



Strasbourg, 31 January 2023

T-PVS/DE(2023)02

CONVENTION ON THE CONSERVATION OF EUROPEAN WILDLIFE
AND NATURAL HABITATS

Standing Committee

43rd meeting
Strasbourg, 27 November - 1 December 2023

**REPORT
OF THE VISIT OF THE INDEPENDENT EXPERT
TO THE MAREMMA REGIONAL PARK
(Italy)**

14-16 November 2022

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INTRODUCTION

The Committee of Ministers of the Council of Europe, by means of its Resolution (92) 17, awarded the European Diploma for Protected Areas category "B" to the Maremma Regional Park at its 476th meeting on 18th May 1992. The deadline established for its renewal was 18th May 1997. The Diploma has been further renewed in 2002, 2007 and 2012. The last renewal (Resolution CM/ResDip(2012) 9) for a period of 10 years has extended the award until 18th May 2022.

Having regard to the decision of the Group of Specialists on the European Diploma for Protected Areas at its meeting of 23-24 February 2022 to perform on-the-spot appraisal visits to areas subject to EDPA renewal in 2022, the undersigned was invited as independent expert to carry out the visit to Maremma Regional Park (Italy). The objective stated was *"to assess whether the conservation of biological, geological and landscape diversity which was put forward at the time of the award of the European Diploma for Protected Areas to the area is still of exceptional European interest and can, consequently, motivate the renewal of its European Diploma"*.

The appraisal visit took place on 14th and 15th November 2022. A Programme of the visit, previously established, is enclosed as Annex I to this report.

The consultant was welcomed on Sunday 13th November by a member of the Rangers Corps (Mr Luciano Minucci) at the Rome airport and driven to Grosseto. The visit started the day after, on Monday 14th, with a meeting at the premises of the protected area in Alberese, where the Director of the Regional Park and his technical and Warden staff provided a comprehensive sight of the situation of the area awarded the European Diploma. The participants were the following:

- Architect Mr Enrico Giunta, Director of the Park
- Dr Laura Tonelli, in charge of forest management and of coordination of the scientific activity
- Mr Maurizio Lunardi, in charge of the "Marchio Parco" project and the European Chart of Sustainable Tourism.
- Architect Mrs Francesca Olivi, Head of the Technical Office
- Dr Catia Biliotti, in charge of the financial and administrative management
- Mr Luca Tonini, Head of the Warden Corps
- Mrs Francesca Pruni, in charge of the Visitor Centre
- Prof Francesco Ferretti, from the Siena University, in charge of the management programme of ungulates and the wolf.
- Dr Andrea Machetti, Agricultural Engineer, external advisor expert in sustainable farming and good practices compatible with the conservation of natural resources.
- Dr Flavio Monti, from the Siena University, acting as Technical-Scientific Coordinator of MedWet initiative (linked to the Ramsar Convention) and in charge of the reintroduction and monitoring of Osprey (*Pandion haliaetus*) in Maremma Regional Park.

In the afternoon, a first ride was made across the Park, visiting the traditional agricultural lands at the foothills, some vigilance towers built in past centuries, some wetlands close to the seaside, a pine forest planted decades ago and the Ombrone estuary, with the associated wetlands of La Trapola, already declared Ramsar site.

The second day the Director of the Parc and his Chief Warden showed the old Benedictine abbey of San Rabano, also called Santa Maria Alborensis, an impressive and gorgeous ruined construction of the XI century, where some reconstruction works have been made, as will be described in section V.7 – Cultural Heritage. After we walked across the Mediterranean thicket and forest, observing numerous and

interesting species, as well as a couple of observatories erected to appreciate the extraordinary landscape and the marine adjacent area.

In the afternoon some meetings with stakeholders took place, in order to firstly inform them on the ongoing process for the renewal of the European Diploma and secondly to obtain their impressions, opinions, concerns, proposals, etc., since they were requested to do it in an open and free conversation. This will be described in detail in section IV.6 – Relationship between the Park Administration and other stakeholders.



Centenary olive trees

I - BRIEF DESCRIPTION OF THE MAREMMA REGIONAL PARK

The main features of Maremma Regional Park are the following:

- Surface area: 8.902 ha of protected area plus 9.097 ha of buffer zone completing nearly 18.000 ha.
- Location: the Regional Park is located in the province of Grosseto, occupying three Municipalities: Grosseto, Magliano in Toscana and Orbetello. The whole protected area is located in the Tuscany Region.
- Perimeter: The area has the approximate shape of a rectangle of nearly 30 km long and about 7 km wide, running along the Tyrrhenian coast of Tuscany.
- Maximum elevation: Poggio Lecci, with 417 m.a.s.l.

The Maremma Regional Park contains the last 25 km of unaltered coast still existing in Tuscany, where no kind of infrastructure for tourism, housing or industry has been installed. Alluvial plains and dunes in coastal areas at sea level in contact with a limestone mountain ridge running from NW to SE in parallel to the coast (the Uccellina Mountains) create numerous environments, transitions and ecotones according to the orientation of the slopes (SW or NE), prevailing winds, altitude, etc. In interaction with the climate features and events, with the hydrology and the different soil types, make up a complex mosaic of Mediterranean ecosystems.

The area is under pressure, both because of the intensive tourism demand and also of a long farming tradition that in the past produced serious conflicts in relation to the protection of the area. However, the situation has evolved in a positive way and at present a large majority of stakeholders understand that the Regional Park, far from being an obstacle to their socio-economic development, is an opportunity for the better appreciation of their products and of their tourism offer. Some compatible traditional activities and tourism take place on it, allowing many wild native species of fauna and flora to inhabit the area in a good conservation status and ecological balance.

Foothills have been occupied since decades by traditional olive and vineyard crops, some of them quite old. A few ancient olive groves (*oliveto* in Italian) are abandoned, and the Mediterranean maquis is recovering its old realm. On the slopes and on top of the hills of Uccellina Mountains, typically Mediterranean forests and thicket grow elsewhere. In some areas close to the seaside, dunes, alluvial plains and water discharge zones are covered by marsh helophyte and brushland vegetation. In past centuries, mostly in the XIXth, a surface area of about 600 ha was planted mainly with stone pine (*Pinus pinea*) and maritime pine (*Pinus pinaster*), the so-called Pineta Granducale (Grand Duke Pinewood).

A few remaining historical constructions still standing up and some archaeological spots recall that the area has been occupied by the humans since the earliest times, contributing to mould in different ways the landscape and the ecology of the area. At present, this factor continues to be one of the most important to understand the current features and the ecological importance of this protected area.

Being a limestone mountain Uccellina area has numerous caves with its peculiar fauna and flora. In 2001 a skull of cave bear (*Ursus spelaeos*) was found in one of them.

