVOLVED: Albanian Authorities, Local, national and international media

PRIORITY: Medium (2)

TIME FRAME: Year 3-10

### *3.2.2. Promote and encourage the publication of articles about the Protected Area in local media*

DESCRIPTION: Encourage and support writing and publishing of articles about the Protected Area in local media by local writers, community groups, visitors, NGOs, etc.

COORDINATION: MoE

STAKEHOLDERS INVOLVED: Local community groups, visitors, NGO, etc., local media

PRIORITY: Medium (2)

TIME FRAME: Year 3-10

### *3.2.3. Promote the Protected Area and Vlora region as an ecotourism destination*

DESCRIPTION: Present and promote the Protected Area and Vlora region at national and international tourism events and for a (ITB, WTM, etc.)

COORDINATION: PAA

STAKEHOLDERS INVOLVED: National, Regional & Local Authorities

PRIORITY: Low (3)

TIME FRAME: Year 5-10

### *3.2.4. Organize a National Conference on Ecotourism in Vlora*

DESCRIPTION: A National Conference on Ecotourism could be organized (e.g. every five years) in Vlora, to disseminate the experience of Vlora region and to share experiences among different ecotourism initiatives.

COORDINATION: PAA

STAKEHOLDERS INVOLVED: National, Regional & Local Authorities, local community groups, Private Sector

PRIORITY: Low (3)

TIME FRAME: Years 5 & 10

## **4. RESEARCH, MONITORING AND TRAINING COURSES PROGRAM**

In link with GENERAL OBJECTIVE 4 : "To make the island a "coastal centre of excellence" by supporting and facilitating applied scientific research, monitoring and training courses on the management of island, coastal and marine environments

Sazani Island has a strong potential to become a centre of excellence to promote applied scientific research and training on the management of coastal and marine environments. A field station could be created to provide the logistic facilities for national and international researchers undertaking surveys and monitoring activities in the protected area, as well as for the organization of training courses to the attention of stakeholders involved in management of coastal and marine protected areas.

The existing information about both natural and cultural values of Sazani Island is incomplete and needs to be further developed through different inventories. Research and survey is also needed to understand the more complex ecological relationships between species and the functioning of important habitats which may present special characteristics on an island ecosystem. Monitoring of different biodiversity groups is essential for assessing their conservation status, discovering the evolution and trends of the populations and ecosystems, and forecasting their future situation. Also monitoring is a fundamental tool for evaluating the success of the management actions.

### **4.1. Create facilities for applied research and training.**

*Specific objective 4.1. : To support and facilitate applied scientific research and training on the management of island, coastal and marine protected areas.*

#### **4.1.1. Create a centre of excellence for applied scientific research and training on the management of coastal and marine environments.**

DESCRIPTION: A field station could be created as a logistic base for national and international scientific research institutions to undertake scientific research and monitoring on the management of Sazani and

other island, coastal and marine protected areas. The field station could also serve as a centre of excellence for training of the stakeholders involved in the management of island, coastal and marine protected areas at national and international level (managers, technical and educational staff, rangers, environmental agents, etc.).

If conceived in a modern way, this field station and logistic base could serve as a centre for groups of volunteers involved in specific management activities, and could be closely linked with the welcoming of visitors, in a purpose of sensitization and public awareness.

COORDINATION: Albanian Authorities, PAA

STAKEHOLDERS INVOLVED: Universities, NSM, research centres and NGOs, international organizations, etc.

PRIORITY: Medium (2)

TIME FRAME: Year 4-5 (development), 6-10 (operation)

## **4.2. Inventory of natural environment and cultural heritage**

*Specific objective 4.2. : To increase knowledge about the nature, history and cultural values, by supporting and promoting inventories and scientific research.*

### **4.2.1 Complete the inventory of flora species, lichens and fungi**

DESCRIPTION: In order to fill the gap of information about the flora of Sazani, an inventory of flora species should be carried out, in particular during winter and early spring seasons, and on the other hand focusing on habitats least surveyed (e.g. sea cliffs).

COORDINATION: CO

STAKEHOLDERS INVOLVED: Universities, NSM, external experts

PRIORITY: High (1)

TIME FRAME: Year 2-4

### **4.2.2 Complete the inventory of bird species**

DESCRIPTION: The inventory should focus on the distribution and population assessment, paying special attention to unexplored zones (stony hills, remote areas) and to potential breeding species (seabirds, owls, song birds, etc.)

COORDINATION: CO

STAKEHOLDERS INVOLVED: Universities, NSM, external experts

PRIORITY: High (1)

TIME FRAME: Year 2-6

### **4.2.3. Complete the inventory of mammal species**

DESCRIPTION: The inventory aims to identify the mammal species present on the island and to determine their distribution and population assessment. The inventory should mainly focus on bats, with particular attention to forest species.

COORDINATION: CO

STAKEHOLDERS INVOLVED: Universities, NSM, external experts

PRIORITY: Medium (2)

TIME FRAME: Year 3-5

### **4.2.4. Complete the inventory of amphibian and reptile species**

DESCRIPTION: The inventory aims to identify the amphibian and reptile species present on the island and to determine their distribution and population assessment.

COORDINATION: CO

STAKEHOLDERS INVOLVED: Universities, NSM, external experts

PRIORITY: Medium (2)

TIME FRAME: Year 3-5

### **4.2.5. Complete the inventory of invertebrate species**

DESCRIPTION: The inventory aims to identify the invertebrate species present on the island and in particular to determine and identify possible endemic species and their distribution. Special attention will be paid to Coleoptera, subterranean fauna and litter fauna.

COORDINATION: CO

STAKEHOLDERS INVOLVED: Universities, NSM, external experts

PRIORITY: Medium (2)

TIME FRAME: Year 3-5

#### *4.2.6. Undertake an inventory of caves and subterranean systems*

DESCRIPTION: The inventory aims to identify the caves and subterranean systems existing on the island, both natural and artificial; a part from identifying the location and extent of these unique habitats, the inventory will allow to discover possible important species and their distribution.

COORDINATION: CO

STAKEHOLDERS INVOLVED: University, Speleology society, external experts

PRIORITY: Low (3)

TIME FRAME: Year 4-6

#### *4.2.7. Undertake an inventory of archaeological sites*

DESCRIPTION: In order to fill the gap of about archaeological information, an inventory of archaeological sites should be carried out.