The Maremma Regional Park has a very nice official web page in Italian and in English:
<https://parco-maremma.it/en/>

II - EUROPEAN INTEREST OF THE SITE

The European Diploma was awarded in 1992 with the category “B”, according to the old Regulation, by virtue of the diversity and quality of the habitats, the 20 km of unaltered coast, the importance for migratory birds, the protection of the cultural heritage, the human use compatible with the conservation of the site and its role in a network of nearby protected areas.

II - 1. Fauna

Within the mammal community the group of carnivores is well represented. The wolf (*Canis lupus italicus*) has spontaneously re-colonised the area and during the last 5 years there were 2-3 stable family groups. The wild cat (*Felis sylvestris*) is also present, although it is not frequent. The red fox (*Vulpes vulpes*) and some mustelids like marten (*Martes martes*), stone marten (*Martes foina*), badger (*Meles meles*) and weasel (*Mustela nivalis*) can also be found here, along with interesting species of small mammals like hazelmice (*Muscardinus avellanarius*). The rodent porcupine (*Hystrix cristata*) is relatively frequent. Ungulates like wild boar (*Sus scrofa*), the symbol of the Maremma Regional Park, fallow deer (*Dama dama*) and roe deer (*Capreolus capreolus*) are basic preys of the wolf. The exotic coypu (*Myocastor coipus*), also called nutria in Italian language as well, has been introduced and breeds in the wild.

Among the 270 bird species, the most relevant groups are the raptors and the wildfowl. Birds of prey like peregrine falcon (*Falco peregrinus*), hobby (*Falco subbuteo*), kestrel (*Falco tinnunculus*), buzzard (*Buteo buteo*), marsh harrier (*Circus aeruginosus*) and the short-toed eagle (*Circaetus gallicus*) nest in the area. The Eleonora's falcon (*Falco eleonora*) and the lanner falcon (*Falco biarmicus*) can occasionally be seen. The osprey (*Pandion haliaetus*) has been successfully reintroduced. The common crane (*Grus grus*) and many wildfowl species can also be found, most of them wintering or during migration: wild geese (*Anser anser*), wigeons (*Mareca penelope*), gadwall (*Mareca strepera*), teal (*Anas crecca*), shoveler (*Spatula clypeata*) and garganey (*Anas querquedula*), along with black-tailed godwit (*Limosa limosa*) and many other waders. Typically Mediterranean bird species can also be seen, like European roller (*Coracias garrulus*), bee eater (*Merops apiaster*), hoopoe (*Upupa epops*) and surprisingly the wallcreeper (*Tichodroma muraria*) has occasionally been seen in some coastal cliffs and in the walls of the Abbey San Rabano.

Interesting reptiles like the Hermann's tortoise (*Testudo hermannii*) and amphibians like the Italian Crested Newt (*Triturus carnifex*) can be found in the Park.

Occasionally marine turtles are caught in the nets of the fisheries and some spontaneous attempts of breeding have been registered in the Tuscany coast, including the Maremma beach. The Park has arranged in a few beaches several areas free from human disturbance for turtle nesting. For the moment some visits of loggerhead sea turtle (*Caretta caretta*) have been recorded, but so far only with false nests, without egg laying. There were successful nestings in nearby beaches, and thus, specific monitoring measures to detect eventual new attempts inside the Park have been implemented, including requiring the cooperation of the visitors to communicate any observation, evidence or footprint.

To finalise the list of vertebrates it is worth to mention some important fish species like the South European Toothcarp (*Aphanius fasciatus*), the Adriatic dwarf goby (*Knipowitschia panizzae*) and the Lampreys *Lampetra fluviatilis* and *Petromyzon marinus*.

The invertebrates is an important group, being well represented and with some endemic species, like the beetles *Nanophyes transversus* (*Curculionidae*) and *Antaxia corsica* subsp. *maremmana* (*Buprestidae*). Other uncommon species can also be found, like the beetle *Eurynebria comparata* (*Carabidae*), feeding on the dead tree trunks stranded on the beach, and the butterfly *Charaxes jasius* (*Nymphalidae*), specialised in feeding on the strawberry tree (*Arbutus unedo*).

II - 2 Flora and vegetation

The Mediterranean forest is the main formation in the medium and higher elevations of the Uccellina Mountains and include principally holm oak (*Quercus ilex*) and accompanying species like strawberry tree (*Arbutus unedo*), myrtle (*Myrtus communis*), *Phillyrea latifolia*, *Pistacia lentiscus*, etc., alternating with some spots of *Quercus pubescens* and *Fraxinus ornus* in fresh soils, along with other deciduous species like *Quercus pubescens*, *Sorbus domestica*, *Sorbus torminalis* and *Acer monspessulanus*. Isolated specimens of *Pistacia terebinthus*, *Laurus nobilis*, *Ostrya carpinifolia* and *Quercus cerris* can be found in scattered shelters. In siliceous soils appear some cork oaks (*Quercus suber*) and heather (*Erica arborea*), which do not tolerate the lime. These formations are mixed up with coastal Mediterranean thicket, often with aromatic plants, with juniper trees *Juniperus oxycedrus* in areas exposed to saline spray and *Juniperus phoenicea* in areas free of salt in the air, wild olive trees (*Olea europaea*) and very few spots of the rare Mediterranean dwarf palms (*Chamaerops humilis*).

The coastal belt is mostly characterised by sandy beaches, large dunes and small bays with typically psammophyllous vegetation, like *Cakile maritimum*, *Xanthium italicum*, saltwort (*Salsola soda*), the threatened sea daffodil (*Pancratium maritimum*), sea chamomile (*Anthemis maritima*), sand couch (*Agropyrum junceum*), marram grass (*Ammophyla littoralis*) and the endemic *Limonium etruscum*. The southernmost zone close to Talamone shows impressive cliffs at the border of the sea. Right beyond the dunes the locally called “*paduletto*” appear in waterlogged depressions with characteristic vegetation of grasses and shrub with different species of the genus *Artemisia*, *Juncus*, *Carex* and *Schoenus*.

To the North of the Park, some wetlands covered with marshland vegetation, remain linked to the fluvio-marine geo-morphological dynamics of the estuary and mouth of the Ombrone river, connecting to the Tyrrhenian sea. La Trapola marsh is a wetland of international importance included in the Italian inventory of wetlands of the Ramsar Convention. The vegetation reveals alternatives between freshwater and brackish water, with different hydro-periods from permanent to seasonal or occasional flooding. Altogether make up a rich mosaic of environments even in a relatively small spatial area, markedly benefiting to more than 150 species of wild birds, either nesting or wintering or migrating. Rare plant species like *Halocnemum strobilaceum*, can be found there.

As already said, south to the Ombrone river there is an area of about 600 ha covered by plantations of different pine species, mostly stone pine (*Pinus pinea*) and maritime pine (*Pinus pinaster*).

II - 3 Exploitation of resources

II-3.1 Agriculture

The Maremma Regional Park and its surroundings has been traditionally cultivated for centuries. The main productions have always been cereals, fruits, olive oil and wine. These cultivations, still persisting,

configure a landscape in mosaic of arable lands of different kinds and stages interspersed with some wild patches, which is a favourable factor benefiting the biodiversity. The agricultural practices have been in the past subject to conflicts between farmers and managers of the protected area. However, the Park has considered as a priority to get involved in the definition of the agricultural policy of the region by providing advice on sustainable procedures, productions and products compatible with the conservation of the protected area. The know-how provided by the Park's Agricultural Engineer with great experience in these issues, has been shared with the farmers, allowing frequent contacts and establishing a personal relationship based on reliance. The farmers have progressively been mainstreaming these guidelines within their practices and at present the agriculture of the area is based on the ecological production and the quality production labels. They are aware of the extent that the involvement of the Park has contributed to improve the appraisal of their products by the markets and to increase their income.

II-3.2 Livestock farming

Sheep, cattle and horses are the main species raised in the farms. In recent decades a special interest for domestic local races has progressively increased and the "Maremmana" cow, at the brink of the extinction a few decades ago, is now being more and more abundant. The main herd is being produced by the *Ente Terre Regionali Toscane*, which depends on the Tuscany Region, in a property integrated in the Maremma Regional Park. The same can be said on the local race of horses, very well adapted to the peculiarities of the terrain. Sheep breeding has clearly decreased across the time, however some farms still have some herds to produce the local "Pecorino" cheese and lamb meat, much appreciated in the markets.



"Maremmana" cows grazing near the Ombrone delta

II-3.3 Fishing

The adjacent coast has traditionally been used by local and sport fishermen and also by commercial fisheries. At present, the commercial fisheries is allowed in marine waters in front of the Park; however, trawl nets which produce severe damage in the marine ecosystems are not used here, since in Italy trawl nets are prohibited in waters up to 50 meters deep and/or at three miles from the coast.

Recently a Court judgement established the legality of the prohibition of fishing in the sea waters adjacent to the Ombrone river and, consequently, fishing is totally forbidden in the final sector and the mouth of the Ombrone river. In coordination with the Italian Navy – Coastal Guard experimental project using radar to verify whether there was illegal fishing in the estuary or not has shown that the legislation is well respected. The Warden Corps makes regularly random controls and very few cases of infringement procedures are reported.

According to the Maremma Regional Park Regulation (arts. 39 and 40), sport fishing is only allowed in one specific sector of the Ombrone river, between April and October, on Wednesday, Saturday, Sunday and bank holidays and from sunrise to sunset, always under payable permit issued by the Administration. At the end of the fishing day, the license holder must inform the Administration on the captures made: species, number and measures.

II - 4 European Interest justifying the diploma

The European Diploma of the Maremma Regional Park was awarded with category “B”, referring to the European interest of its landscape according to the former regulation. With regard to the current “Criteria for the award for the European Diploma for Protected Areas” (see ¹), the Maremma Regional Park meets the requirements of the group “B”, equivalent to those established for Category “B” when awarded. Therefore, according to the current rules the objective of protected areas of group “B” is “*to preserve biological and landscape diversity together with harmonious and sustainable development of socio-economic and educational functions*”. The area meets the specific criteria established for them.

In addition to highlighting landscape features qualifying for category “B”, the Maremma Regional Park presents also outstanding fauna and flora species and their habitats of European interest, showing a pretty good conservation status. For example, rare species at European scale, like porcupines, wolves, wild cat, a complete and diverse community of raptors and many migratory species like cranes, wild geese and other wildfowl, can be found in this protected area. For that reason, Maremma fulfils the specific criteria both for group “B”, as awarded, but also for group “A”, since it fulfils the essential goal of these areas: “*to preserve biological and landscape diversity and ecosystems*” and meets as well the specific criteria established for this group.

The biodiversity and the habitat types existing in the Maremma Regional Park constitute the remnants of natural ecosystems already disappeared in the Tyrrhenian coast and also in most areas of the Mediterranean Europe. This fact, along with the rest of attributes described in this report, demonstrates that this protected area holds undeniable merits to deserve a particular recognition of its European interest justifying the Diploma.

III - CONSERVATION MEASURES

III - 1 Legal protection status

The Maremma Regional Park was firstly declared as Nature Park by the Law 65 of 5th June 1975, with 9.800 ha. In 1994 it was re-classified as Regional Park, being under the responsibility of the Regional authorities of Tuscany and the Municipal authorities of Grosseto, Magliano in Toscana and Orbetello.

As all the protected areas of Tuscany it falls under the Law 30/2015 on the conservation and valorisation of the naturalistic-environmental regional heritage. It complements and harmonises the legal provisions that all the regional protected areas must comply with. One of the most relevant aspects is the

¹ <http://rm.coe.int/CoERMPublicCommonSearchServices/DisplayDCTMContent?documentId=0900001680479efd>

new Integrated Management Plans that must be drafted. The Maremma Regional Park is currently elaborating its Integrated Management Plan.

III - 2 Boundaries/zoning/buffer zones

Since its declaration in 1975, the Maremma protected territory covers a surface area of 8.920 ha and an adjacent protection zone ("*Area contigua*" or "Contiguous Area") of 9.097 ha, acting as buffer belt.

The zonation of the Park considers the following sub-categories for the main protected area:

- Zone A – Integral Reserve (536 ha – 6 %)
- Zone B – General Oriented Reserve (1.775 ha - 20 %)
- Zone C – Protection Area (5.072 ha – 55 %)
- Zone D – Areas of Economic and Social_Promotion (1.676 ha – 19 %)

In the so-called Contiguous Area, the following sub-categories can also be distinguished:

- Zone E: areas of high environmental tutelage
- Zone F: areas of great human influence with natural environmental values
- Zone G: open areas
- Zone H: inhabited areas

The complete lists of spots and their respective zonation code can be consulted in Annex III. The map with the detailed zonation of the new Integrated Management Plan which is being elaborated will be as follows:

PIANO INTEGRATO DEL PARCO
art. 27 L.R. 10 marzo 2015, n. 39

SEZIONE PIANIFICATORIA
FASE 5 PROGETTO DI PIANO

Presidente del Parco della Maremma
Dott. Avv. Simone Pisci

Responsabile del Documento
Dott. Arch. Bruno Ciurlo

Direttore Parco Regionale della Maremma
Ufficio di Piano del Parco della Maremma
Dott. Arch. Francesco Cio
Dott. Stefano Amadi
Dott. Ssa Fer Laura Torali

Carico tecnico amministrativo e dati cartografici
e ingegneristici del territorio: Ing. Roberto Pizzani
Avv. Francesco Di Sisti