COORDINATION: OLO

STAKEHOLDERS INVOLVED: University, NHM, external experts

PRIORITY: Medium (2)

TIME FRAME: Year 3-10

#### *4.2.8. Carry out a Toponymy study, including a map of site names*

DESCRIPTION: The list of site names of Sazani Island is rather short; a toponymy study will allow identifying the site names and producing a map of site names, which apart from a great intrinsic cultural value, will serve as geographic reference for the Protected Area management.

COORDINATION: OLO

STAKEHOLDERS INVOLVED: Universities, NHM, external experts

PRIORITY: Low (3)

TIME FRAME: Year 4-6

### **4.3. Research on natural environment and cultural heritage**

*Specific objective 4.2. : To increase knowledge about the nature, history and cultural values, by supporting and promoting inventories and scientific research.*

#### *4.3.1. Composition and ecological dynamics of remarkable plant communities*

DESCRIPTION: Study about the composition of plant communities of particular importance on the island, such as sea and inland cliffs and rocky areas, rocky and aerohaline grasslands, sandy habitats, etc.

COORDINATION: CO

STAKEHOLDERS INVOLVED: Universities, NSM, external experts

PRIORITY: Medium (2)

TIME FRAME: Year 4-5

#### *4.3.2. History of the terrestrial environment, including historical ecology and paleoecology*

DESCRIPTION: Research on the past flora of the island, using among others paleoecological techniques

COORDINATION: CO

STAKEHOLDERS INVOLVED: Universities, NSM, external experts

PRIORITY: Low (3)

TIME FRAME: Year 5-6

#### *4.3.3. Assessment of the ecological impacts of introduced mammal species*

DESCRIPTION: The study will pay special attention at the consequences of the potential eradication of dogs, rabbits and rats.

COORDINATION: CO

STAKEHOLDERS INVOLVED: Universities, NSM, external experts

PRIORITY: Medium (2)

TIME FRAME: Year 3-4

#### *4.3.4. Behaviour and feeding ecology of Eagle Owl*

DESCRIPTION: This study will include interactions of Eagle Owl with other birds and small mammals of the island.

COORDINATION: CO

STAKEHOLDERS INVOLVED: Universities, NSM, external experts



PRIORITY: Low (3)  
TIME FRAME: Year 5-6

**4.3.5. Assessment of the importance of Sazani for migratory birds and as a feeding ground for raptors**  
DESCRIPTION: Evaluation of the bird migration over Sazani following the Adriatic Flyway, through ringing campaigns, regular counts, etc. during both migratory seasons.

COORDINATION: CO

STAKEHOLDERS INVOLVED: Universities, NSM, external experts

PRIORITY: Low (3)

TIME FRAME: Year 5-6

**4.3.6. Assessment of the importance of Sazani for migratory bats**

DESCRIPTION: Evaluation of the bat migration over Sazani, using specific techniques for this group.

COORDINATION: PAA

STAKEHOLDERS INVOLVED: Universities, NSM, external experts

PRIORITY: Low (3)

TIME FRAME: Year 5-6

**4.3.7. History of Sazani island**

DESCRIPTION: The study will cover the past and modern history, through archival work, social surveys, interviews with former inhabitants, etc.

COORDINATION: OLO

STAKEHOLDERS INVOLVED: Universities, NHM, external experts

PRIORITY: Low (3)

TIME FRAME: Year 5-6

**4.3.8. Research of potential ancient settlements and archaeological remains**

DESCRIPTION: the ancient settlements and archaeological remains will be searched for, based on archival work and field work

COORDINATION: OLO

STAKEHOLDERS INVOLVED: Universities, NHM, external experts

PRIORITY: Low (3)

TIME FRAME: Year 6-10

#### **4.4. Monitoring the natural environment and cultural heritage**

*Specific objective 4.3. : To assess the status and trends of the natural, historical and cultural values, by undertaking specific monitoring programmes*

**4.4.1. Monitor alien plant species**

DESCRIPTION: The study shall focus on the control of the possible dispersion of alien invasive species, paying particular attention, especially to the areas around the harbour and the village.

COORDINATION: CO

STAKEHOLDERS INVOLVED: University, Rangers

PRIORITY: High (1)

TIME FRAME: Year 2, 4, 6, 8, 10

**4.4.2. Monitor the population dynamics of rare plants**

DESCRIPTION: This shall include the following species: *Serapias agg. orientalis*, *Allium commutatum*, *Jacobaea maritima*, *Brassica cretica subsp. aegea*, etc.

COORDINATION: CO

STAKEHOLDERS INVOLVED: Universities, NSM, External experts

PRIORITY: Low (3)

TIME FRAME: Year 5

**4.4.3. Monitor the populations of Eagle-owl and of seabirds**

DESCRIPTION: Eagle Owls are one of the most remarkable biodiversity features on the island; it is important to know the evolution and trends of this unique island population.

COORDINATION: CO  
STAKEHOLDERS INVOLVED: Technical Officer, Rangers  
PRIORITY: Low (3)  
TIME FRAME: Year 7, 9

*4.4.4. Monitor the bat and other mammal populations*

DESCRIPTION: Regular monitoring programmes addressed to determine the evolution and trends of bats and other mammal species will be carried out, using the most adequate techniques to each group.

COORDINATION: CO  
STAKEHOLDERS INVOLVED: Technical Officer, Rangers  
PRIORITY: Low (3)  
TIME FRAME: Year 7, 9

*4.4.5. Monitor the reptiles and amphibian populations*

DESCRIPTION: Regular monitoring programmes addressed to determine the evolution and trends of the herpetological fauna will be carried out, using the most adequate techniques to each group.

COORDINATION: CO  
STAKEHOLDERS INVOLVED: Technical Officer, Rangers  
PRIORITY: Low (3)  
TIME FRAME: Year 7, 9

*4.4.6. Monitor radioactive exposure*

DESCRIPTION: Undertake regular measures of radiation in order to verify that it stays under the acceptable thresholds

COORDINATION: CO  
STAKEHOLDERS INVOLVED: University or specialized company  
PRIORITY: Low (3)  
TIME FRAME: Year 4, 7, 10

## 5. VALORIZATION OF THE SITE, EDUCATION AND PUBLIC AWARENESS PROGRAMME

In link with GENERAL OBJECTIVE 5 : " To highlight Sazani heritage and raise awareness among the local and national population to communicate on the importance and uniqueness of Sazani island and the need for its conservation."