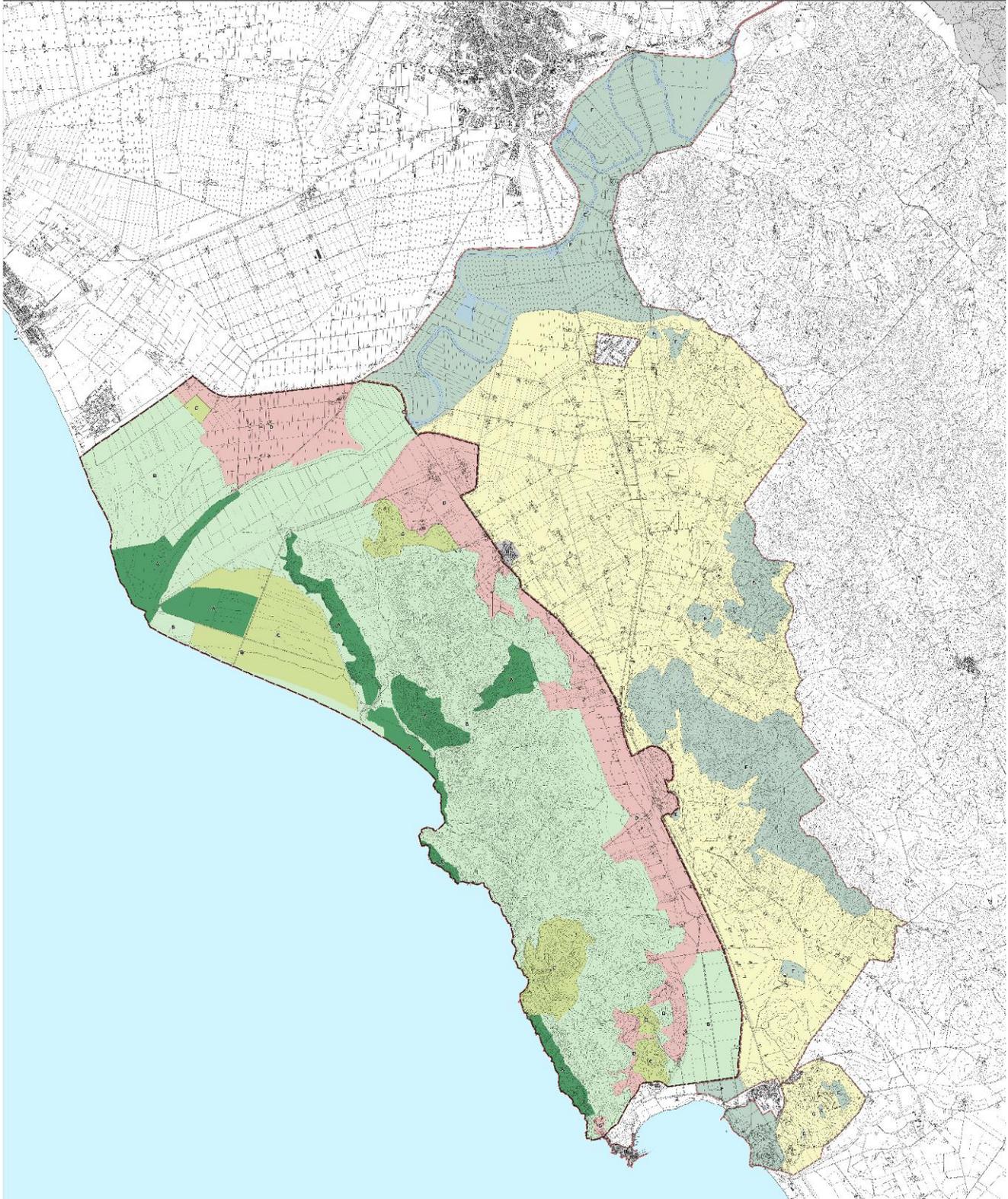
Coordinatore per la redazione del Piano
Dott. Arch. Silvia Volante - Firenze

Sistema Informativo Territoriale
dell'Ingeg. GIS S.r.l. - Siena
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Ambiente Italia S.p.A. - Milano
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Dott. Geol. Francesco Giorgio Rossi - Varese
Territorio antropico
Dott. Agn. Antonio Piccoli - Genova
Territorio socio-economico
Dott. Rita Bini - Roma

TAV. 1 - ZONIZZAZIONE

AVELLA
Scala 1:25.000

- Zone Territoriali Omogenee**
- A. Territorio agricolo
 - B. Riserve perenni coltivate
 - C. Aree protette
 - D. Aree protette
- Altre Aree Costanti**
- E. Aree di alta qualità paesaggistica
 - F. Aree di alta qualità di vista e di alto valore naturalistico
 - G. Terreno sommo
 - H. Campi solari
- Contorni del Parco Regionale della Maremma**
- Linea nera: Perimetrio del Parco Regionale della Maremma
 - Linea rossa: Perimetrio del Parco Regionale della Maremma
 - Linea grigia: Perimetrio del Parco Regionale della Maremma



III - 3 Supervision and warding

The Maremma Regional Park has a specific Warden Corps constituted by 7 permanent Wardens and 4 more working part-time, during the most crowded periods of the year. Their functions are very diverse: surveillance of illegal activities, infringement procedures, information and support to the visitors, cooperation in monitoring and data capture on biodiversity, support to managers and scientists, etc. They are, in particular, responsible for the management of the live traps to capture wild boars, the system used for population control purposes. They are also very active in monitoring the vertebrates by means of camera traps. Wardens are essential for the different kinds of control of the whole territory, not only to avoid illegal activities and poaching, but also as early observers of nature events occurring in the field and of wildfires. Budgetary restrictions ordered by the Ministry of the Environment prevent staff enlargement.

III - 4 State of conservation of the main species and their habitats

Judging from the different reports available between the candidature dossier to the European Diploma and the last appraisal report for the renewal in 2012, the annual reports and the data provided during the appraisal visit recently made, the state of conservation of the species and their habitats seem to be good. According to this information, the situation of the most relevant species can be described as follows:

III.4.1 - Wolf (*Canis lupus subsp. italicus*)

The Italian wolves are a different subspecies separate from the other populations of European wolves. They became extinct in the Maremma area decades ago, however, as a consequence of the recent expansion of the species in Italy, the wolf came back to this region in early 2000s. From the very beginning, a strict monitoring of the wolf along with of the ungulates as their potential preys was carried out by specialists of the University of Siena. This measure aimed essentially to assess the successful evolution of the predator's re-colonisation and the current real situation of the species, along with the consequences on the abundance and population dynamics of the ungulates. The presence of this carnivore has been favourable in terms of limitation of the former over-population of big herbivores. The most consumed prey has been the wild boar, followed by fallow deer and to a lesser extent, the roe deer. The good news is that wolves also prey on the coypu, an alien invasive species, and that the predatory action on domestic herbivores is very limited.

The wolves have established during the last 5 years 2-3 family groups well structured, with experienced dominant male and female and younger individuals forming stable packs. This may be a key factor explaining the positive selection on wild preys at the expense of domestic cattle, horses or sheep. Damages on domestic livestock are often a consequence of vagrant youngsters not very well trained for killing preys, the opposite to family groups that may become well organised and trained, capable to efficiently kill wild ungulates, which are much more difficult. The management of wolves in Maremma consists of leaving the packs evolve in a natural way and reimbursing the farmers for the damages in case of wolf attack. This policy is, by far, the most correct and successful, since measures like killing wolves, frequently adopted in other areas, disrupt the balanced family groups, increasing the probability of unskilled wolves attacking easy preys like the domestic herbivores.

In 2013 some individuals were suspected to be hybridised with dogs, after the genetic study of droppings. However, all the studies made since then on all samples analysed show that all individuals are

pure wolves, with the exception of one individual who had genetic traits of dog ancestors, probably from several preceding generations. New samples are regularly sent to the ISPRA laboratories and the available results show, up to now, that in all cases the animals are pure wolves.

III.4.2 - Wild ungulates

The wild ungulates in Maremma are the wild boar (*Sus scrofa*), fallow deer (*Dama dama*) and roe deer (*Capreolus capreolus*). In the existing documentation the over-population of wild ungulates has been often reported, and some measures of control were adopted. In Maremma Regional Park hunting is not allowed and, thus, the extraction of individuals is made by the Wardens. The method used for the wild boar consists of live-trapping with specially designed devices. The animals caught are sold to hunter's societies that release and reinforce with them their own hunting grounds. In this way, along with the predatory effect of the wolves, the wild boar population levels are well maintained.

For the fallow deer this method does not work efficiently and for that reason their population levels are slightly high. However, the wolf predation is helping a lot to limit the population of this ungulate. The roe deer is quite scarce, probably by competition with the fallow deer, and their population levels are not a matter of concern.

III.4.3 - Marine turtles

Loggerhead sea turtles (*Caretta caretta*) are often accidentally captured in the fisheries nets and increasing records indicate that they are relatively common in the Tuscany coast of the Tyrrhenian Sea. Since 2015 several footprints of turtles coming out of the sea for egg laying have been seen and in some cases young turtles have hatched. In the beaches of Maremma all the recorded nesting attempts have been unsuccessful and a special survey is made every year between June and September, to early detect nests and protect them.

The Maremma Regional Park manages the Talamone Sea Turtle Rescue Center, integrated in the Tuscany networks for the conservation of Cetaceans and Sea Turtles. It has been authorised by the Ministry of the Environment for sea turtle recovery and nest monitoring by means of walking surveys and drone flights. These works are made by the Warden Corps accompanied by volunteers of *Amici del Parco*.

III.4.4 - Osprey (*Pandion haliaetus*)

This raptor was a nesting species in Italy until 1969. Since then it became a wintering or migrant species. In 2006 a reintroduction project started to be implemented in Maremma Regional Park in cooperation with the Corsica Regional Park. Between 2006 and 2010 a total of 33 chicks have been released in Maremma, using the "hacking" technique. In 2011, a male released in 2006 and a wild female were the first breeding pair since more than 40 years and reared successfully two fledglings. The species regularly breeds in Maremma and in other sites of Italy from birds released in the context of this reintroduction project. In total, 41 reproductive events have been registered across Italy, with 118 eggs laid down, 85 of them hatching. A total of 72 chicks have successfully fledged between 2011 and 2022. At present, the Italian population of Osprey is comprised by 6-7 breeding pairs, plus a few floating individuals and pairs.



Wooden tower with an artificial nest where Ospreys breed successfully, monitored by a remote camera. An adult is perched on the tree on the right

III.4.5 - Waterfowl and migratory birds

The winter censuses made in the wetlands of the Maremma Regional Park (Ombrone Mouth and La Trappola marshes) during the last 4 years reveal the presence of at least 5.300 to 8.600 birds belonging to 51 species, some of them being of great interest, like the Greylag Geese (*Anser anser*), the crane (*Grus grus*) or the Eurasian curlew (*Numenius arquata*). The biodiversity and the abundance registered are quite important, in a relatively small area. From this point of view, Maremma is a key node in the wetlands network and plays a very important role for this particular group of vertebrates not only in the regional and national scale but also in the European context.

III.4.6 - Other Raptors

Some monitoring and research activities have been carried out on three species of raptors representative of three habitat types in the Maremma Regional Park: peregrine falcon (*Falco peregrinus*) breeding in calcareous cliffs, the short-toed snake eagle (*Circaetus gallicus*), nesting in Mediterranean forest of holm oak and Eurasian hobby (*Falco subbuteo*), breeding in the pinewood close to the wetland area. The study reveals the importance of maintaining in good conservation status these habitats for uncommon species with peculiar trophic needs, like the snake eagle, which moreover is migratory.

III.4.7 - Inventories of fauna

While the vertebrates have always been pretty well known in most protected areas, the group of the invertebrates have been relatively neglected, due to the intrinsic difficulties of their study. However, the Maremma Regional Park has inventoried the macro-invertebrates existing, with a total of 1.449 species. Most of them are beetles (710 species - 49 %) and butterflies (468 species - 32 %). Four species are endemic in this protected area: the Cerambycid *Pogonocherus marcoi*, the Curculionid *Otiorhynchus taitii* and the Staphilinids *Entomoculia maremmana* and *Leptotyphlus uccellinensis*.

Again, these figures are impressive for such a restricted area.

III.4.8 - Inventories of flora

A recent study on the quantitative assessment of plant diversity of the Maremma Regional Park for monitoring purposes, based on a dense sampling grid, has revealed the presence of 119 new species not previously detected. Consequently, the total number of vascular plants recorded so far is 674 species.

This study has been conceived to be repeated regularly in the future to characterize the changes that may occur in the future, either due to the climate change or due to any other factors.

III.4.9 - Protection of coastal flora and fauna

The intensive use of beaches during the good weather period creates an intensive trampling of the ground, where a number of endangered plants suffer from the human occupation, particularly during their vegetative growth period. For that reason, the Park managers have delimited several areas with sticks, strings and informative panels to let them free from the human presence. In general, the visitors respect the restrictions and, in passing, learn about the biological peculiarities of the area and their responsibility in respecting the needs of the wild species. Some of these perimeters have also been selected for eventual nesting of marine turtles (*Caretta caretta*), since they regularly visit the beaches of the region and try to nest. Some footprints have been found in the Maremma Regional Park, but so far without true nests. The Kentish plover (*Charadrius alexandrinus*), a little shorebird regularly nesting in the beach of Maremma, also benefits from this protection.