Opening the site to the public and promoting educational activities, interpretation and public use is one of the main objectives of a protected area. The development of activities of public welcoming (based on daily guided tours) will contribute to communicate on Sazan heritage. Besides, the protected area must be integrated within the social context of the local community and must ensure that the local community understands it as part of their shared natural and cultural heritage. This programme aims to bring the protected area close to the members of the local community, by providing them with relevant information, resources, tools and activities, so they can integrate the idea and the need for conserving the protected area for their own enjoyment and for the future generations.

### 5.1. Visitor management and interpretation

*Specific objective 5.1 : To organize the public welcoming on the site and communicate on the nature, the history and the cultural values of Sazan.*

*NOTE : On the basis of the Study on landscaping and site valorization (2.1.1.)*

*5.1.1. Create an information point*

DESCRIPTION: The Protected Area office at the harbour can be used as a first welcome facility and as an information point for visitors.

COORDINATION: PAA  
STAKEHOLDERS INVOLVED: external contract  
PRIORITY: High (1)  
TIME FRAME: Year 2

#### *5.1.2. Create basic visitor facilities at or near the harbour*

DESCRIPTION: Basic visitor facilities will be created at or near the harbour: toilets, pick-nick area with shade hut.

COORDINATION: PAA

STAKEHOLDERS INVOLVED: external contract

PRIORITY: High (1)

TIME FRAME: Year 2

#### *5.1.3. Create an Education and Interpretation Centre.*

DESCRIPTION: Based on the Landscape Study and the Master Plan, a building will be proposed as Education and Interpretation Centre. Among, other equipment and facilities, the Centre should include an interpretive exhibition about the values of Sazani Island, classroom for school activities, field laboratory, toilets, etc.

COORDINATION: PAA

STAKEHOLDERS INVOLVED: external contract

PRIORITY: High (1)

TIME FRAME: Year 2-4

#### *5.1.4. Create nature/history trails*

DESCRIPTION: Based on the Landscape Study, a number of nature/history trails for visitors will be designed and created. The trails will be clearly delineated, marked and signposted, and information boards about the biodiversity, landscape and history of Sazani will be placed at specific interest points. Measures will be taken to always ensure safety of visitors. An initial proposal for locating the nature/history trails is presented in the zonation map.

COORDINATION: PAA

STAKEHOLDERS INVOLVED: external contract

PRIORITY: High (1)

TIME FRAME: Year 2-4

#### *5.1.5. Create a marine nature trail at the beach*

DESCRIPTION: A marine nature trail could be created at the beach north of the harbour. Measures will be taken to always ensure safety of visitors.

COORDINATION: PAA

STAKEHOLDERS INVOLVED: educational staff

PRIORITY: Medium (2)

TIME FRAME: Year 3-4

#### *5.1.6. Create landscape viewpoints*

DESCRIPTION: A number of landscape viewpoints will be located in areas that can be easily accessed and adapted. The exact location will be defined by the Landscape Study. Measures will always be taken to always ensure safety of visitors.

COORDINATION: PAA

STAKEHOLDERS INVOLVED: external contract

PRIORITY: Low (3)

TIME FRAME: Year 4-6

#### *5.1.7. Create other visitor facilities at buildings of architectonical or historical value*

DESCRIPTION: Based on the Landscape Study and the Master Plan, some buildings of architectonical or historical value can be used as visitor or management facilities such as: educational facilities, historical museum.

COORDINATION: PAA

STAKEHOLDERS INVOLVED: external contract

PRIORITY: Low (3)

TIME FRAME: Year 6-10

## 5.2. Communication and information on Sazan protected area

*Specific objective 5.2 : To inform and make aware the local and national population about Sazan Protected Area*

### 5.2.1. Produce information materials

DESCRIPTION: Publish different types of materials to disseminate the values of the Protected Area: leaflets, posters, maps, etc.

COORDINATION: OLO & educational staff

STAKEHOLDERS INVOLVED: external contract

PRIORITY: High (1)

TIME FRAME: Year 2-4

### 5.2.2. Create, maintain and keep up to date a web site and social networks

DESCRIPTION: Develop a web site and create pages in the social networks to present the Protected Area and to disseminate information and activities. The web site and social networks will be regularly maintained and updated.

COORDINATION: OLO & educational staff

STAKEHOLDERS INVOLVED: external contract

PRIORITY: High (1)

TIME FRAME: Year 2-3 (creation), 3-10 (maintenance and updating)

### 5.2.3. Produce a video documentary

DESCRIPTION: Produce a video documentary to present the Protected Area and to disseminate its values.

COORDINATION: OLO & educational staff

STAKEHOLDERS INVOLVED: external contract

PRIORITY: Medium (2)

TIME FRAME: Year 3-4

### 5.2.4. Organize public events about the Protected Area

DESCRIPTION: In collaboration with local stakeholders (Regional & Local Authorities, Local community groups, NGOs, private sector, etc.), organize public events in Vlora, Orikumi, Rhadime, Qendër, etc.

COORDINATION: OLO & educational staff

STAKEHOLDERS INVOLVED: Regional & Local Authorities, Local community groups, NGOs, private sector, etc.

PRIORITY: Medium (2)

TIME FRAME: Year 3-10

## 5.3. Environmental education

*Specific objective 5.3 : To acquaint and create awareness among the educational community about the natural, historical and cultural heritage of Sazan and to facilitate its use as an educational resource.*

### 5.3.1. Organize environmental education activities in the Protected Area

DESCRIPTION: A programme of environmental education activities and visits to the Protected Area addressed to schools, NGOs, volunteers, local community groups, associations, etc. should be designed and implemented.

COORDINATION: OLO & educational staff

STAKEHOLDERS INVOLVED: Schools, parent's associations, NGOs, volunteers, local community groups, associations, etc.

PRIORITY: High (1)

TIME FRAME: Year 2-10

### 5.3.2. Design and produce educational materials, resources and tools

DESCRIPTION: Education materials, resources and tools (e.g. fact sheets, presentations, video, etc.) need to be produced for the environmental education activities and visits.

COORDINATION: OLO & educational staff

STAKEHOLDERS INVOLVED: Teachers, NGOs, volunteers, local associations, etc.

PRIORITY: High (1)

TIME FRAME: Year 2-4

#### 5.3.3. *Organize talks about the Protected Area for local community groups*

DESCRIPTION: Talks can be organized at schools, NGOs, local associations, and other community groups as a general introduction to the Protected Area or as part of the preparatory work previous to the visit.