III.4.10 - Mediterranean forest habitats

In recent decades Holm oaks (*Quercus ilex*) are showing symptoms of mortality, particularly during the last 4-5 years characterized by low precipitation and higher temperatures than average. Since 2019, researchers from the University of Firenze and the Maremma Regional Park are carrying out a study concerning the effect of the climate change in the vegetation of the Mediterranean coastal ecosystems, from different approaches: eco-physiology, biochemistry, dendro-chronology and remote sensing, aiming at characterising the role of the climate change in this decay.



The preliminary results seem to indicate that within the same forest there are individuals with very different rates of defoliation, even being located at distances of only 1 km. Some of them are better adapted to drought conditions with better growing rates and water use strategies in relation to other languishing trees. Genetic studies demonstrate that both populations show differences. Therefore, their respective water use strategies can be genetically determined. This research line can be of great interest for the managers, since it can be helpful for the long-term fostering of better adapted varieties of native Mediterranean forest species.

III.4.11 - Beach and dune system

During the recent decades, both the Ombrone delta and the sea shoreline are being affected by an increase of the marine erosion. For that reason, an important surface area has disappeared and the dune system immediately adjacent was a matter of concern (see also section III.5.1).

To cope with this problem, during 2015 the managers of the area have constructed in Marina di Alberese, perpendicularly to the coast, six submerged dikes (in total of 2.500 meters) of rocky blocks to dissipate the energy of the waves causing the erosion, along with a dike of 1.200 meters to protect the retro-dune system and the Pineta Granducale, in risk to be flooded by the sea. Since then, the loss of beach grounds seems to have stopped and the beach is recovering solid material accreting its amplitude. In 2021, a new dike in parallel to the seaside and a few meters inside the coast has been built to replace the one constructed in 2015, since it has been very affected by the coastal erosion.



Protection dyke erected in 2021 to protect the coastal ecosystems against erosion
Photos: Luca Tonini – Maremma Regional Park

The following panel graphically shows to the visitors and users of the beach the location of the submerged stone barriers, asking for their precautions to avoid incidents with them.



III - 5 Land use planning

The existing legislation of the Maremma Regional Park ensures the effective protection of the territory that cannot be modified by land use provisions of any kind.

All the information related to land use planning is available in the web page of the Park:

<https://maps3.ldpgis.it/parcodellamaremma/>

III - 6 Threats

III.6.1 - Coastal erosion

Centuries ago, the mouth of the river Ombrone had the shape of a delta, formed by large amounts of sediments protruding into the sea. Progressively, the amount of sediments transported by the river and delivered on its mouth has decreased and the coastal dynamics have provoked the erosion of the delta and neighbouring areas. The climate change is probably also an important factor explaining the increase of the marine erosion process at the expense of the river siltation process. On one hand gales are more and more frequent and intense and on the other hand the rise of the sea level, particularly during big surges, increases the effect and the energy of the waves.

In relation to the problem of the Ombrone delta, may be worth to mention another factor that can also contribute to explain the changes of its shape. It is quite likely that the burden of sediments transported by the river from upstream has been quite bigger in the past because of the deforestation occurred in the basin. More recently, the reduction of erosion processes at basin scale, thanks to reforestation efforts and other measures to reduce the soil loss in the slopes, along with the construction of dams, have probably contributed to reduce the discharge of sediments in the Ombrone estuary. This is the second biggest river in Tuscany, after the Arno, and its basin covers a surface area of 3.500 km². Therefore, if this factor may explain part of the problem, it occurs far beyond the Maremma Park. It must, accordingly, be seen within a regional approach rather than at local level and a thorough understanding of the situation at basin level and at different time and spatial scales is needed.

The undersigned is not in capacity to provide a technical opinion on that matter, since it is mostly to be assessed by specialists. However, this is an important matter and a specific recommendation should be formulated to address this situation. A consultation of experts through the Scientific Committee of the *Ente Parco Regionale della Maremma* should be carried out, to firstly provide a diagnosis of the situation and secondly formulate realistic and feasible alternatives to solve it, along with an estimation of costs and an assessment of environmental and security risks.

III.6.2 – Groundwater salinisation

As in most sites with modern agriculture, water demand is increasingly higher, competing with the needs for maintaining the ecological processes of wetlands and other ecosystems. For that reason, historical and current extractions of groundwater for the agriculture and urban demands are modifying the natural hydro-geology of the aquifers. One of the most evident effects is the intrusion of sea water inland the coastal areas caused by movements of the interface brackish-freshwater. As a consequence of that, some old pines and other trees, frequently complete stands of trees, suddenly die when their roots are located in areas where salt water replaces the freshwater.

III.6.3 – Illegal fishing and poaching

Hunting is forbidden in the Maremma Regional Park. The abundance of game species like wild boars, fallow deers and, to a lesser extent, roe deers draws the attention of hunters. Nevertheless, the incidence of poaching in Maremma is relatively low, thanks to the deterrent effect of the Surveillance Services that should, anyway, be sufficiently staffed.

III.6.4 – Wildfires

The combination of Mediterranean forest and thicket on one hand and the increase of the aridity caused by the climate change on the other hand, is becoming progressively more dangerous in terms of risk of wildfires, particularly when climate is already characterised by summer droughts and high temperatures.

The Park authorities maintain during the summer season a set of preventing measures to avoid risks and to attack fires during their initial stages. If the situation overgrows their capacities, the intervention of the National system of fire-fighters the “Corpo Nazionale dei Vigili del Fuoco”, is immediately requested, since it has experienced staff and all material resources necessary to fight against medium and big fires like motor pumps, hydroplanes, helicopters, drones, etc.

The measures adopted to control wildfires seem to be, up to now, quite efficient, since only small surface areas have been affected by fires at an initial stage. However, in an area so vulnerable and occasionally influenced by torrid strong winds (called “scirocco” in southern Europe), it is not possible to be sure that, for instance, a combination of unfavourable factors, could eventually unleash a devastating wildfire. Therefore, for the future all the existing mechanisms for firefighting should be reinforced accordingly in the current scenario of increasing aridity caused by climate change.

III.6.5 – Climate change

The climate change has repeatedly been mentioned in this report as a true threat. There is no doubt that this is probably the most relevant risk that not only the wildlife, but also the humanity, must cope with, since the changes involved are starting to be clearly noticeable. The prediction models do not allow being optimistic, since the consequences that may appear, and are actually appearing, are devastating.

The margin of manoeuvre of the wildlife managers is very limited. However, it is worth to recommend establishing monitoring mechanisms of these phenomena to characterise them and to obtain knowledge for the formulation of strategies, projects and methods helping the biodiversity and the ecosystem services to increase their resilience to the changes by means of adaptive management decisions.