COORDINATION: OLO & educational staff

STAKEHOLDERS INVOLVED: Schools, NGOs, local associations, other community groups, etc.

PRIORITY: Medium (2)

TIME FRAME: Year 3-10

#### 5.3.4. *Organize a school competition for the design of the logo of the Protected Area*

DESCRIPTION: A competition for the design of the official logo of the Protected Area addressed to the schools of Vlora region will certainly help to disseminate and raise awareness about the values of Sazani.

COORDINATION: OLO & educational staff

STAKEHOLDERS INVOLVED: Schools

PRIORITY: High (1)

TIME FRAME: Year 2

#### 5.3.5. *Publish a Protected Area newsletter*

DESCRIPTION: The newsletter will inform about the activities and news related to the Protected Area and other protected areas in the country. Local associations and stakeholders will be encouraged to write articles.

COORDINATION: OLO & educational staff

STAKEHOLDERS INVOLVED: NGOs, scientists, volunteers groups, associations, local stakeholders, etc.

PRIORITY: Medium (2)

TIME FRAME: Year 3-10

#### 5.3.6. *Organize an open photograph competition about the Protected Area*

DESCRIPTION: A photograph competition about the values of the Protected Area could be organized (e.g. every two years); the photographs could be used for posters, leaflets, publications and other materials of the Protected Area.

COORDINATION: OLO & educational staff

STAKEHOLDERS INVOLVED: Local community

PRIORITY: Low (3)

TIME FRAME: Year 3, 5, 7, 9

## 6. CAPACITY BUILDING PROGRAMME

In link with GENERAL OBJECTIVE 6 : " To increase capacity among technical staff and local stakeholders involved in the conservation of Sazani island".

Capacity building and training are essential to improve the skills of Protected Area staff and of local stakeholders who are involved with the protected area. On one hand, not all the Protected Area staff that will be recruited or appointed will have all the skills needed for properly organizing the management and successfully implementing it; for that reason a series of training activities will provide the new skills needed and strengthen the existing ones. On the other hand, the Protected Area opens new opportunities to local stakeholders for developing economic activities, mainly related to tourism; training activities specifically designed for this target group will guarantee that these activities are carried out in a sustainable way. Finally, a voluntary Scheme will ensure the involvement of the local community in the management of the protected area.

### 6.1. Capacity building and training of Protected Area staff

*Specific objective 6.1 : To increase capacity among the management staff of the protected area and stakeholders that will be directly or indirectly involved in its management, through capacity building and training programmes.*



#### *6.1.1. Undertake a training needs assessment of the Protected Area staff*

DESCRIPTION: In order to identify the training priorities in terms of target groups and themes, a training needs analysis of the Protected Area staff will be carried out.

COORDINATION: PAD

STAKEHOLDERS INVOLVED: All PA staff / external experts

PRIORITY: High (1)

TIME FRAME: Year 2-3

#### *6.1.2. Organize training activities for technical staff*

DESCRIPTION: The training topics may include: governance, conflict resolution, GIS, use of GPS, project development, organizational development, communication, etc.

COORDINATION: PAD

STAKEHOLDERS INVOLVED: Technical staff / University, external experts

PRIORITY: High (1)

TIME FRAME: Every 2 years

#### *6.1.3. Organize training activities for rangers*

DESCRIPTION: The training topics may include: biodiversity conservation and monitoring techniques, use of GPS, first aid, safety at sea, etc.

COORDINATION: OLO, CO & HW

STAKEHOLDERS INVOLVED: rangers / University, external experts

PRIORITY: High (1)

TIME FRAME: Every 2 years

#### *6.1.4. Organize training activities for educational staff*

DESCRIPTION: The training topics may include: biodiversity and conservation issues, communication, first aid, etc.

COORDINATION: OLO

STAKEHOLDERS INVOLVED: Educational staff; University, external experts

PRIORITY: High (1)

TIME FRAME: Every 2 years

#### *6.1.5. Organize training activities for MoD staff based on the island*

DESCRIPTION: The training topics may include: biodiversity and conservation issues, communication, first aid, safety at sea, etc.

COORDINATION: OLO, HW & rangers

STAKEHOLDERS INVOLVED: MoD staff; University, external experts

PRIORITY: High (1)

TIME FRAME: Every 2 years

### **6.2. Capacity building and training of local stakeholders**

*Specific objective 6.2 : To promote capacity building and training programmes addressed to the local community in Vlora region in fields related to new sustainable economic activities.*

#### *6.2.1. Organize training activities for tourist boat companies*

DESCRIPTION: The target audience are captains, sailors and other staff and the training topics may include: biodiversity and conservation issues, PA regulations, etc.

COORDINATION: OLO

STAKEHOLDERS INVOLVED: tourist boat companies

PRIORITY: Medium (2)

TIME FRAME: Year 3, 6, 9

#### *6.2.2. Organize training activities for local community groups*

DESCRIPTION: The target audience are local associations, NGOs, local private sector, etc. and the training topics may include: biodiversity and conservation issues, PA regulations, etc.

COORDINATION: OLO

STAKEHOLDERS INVOLVED: Local associations, NGOs, private sector, etc.

PRIORITY: Medium (2)

TIME FRAME: Year 3, 6, 9

**6.2.3. Support the implementation of the “Best Practices Code”**

DESCRIPTION: Organize events and training sessions to disseminate and support the implementation of the “Best Practices Code” by local stakeholders.

COORDINATION: OLO

STAKEHOLDERS INVOLVED: Regional and Local Authorities, private sector, local associations, etc.

PRIORITY: Medium (2)

TIME FRAME: Year 5-10

**6.3. Establish a volunteer programme**

*Specific objective 6.2: To promote capacity building and training programmes addressed to the local community in Vlora region in fields related to new sustainable economic activities.*

**6.3.1. Design a volunteer programme and promote the creation of groups of volunteers**

DESCRIPTION: The volunteer programme will be addressed to target groups among the local community: NGOs, schools, local associations, private sector, etc. The Programme will be developed and coordinated by a Technical Officer with the support from the educational staff and the rangers.

COORDINATION: OLO, educational staff, rangers

STAKEHOLDERS INVOLVED: NGOs, schools, local associations, private sector, etc.