IV - MANAGEMENT

IV.1 - Management Plan

The current Management Plan was approved in 2008. It can be downloaded from the web page:
<https://parco-maremma.it/piano-per-il-parco/>

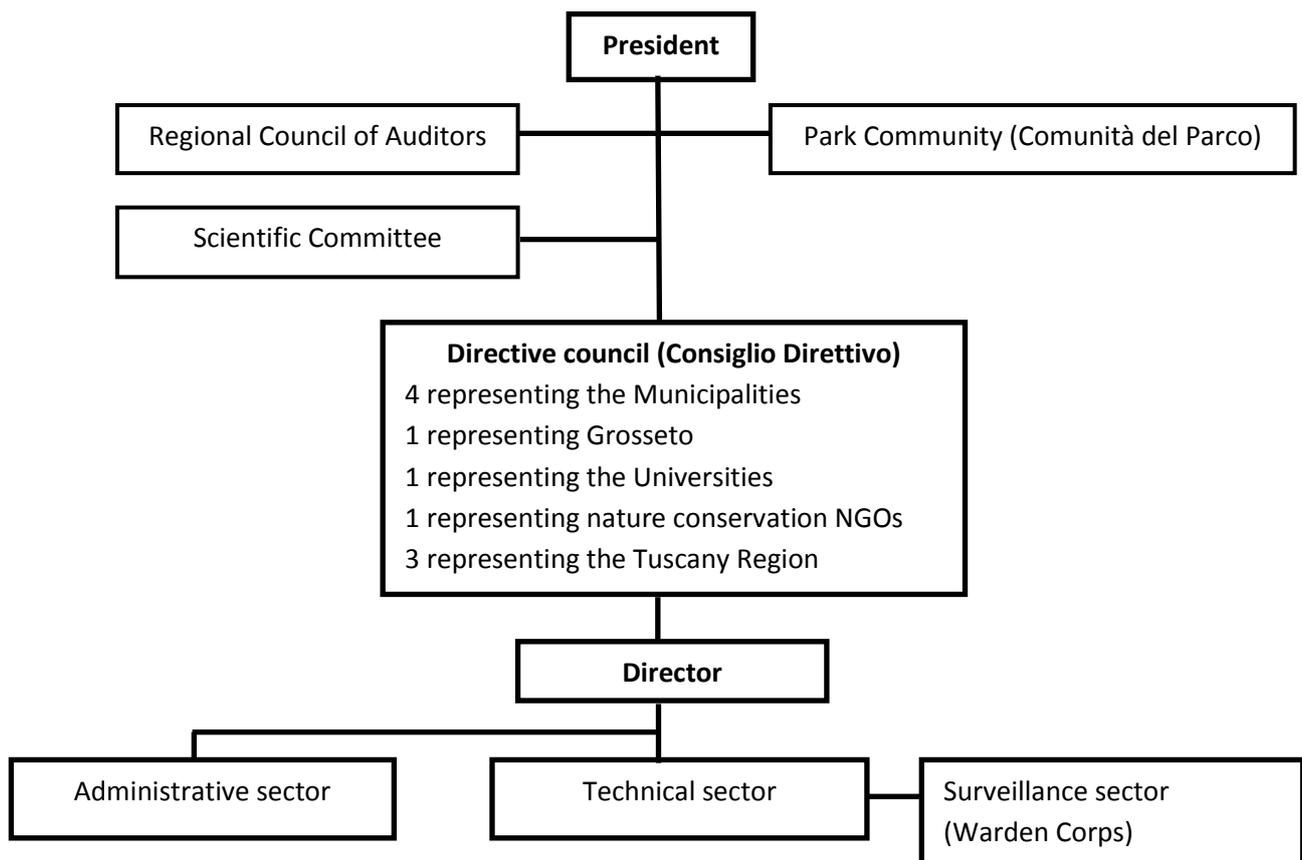
However, according to article 27 of the Regional Law 30/2015 on the conservation and valorisation of the naturalistic-environmental regional heritage, that complements and harmonises the legal provisions for all the regional protected areas, the Regional Parks must elaborate their Integrated Management Plans, with specific rules and procedure for its approval (section III, articles 26 to 31). The Maremma Regional Park is currently elaborating its Integrated Management Plan.

Apart from the Management Plan, in Italian protected areas there is another legislative piece with specific rules for the different subjects under the responsibility of the Administration: the Regulation (*Regolamento*). In the Maremma Regional Park there its definitive version dates back in April 2016 and can be downloaded from:

<https://parco-maremma.it/wp-content/uploads/2016/05/Regolam-Copertina-DEFINITIVO-Pubblicato.pdf>

IV.2 - Institutional responsibility

According to the mentioned Regional Law 30/2015, the “**Ente Parco Regionale della Maremma**” (Maremma Regional Park Entity), has several management bodies, periodically renewed, organised as follows:



The “Comunità del Parco” (Park Community) is constituted by the Majors of the three Municipalities within the territory of the Park (Grosseto, Magliano in Toscana and Orbetello), and is chaired by the President of Grosseto province. The role of the Regional Council of Auditors, which is unique for Tuscany, is supervising the financial management of the Park. The Scientific Committee is fundamental to

provide scientific advice to the authorities responsible for the management and conservation of the Maremma Regional Park. These advisory bodies are periodically renewed.

The Directive Council has decision powers and is composed by 10 members representing the local and the regional authorities, the Universities and the nature-conservation NGOs, as described in the chart.

The President of the Ente Parco Regionale della Maremma is designated by the Regional Board of Tuscany, selecting among personalities of recognised prestige proposed by the Park Community. The Director of the Park is designated by the President, following a public selection, having a private contract of maximum 5 five years renewable just for a second period. These management bodies, except the Park Community, have a mandate of five years.

IV.3 - Capacities

The staff allocated to the Maremma Regional Park is made up by full-time and part-time employees. The latter usually work during the busiest months of the year, between June and October, when the Park is more crowded with visitors. The existing staff at the date of this report consists of:

- The Director
- Permanent technical staff: 3
- Permanent administrative staff: 6
- Permanent Warden Corps: 7, one of them being the Commander
- Part-time Warden Corps: 4 (between June and October)
- Part-time technician (18 hours per week) shared with other *Ente*: 1

The 3 technicians are often assisted by external staff for specific tasks, like the expert for monitoring of the wolf and ungulates populations.

The current number of personnel represents a reduction in relation to the mentioned in the Appraisal Report of the last renewal, dated on November 2011. At that time there were 13 persons in the Administrative and Technical Unit, 11 in the Warden Corps and 5 volunteers. In view of the increasing pressures and challenges of the protected area, encompassing supplementary needs for surveillance and control, the author of this report called already the attention on the need to increase the staff accordingly.