PRIORITY: High (1)

TIME FRAME: Year 2-3

**6.3.2. Organize volunteering activities**

DESCRIPTION: Volunteer activities will be organized such as: participation in conservation and monitoring activities, tree planting, manual beach cleaning, etc.

COORDINATION: OLO, educational staff, rangers

STAKEHOLDERS INVOLVED: NGOs, schools, local associations, private sector, Local Authorities, etc.

PRIORITY: High (1)

TIME FRAME: Year 2-10

### 3.4. WORK PROGRAM

The Work Programme is a tool for presenting the different management programmes and actions in a structured, synthetic and clear way, in order to facilitate their implementation. It is presented in a tabular form and it includes:

- The name of each management programme.
- The general objective corresponding to each programme.
- The specific objective corresponding to each sub-programme.
- The name of each management sub-programme.
- The management action.
- The priority of each management action in scale of 1 to 3. 1: high priority; 2: medium priority; 3: low priority.
- The year(s) during which each management action will be implemented, over a period of 10 years starting at the moment of the declaration of the protected area.
- The structure/body/agency in charge of coordinating the implementation of each management action and the stakeholders involved.

Code	Management Programme / Action	Priority	Year										Coordination / Stakeholders involved (proposed)	
		1-3	1	2	3	4	5	6	7	8	9	10		
1	INSTITUTIONAL SET-UP, ADMINISTRATION AND GOVERNANCE PROGRAMME <i>"To declare Sazan island as a protected area and ensure the implementation of an efficient and effective management in coordination with Karaburun-Sazan Marine National Park."</i>													
Specific objective 1.0. To declare Sazani island as a protected area <sup>25</sup>														
1.0.1	Develop a proposal for the declaration of Sazani Island as a protected area	1												AA <sup>26</sup>
1.0.2	Establish a consultation process with the relevant stakeholders	1												AA / Government departments, Regional & Local authorities, scientific institutions, NGOs, private sector, local community groups and associations...
1.0.3	Approve the declaration of Sazani Island as a protected area, including the Regulations	1												Council of Ministers
Specific objective 1.1. To appoint Protected Area Management Administration														
1.1.1	Appoint PA technical staff: PAD, TOs, support staff	1												AA
1.1.2	Appoint a Head Warden (HW) and rangers	1												AA
1.1.3	Appoint educational staff	1												AA
Specific objective 1.2. To create a Management Committee														
1.2.1	Create a Management Committee, including key national and local stakeholders directly involved with the PA	1												AA / Government departments, Regional & Local authorities, scientific institutions, NGOs, relevant local companies, relevant local community groups and associations, individual experts...

<sup>25</sup> According to the provisions of the Law no. 8906, dated 6.6.2002, for Protected Areas, and Law no. 9868, dated 4.2.2008, on some supplements and changes in Law no. 8906, dated 6.6.2002 "for protected areas"; and the provisions of the Decision no. 267, dated 24. 04. 2003, concerning procedures regulating proposal and declaration of protected and buffer zones.

<sup>26</sup> Albanian Authorities

Specific objective 1.3. To provide logistic facilities and equipment													
1.3.1	Provide accommodation facilities for staff including logistic support	1											AA / AA
1.3.2	Provide a PA office and equipment	1											AA
1.3.3	Provide vehicles	1											AA
1.3.4	Provide fire extinction equipment	1											AA
1.3.5	Provide field equipment	1											AA
Specific objective 1.4. To establish planning tools													
1.4.1	Establish a Surveillance Plan, including an emergency protocol	1											PAD <sup>27</sup> & HW <sup>28</sup> / rangers
1.4.2	Prepare the Annual Work Plan and Annual Budget	1											PAD / All PA staff
2	CONSERVATION AND RESTORATION PROGRAMME "To guarantee the long-term conservation of historical and cultural values of Sazani Island and to ensure suitable conditions for public welcoming in accordance with biodiversity conservation."												
Specific objective 2.1. To maintain and restore the historical and cultural values to a good conservation state, while preventing any risk for visitors.													
2.1	Management of the built heritage												
2.1.1	Undertake a Study on landscaping and site valorization	1											PAA / External experts
2.1.2	Prevent public access to degraded buildings	1											PAA / External contract & Educational staff, tour guides, rangers
2.1.3	Develop a Master Plan for the existing buildings - Development (d) - Implementation (i)	1		d	d i	i	i	i	i	i	i	i	PAA / AA, external contracts
2.1.4.	Restore the buildings which have architectonic, historical or cultural values	2											PAA / AA, external contracts
Specific objective 2.2. To restore the degraded areas, in order to recover their original biodiversity values and functions.													
2.2	Restoration and land management												

<sup>27</sup> Protected Area Director

<sup>28</sup> Head-Warden



2.2.1	Develop and implement a Decontamination Plan - Development (d) - Implementation (i)	1	d	d	i	i	i	i	i				PAA / AA, external contract
2.2.2.	Develop and implement a Waste Management System - Development (d) - Implementation (i)	1	d	d	i	i	i	i	i	i	i	i	PAA / AA, Residents, visitors
2.2.3.	Develop and implement a Restoration Plan - Development (d) - Implementation (i)	1		d	d	i	i	i	i	i			PAA / AA, external contract
<b>Specific objective 2.3. To eradicate and/or minimize any activity or existing feature that generates impacts and to prevent them in the future.</b>													
2.3.	<b>Eradication and prevention of impacts</b>												
2.2.1	Replace existing facilities by new low-impact facilities	2											PAA <sup>29</sup> / AA, external contract
2.2.2	Conduct annual campaigns of manual cleaning of the shoreline	1											PAA / NGOs, volunteers, MoD
2.2.3	Develop and implement a Fire Prevention Plan - Development (d) - Implementation (i)	1	d	d	i	i	i	i	i	i	i	i	PAD, CO, HW / HW, rangers, MoD
2.2.4	Remove and/or prevent other impacts	2											PAA / AA, external contracts
<b>Specific objective 2.4. To achieve and maintain a good conservation status of the habitats, flora and fauna.</b>													
2.4.	<b>Habitat and species management</b>												
2.4.1	Implement habitat protection and restoration measures (streams, springs, beaches...)	2											CO <sup>30</sup> /HW / rangers, scientists, NGOs, volunteers..
2.4.2	Eradicate alien plant species	2											CO/HW / rangers, scientists
2.4.3	Eradicate alien animal species	1											CO/HW / rangers, scientists
2.4.4	Prevent any introduction of alien species	1											CO/HW / rangers
2.4.5	Conserve, restore and create water points	2											CO / rangers, volunteers
2.4.6	Establish access restrictions to areas important for remarkable flora and fauna	1											PAD, CO & HW / rangers

<sup>29</sup> Protected Area Administration

<sup>30</sup> Conservation officer

3	SUSTAINABLE DEVELOPMENT PROGRAMME " To support and promote the development of new sustainable activities contributing to the socio-economic development of the local community in Vlora region, by allowing a controlled and progressive access of public to the site."												
Specific objective 3.1. To support the creation of new business and job opportunities linked to ecotourism, using the Karaburun-Sazan protected areas as major natural, historical and cultural tourist assets.													
3.1	Implementation of ecotourism activities on the island												
3.1.1	Undertake a technical and financial feasibility study and a market study	1											PAA / External experts
3.1.2	Develop an Ecotourism Plan	1											PAA / AA, local authorities, stakeholders / external contract
3.1.3	Establish and implement a system for organizing one-day visits of tourist boats - Development (d) - Implementation (i)	1		d	i	i	i	i	i	i	i	i	PAA / educational staff, rangers, boat companies, tourist guides
3.1.4	Establish and implement a system for organizing scuba diving activities - Development (d) - Implementation (i)	2			d	i	i	i	i	i	i	i	PAA / rangers, diving centres,
3.1.5	Establish and implement a system for organizing visits by private leisure boats - Development (d) - Implementation (i)	3				d	i	i	i	i	i	i	PAA / rangers, educational staff
3.1.6	Establish a certification and licensing system of tour guides	1											PAA / candidates
3.1.7	Develop and implement a "Code of Best Practice" for tourist activities in Vlora region - Development (d) - Implementation (i)	2			d	d	i	i	i	i	i	i	PAA / Regional & Local Authorities, boat companies, diving centres, hotel industry, NGOs, other stakeholders
3.1.8	Support and create incentives for the creation of local business on ecotourism	2											PAA / MoEDTE, Local stakeholders, Regional & Local Authorities
Specific objective 3.2. To promote the Karaburun-Sazan area and its protected areas as an added value for sustainable tourism.													
3.2	Promotion at national and international level												
3.2.1	Facilitate the promotion of the PA in national and international media	2											PAD / AA, Local, national & international media

3.2.2	Promote and encourage the publication of articles about the PA in local media	2											PAD / Local community groups, visitors, NGO, etc., local media
3.2.3	Promote the Protected Area and Vlora region as an ecotourism destination	3											PAD / National, Regional & Local Authorities
3.2.4	Organize a National Conference on Ecotourism in Vlora	3											PAD / National, Regional & Local Authorities, local community groups, Private Sector
4	RESEARCH, MONITORING & TRAINING COURSES PROGRAMME <i>"To make the island a "coastal centre of excellence" by supporting and facilitating applied scientific research, monitoring and training courses on the management of island, coastal and marine environments"</i>												
Specific objective 4.1. To support and facilitate applied scientific research and training on the management of island, coastal and marine protected areas.													
4.1.	Create facilities for applied research and training												
4.1.1.	Create a centre of excellence for applied scientific research and training: - Development (d) - Operation (i)	2				d	d	i	i	i	i	i	AA, PAA / Universities, NSM, research centres and NGOs, international organizations, etc.
Specific objective 4.2. To increase knowledge about the nature, history and cultural values, by supporting and promoting inventories and scientific research													
4.2.	Inventory of natural environment & cultural heritage												
4.2.1	Complete the inventory of flora species, mainly during winter and early spring, and on sea cliff habitats	1											CO / Universities, NSM, external experts
4.2.2	Complete the inventory of bird species	1											CO / Universities, NSM, external experts
4.2.3	Complete the inventory of mammal species	2											CO / Universities, NSM, external experts
4.2.4	Complete the inventory of amphibian and reptile species	2											CO / Universities, NSM, external experts
4.2.5	Complete the inventory of invertebrate species	2											CO / Universities, NSM, external experts
4.2.6	Undertake an inventory of caves and underground systems	3											CO / Universities, Speleology society, external experts
4.2.7	Undertake an inventory of archaeological sites	2											OLO / Universities, NHM, external experts



5	VALORIZATION OF THE SITE, EDUCATION, AND PUBLIC AWARENESS PROGRAMME " To highlight Sazani heritage and raise awareness among the local and national population to communicate on the importance and uniqueness of Sazani island and the need for its conservation."												
Specific objective 5.1. To organize the public welcoming on the site and communicate on the natural, historical and cultural heritage of Sazan													
5.1.	Visitor management and interpretation												
5.1.1	Create an information point at the harbour	1											PAA / External contract
5.1.2	Create basic visitor facilities at or near the harbour	1											PAA / External contract
5.1.3	Create an Education and Interpretation Centre	1											PAA / External contract
5.1.4	Create nature/history trails	1											PAA / External contract
5.1.5	Create a marine nature trail at the beach	2											PAA / Educational staff
5.1.6	Create landscape viewpoints	3											PAA / External contract
5.1.7	Create other visitor facilities at buildings of architectonical or historical value	3											PAA / External contract
Specific objective 5.2. To inform and make aware the local and national population about Sazan Protected Area													
5.2.1	Produce information materials	1											OLO & educational staff / External contract
5.2.2	Create and maintain a web site and social networks (creation, maintenance and updating)	1											OLO & educational staff / External contract
5.3.3	Produce a video documentary	2											OLO & educational staff / External contractor
5.4.4	Organize public events	2											OLO & educational staff / Regional & Local Authorities, Local community groups, NGOs, private sector, etc.
Specific objective 5.3. To inform and make aware the local and national population about Sazan Protected Area													
5.3	Environmental education												
5.3.1	Organize environmental education activities in the PA	1											OLO <sup>31</sup> & educational staff / Schools, parent's associations, NGOs, volunteers, local community groups, associations, etc.
5.3.2	Design and produce educational materials, resources and tools	1											OLO & educational staff / Teachers, NGOs, volunteers, local associations, etc.

<sup>31</sup> Outreach and Livelihoods Officer  
Management plan for Sazani island, Albania  
January 2015



5.3.3	Organize talks about the PA for local community groups	2												OLO & educational staff / Schools, NGOs, local community groups, associations, etc.
5.3.4	Organize a school competition for the design of the logo of the PA	1												OLO & educational staff / Schools
5.3.5	Publish a newsletter informing of the activities and news related to the PA and other protected areas	2												OLO & educational staff / NGOs, scientists, volunteers groups, associations, local stakeholders, etc.
5.3.6	Organize an open photograph competition about the PA (photos can be used for posters)	3												OLO & educational staff / Local community
6	CAPACITY BUILDING PROGRAMME " To increase capacity among technical staff and local stakeholders involved in the conservation of Sazani island".													
Specific objective 6.1. To increase capacity among the management staff of the protected area and stakeholders that will be directly or indirectly involved in its management, through capacity building and training programmes														
6.1	Capacity building and training of PA staff													
6.1.1	Undertake a training needs assessment of the PA staff	1												PAD / All PA staff, external experts
6.1.2	Organize training activities for technical staff	1												PAD / technical staff / University, external experts
6.1.3	Organize training activities for rangers	1												OLO, CO & HW / rangers / University, external experts
6.1.4	Organize training activities for educational staff	1												OLO / educational staff /University, external experts
6.1.5	Organize training activities for MoD staff	1												OLO, HW& rangers / MoD staff
Specific objective 6.2. To promote capacity building and training programmes addressed to the local community in Vlora region in fields related to new sustainable economic activities														
6.2	Capacity building and training of local stakeholders													
6.2.1	Organize training activities for tourist boat companies	2												OLO / tourist boat companies
6.2.2	Organize training activities for local community groups	2												OLO / Local community groups, NGOs, private sector, etc.
6.2.3	Support the implementation of the “Best Practices Code”	2												OLO / Regional and Local Authorities, private sector, local community groups, etc.

<b>6.3</b>	<b><i>Establish a volunteer programme</i></b>												
6.3.1	Design a volunteer programme and promote the creation of groups of volunteers	1											<u>OLO, educational staff &amp; rangers</u> / NGOs, schools, local associations, private sector, etc.
6.3.2	Organize volunteering activities	1											<u>OLO, educational staff &amp; rangers</u> / NGOs, schools, local associations, private sector, etc.

## PART 4. MONITORING AND EVALUATION OF MANAGEMENT

It is very important to regularly assess the level and state of the implementation of the management plan, as well as the success and effectiveness of the management actions of the protected area. The assessment allows identifying the level of fulfillment of the management objectives as well as any deviation regarding the pre-established work programme. The assessment shall be done annually by the Protected Area Administration and under the advice of the Management Committee.

There are different tools for monitoring and assessing the management of a protected area. On one hand, it is proposed that the management is monitored using Annual Work Plans and Annual Budgets, and that the results are presented each year in an Annual Report. While the Annual Work Plan serve as a tool for monitoring the implementation, the Annual Budget is a tool for financial monitoring; the assessment of the management is presented in the Annual Reports.

On the other hand, a specific standard tool shall be used for assessing the effectiveness of the overall management of the protected area. Many such tools exist (see below) and in the case of this management plan it is proposed to use the global standard developed by the World Bank and the WWF, the “Management Effectiveness Tracking Tool (METT)”, which is based on the “Framework for Assessing Management Effectiveness of Protected Areas” adopted by the IUCN World Commission on Protected Areas (WCPA).

### 4.1. ANNUAL PLANNING: ANNUAL WORK PLANS AND ANNUAL BUDGETS

The proposed duration of the management plan is ten years, so the management programmes and actions (chapter 3.3) will be implemented over this period. As this is a medium term period, in order to facilitate the annual implementation of the management plan and to have a more dynamic and efficient planning tool, a specific Annual Work Plan shall be developed.

The Annual Work Plan allows identifying the actions that must be carried out the following year and the priority of each action within the year; this will also let the Protected Area Administration, the Management Committee, the administrations and the different stakeholders involved in each action, to clearly understand their particular roles and responsibilities and the expected results.

The contents of the Annual Work Plan follow the same structure and order than chapter 3.3 (Management Programmes and Actions). For each management action, it should include:

1. Code of the management action.
2. Title of the management action.
3. Specific activities to be carried out during the year (in most cases, each management action can be subdivided in more concrete activities, that will be implemented in a chronological order).
4. Staff in charge of the coordination of each activity and those administrations and stakeholders involved in its implementation.
5. Expected results of the management action at the end of the year (a tool for monitoring the level of implementation).
6. Schedule of implementation of these activities during the year (depending on the activity, the schedule will be prepared on a monthly or quarterly basis) (a complementary tool for monitoring the level of implementation).
7. Estimated budget for each management action (a tool for financial monitoring).

A table summarizing the items mentioned above shall be annexed to the Annual Work Plan, following the format of the Work Programme (see chapter 3.4). In parallel, an Annual Budget for the whole year shall be built based on the budgets estimated for each individual management action and programme.

The Annual Work Plan and Annual Budget must be prepared by the Protected Area Administration and submitted to the Protected Area Management Committee for advice, evaluation and endorsement, before to the end of the previous year.

## 4.2. ANNUAL REPORTS

The results of the implementation of the management plan and the assessment will be presented and analyzed in Annual Reports. Annual Reports are key tools for monitoring the effectiveness of the implementation of the Annual Work Plan and also for monitoring the effective use of funds.

For each individual management action, the report should include the progress made during the year, indicate the stakeholders involved, specify the actions/activities that could not be implemented, identify the causes, highlight any unplanned action that has been undertaken, and detail the actual expenditure in relation to the estimated budget.

The contents of the Annual Report should follow the same structure and order than the Annual Plan:

1. Code of the management action.
2. Title of the management action.
3. Specific activities carried out during the year (following the structure of the Annual Work Plan), adding any unplanned action that has been undertaken, and indicating the actions/activities that could not be implemented, and the causes.
4. Stakeholders that have been involved in each activity.
5. Results achieved for each management action compared to the expected results, indicating any deviation in relation to the actions planned and the causes (key tool for monitoring the level of implementation).
6. Actual schedule of implementation of the activities, indicating any deviation in relation to the schedule planned and the causes (key tool for monitoring the level of implementation).
7. Actual expenditure on each management action, in relation to the estimated budget (key tool for monitoring the effective use of funds).

The Annual Report shall be prepared by the Protected Area Administration and submitted to the Protected Area Management Committee for advice, evaluation and endorsement.

## MID-TERM AND FINAL EVALUATIONS AND REPORTS

At the end of years 4 and 7, a process for mid-term monitoring and assessment shall be carried out. A Mid-term Report including the overall results of the previous three-year period shall be compiled based on the previous Annual Reports and following the same format. The aim of the Mid-term Report is to assess the level of implementation of the management plan and the effective use of funds during the three-year period. A summary of the report shall be prepared using the original Work Programme as a reference, and any deviation, both in terms of implementation and of used of funds, should be identified and justified.

Based on the findings of the three year report, a process for adapting and updating the management plan for the remaining period should be undertaken adopting a dynamic planning approach and following the principles of adaptive management.

During the last year of the management plan, a global assessment shall be carried out, in order to evaluate the level of implementation of the overall management plan and the effective use of funds. The results of this global assessment shall be presented in a Final Report, which shall be based on the previous Annual and Mid-term Reports and follow the same format. A summary of the report shall be prepared using the original Work Programme as a reference, and any deviation, both in terms of implementation and of used of funds, should be identified and justified.

This global assessment after the 10 year period shall be the basis for the revision of the current management plan and for developing a new management plan for the next period.

The Three-year Report and the Final Report must be prepared by the Protected Area Administration and submitted to the Protected Area Management Committee for advice, evaluation and endorsement

### 4.3. ASSESSMENT OF THE MANAGEMENT EFFECTIVENESS

According to the Convention on Biological Diversity<sup>32</sup>, the evaluation of management effectiveness is generally achieved by the assessment of series of criteria (represented by carefully selected indicators) against agreed objectives or standards. Management effectiveness evaluation is defined as the assessment of how well protected areas are being managed - primarily the extent to which management is protecting values and achieving goals and objectives. The term management effectiveness reflects three main 'themes' in protected area management:

- design issues relating to both individual sites and protected area systems;
- adequacy and appropriateness of management systems and processes; and
- delivery of protected area objectives including conservation of values.

In order to provide guidance to protected areas managers in the development of systems for assessing the effectiveness of their management and to encourage standards for assessment and reporting, the IUCN World Commission on Protected Areas (WCPA) developed a "Framework for Assessing Management Effectiveness of Protected Areas"<sup>33</sup>. The Framework is based on the idea that good protected area management follows a process that has six distinct stages: it begins with understanding the context of existing values and threats, progresses through planning, and allocation of resources (inputs), and as a result of management actions (processes), eventually produces products and services (outputs), that result in impacts or outcomes.

In order to implement the IUCN-WCPA Framework, the "World Bank/WWF Alliance worldwide" developed the "Management Effectiveness Tracking Tool (METT or Tracking Tool)"<sup>34</sup>. The METT aims to report progress on management effectiveness, as it provides a quick overview of progress in improving the effectiveness of management in individual protected areas, to be filled in by the Protected Area Administration. The Tracking Tool is not designed for allowing comparison between sites: the scoring system is most useful for tracking progress over time in one site.

The Tracking Tool is not aimed to allow a detailed evaluation of outcomes and is really addressed at providing a quick overview of the management steps identified in the WCPA Framework up to and including outputs. An adaptation of the METT is under consideration to track progress in implementing protected areas commitments under the Ramsar Convention on Wetlands. Also the Convention on Biological Diversity proposes the Tracking Tool as one of the possible systems to evaluate and improve the effectiveness of protected areas management. The system has also been adopted by the Global Environment Facility as the basis for tracking changes in management effectiveness in all GEF protected area project sites.

The METT is composed of two main sections that should be completed: datasheets and assessment form:

1. Datasheets. Two forms: the 1<sup>st</sup> allows recording details of the assessment and basic information about the site, its management objectives, etc. and the 2<sup>nd</sup> requests to identify threats and rank their impact on the protected area.
2. Assessment Form. Includes 30 main questions plus three supplementary questions (in a table format) for recording details of the assessment, all of which should be completed.

The assessment is made by assigning a simple score ranging between 0 (poor) to 3 (excellent) to each question, out of a series of four alternative answers. The maximum score of the main 30 questions and the three supplementary questions is 99.

For a detailed description on how to apply the Tracking Tool, the datasheets and the assessment form see to the reference document: Stolton, S., M. Hockings, N. Dudley, K. MacKinnon, T. Whitten, and F. Leverington. 2007. *Reporting progress in protected areas. A site level management Effectiveness Tracking Tool. Second edition*. Gland, Switzerland: World Bank/WWF Forest Alliance and WWF<sup>28</sup>.

Other tools dedicated to the evaluation of management effectiveness can be used, such as :

- the evaluation sheet for SPAMI (Specially Protected Area of Mediterranean Importance)
- the evaluation tool "wind rose" developed by the French GEF

<sup>32</sup> Convention on Biological Diversity. undated. *Protected Areas Management Effectiveness*. Retrieved on 27 October 2014. <http://www.cbd.int/protected-old/PAME.shtml>

<sup>33</sup> Hocking et al. (2000); Hocking et al. (2006)

<sup>34</sup> Stolton et al. (2007): [http://wwf.panda.org/what\\_we\\_do/how\\_we\\_work/conservation/forests/tools/tracking\\_tool](http://wwf.panda.org/what_we_do/how_we_work/conservation/forests/tools/tracking_tool)



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## ANNEX 1 : THEMATIC REPORTS - PIM INITIATIVE NOTES

The following thematic reports of the PIM Initiative filed missions to Sazan are available on:

<http://www.initiative-pim.org/en/fiche-Ile/ALSZ001/ile-docview>

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Theou, Ph., F. Bego. 2013. *Etude des populations de chiroptères de l'île de Sazani (Albanie)*. Note naturaliste de l'Initiative PIM. Conservatoire du littoral. <http://www.initiative-pim.org/en/node/47572> (French); <http://www.initiative-pim.org/en/node/56616> (Albanian).

## ANNEX 2 : THE MANAGEMENT EFFECTIVENESS TRACKING TOOL

Stolton, S., M. Hockings, N. Dudley, K. MacKinnon, T. Whitten, and F. Leverington. 2007. *Management Effectiveness Tracking Tool. Reporting progress in protected areas site. Second edition*. Gland, Switzerland: World Bank/WWF Forest Alliance and WWF. Available on: [http://wwf.panda.org/what\\_we\\_do/how\\_we\\_work/conservation/forests/tools/tracking\\_tool](http://wwf.panda.org/what_we_do/how_we_work/conservation/forests/tools/tracking_tool)