The Maremma Regional Park continues being under high pressure and has to face increasing challenges, like the intensive human presence during most part of the year, the presence of important and endangered species, in particular the wolf that requires specific continuous attention, the increasing risks associated to the climate change, the need to control illegal activities and poaching, etc. In general, taking into account all these factors, it may well be considered that the Maremma Regional Park may be understaffed. These numerous and complex tasks can only be carried out with guarantees if the human and financial resources are sufficient.

The Director of the Park is currently not authorised to recruit more staff and has to comply – as all other parks – with the instructions of the ministry to limit their budget to level of 2013.

IV.4 - Budget

According to the information provided by the Park authorities, the general budgets in Euros (excluding cents) during the last 5 years (until the end of October 2022) were the following:

Years	2018	2019	2020 (COVID-19)	2021	2022 (31/10)
Income from Tuscany Region – functioning expenses	1.154.000	1.154.000	1.154.000	1.154.000	1.433.333
Income from Tuscany Region – project expenses	21.496	48.911	17.873	11.444	10.000
Income Park Community – functioning expenses	168.164	214.815	214.815	214.815	214.815
Income Park Community – project expenses	16.272		16.929	30.110	10.253
Income own resources – commercial nature	443.376	478.880	398.831	517.388	491.750
Income own resources – institutional nature	36.058	33.166	36.934	53.589	39.937
Extraordinary income	54.587	21.000	77	0	0
Income by other kind of contributions	83.206	20.000	31.997	59.762	34.100
Income for investments	220.810	238.971	288.000	256.655	201.003
TOTAL	2.197.969	2.209.743	2.159.456	2.297.763	2.435.191
Self financing (%)	20,17	21,67	18,47	22,52	20,19

The average total income is of 2.260.000 €, fluctuating between 2.200.000 – 2.300.000 €. The 2022 budget is the highest of the five years considered. It has been increased by 137.500 € compared to 2021 by 175.200 more compared to the average budget. This is a consequence of an increase of income from the Tuscany region for functioning expenses, which has been nearly 280.000 € more than the year before.

It may be worth to highlight that a significant proportion of the total budget arises from the self-financing with the own resources of the Park. The visitors pay a ticket to enter and enjoy the Maremma Regional Park, with amounts depending on the type of visit desired. During the last five years, this concept represented an average of 20,60 % of the total income, with a minimum during the year 2020 (lock down due to the COVID-19 pandemic) and a maximum the year after, in 2021, characterised by massive touristic demands, as elsewhere in European wild areas.

IV.5 - Research and Monitoring Programmes

According to the information gathered during the visit, an intensive scientific activity takes place in the Maremma Regional Park. Many Universities, especially from Tuscany (Siena, Pisa, Firenze, etc.) and Research Centres (ISPRA, CNR, etc.) develop their research projects in different fields like Botany/Forest, Zoology, Geology, Archaeology, Fisheries, etc., most of them of great interest as knowledge transfer towards conservation management.

All the scientific projects implemented in the Maremma Regional Park must comply with the Regulation on the Scientific Research and be aligned with the Strategic Programme approved by the Scientific Committee.

All the information concerning the 24 ongoing scientific activities can be found at the web page <https://parco-maremma.it/cosa-facciamo/ricerca-scientifica/ricerche-in-corso/>.

References of scientific publications existing at the Park's archives related to research projects implemented in Maremma can be found in the following web page:

<https://parco-maremma.it/cosa-facciamo/ricerca-scientifica/archivio-ricerche-scientifiche/>

The Regional Park is also developing monitoring activities on different subjects. Among the most significant the following can be highlighted:

- Wolf population and its influence on the local populations of wild and domestic ungulates (see section III.4)
- Effect of climate change on the vegetation of Mediterranean Coastal Ecosystems. Two close populations of Holm oaks (*Quercus ilex*) are being monitored along with climatic variables, to characterise the forest decay and its correlation with climate change (see section III.4).
- Osprey (*Pandion haliaetus*) population. Following the reintroduction of the species in 2006, nesting in the wild since 2011, every year the current wild population is closely monitored, along with monitoring carried out in other localities where the species has expanded: individual identifications, nesting parameters, chicks fledged, mortality, etc.

IV.6 - Relationship between the Administration of the Park and other stakeholders

The determination of the authorities of the Maremma Regional Park to resist to pressures from urban development, tourism, industry, and intensification of agriculture and livestock farming has been crucial for the current state of conservation of the Park. They have also been acting with wisdom and empathy towards the legitimate goals of socio-economic development of the local population. They have, in consequence, decided to get involved in the definition of strategies, criteria and measures to ensure the compatibility of the economic activity with the conservation of the Park.

One of the basic elements of the relationship with the stakeholders has been to hire an Agricultural Engineer, expert in varieties, procedures and methods of low ecological impact in order to make available to farmers a set of successful solutions in harmony with the ecological preservation needs of the protected area. In the course of the years an excellent relationship with farmers, based on the mutual knowledge of the needs of the counterpart, has been established. The same can be said concerning the tourism sector, since the efforts of the managers to create infrastructures and educational and awareness raising activities for visitors willing to get in touch with a natural area in an excellent state of conservation, is considerably benefiting the tourism sector. In this way, the parties have raised a successful model of sustainability characterising the natural area and its socio-economic context.

During the visit, there was the opportunity to dialogue with some representatives of different economic sectors, such as the agriculture (livestock farming included) and the tourism. In all the cases, they

declared that the Park managers are of great help to improve their benefits, since their activity attracts a different kind of tourists more sensitive to environmental approaches and which requires higher standards of ecological quality. For that reason, both agriculture and livestock rising is progressively run according to the rules of the ecological production and the quality labels. Their production is, then, more appreciated and their incomes are higher and more stable.

The tourism sector is in close contact with the Park Administration for the design of activities targeting visitors. Both parties are aware that the tourism business, like restaurants, hotels or companies of active tourism are “the face of the Maremma Regional Park”, the bond of the visitor with the protected area, the person who informs, accompanies, educates, and discovers a little paradise to enjoy and to be proud of.

In sum, during these meetings there was a total consensus that the Regional Park, far from being an obstacle impairing their socio-economic development, is an engine of economic activity allowing many families to obtain their incomes with healthy small businesses that retains young and local population.

The attendees were requested to openly comment their unfavorable opinions, concerns, complaints, etc., and no one did so. All of them unanimously looked very much forward to the renewal of the European Diploma for the Maremma Regional Park as recognition of their sustainable model of conservation and development achieved after many years of cooperation and dialogue.

Annex II contains the lists of persons, associations and bodies attending the meetings held on 15th November.

IV.7 - Public services including waste management

The managers of the Maremma Regional Park made an important effort to efficiently collect the rubbish generated in the areas frequented by the visitors. They have been requested to cooperate by dropping their garbage in strategic points, for instance besides the picnic areas, where the Administration has allocated stations of selective collection of waste. These focal stations are integrated within the ordinary urban service of waste management arranged by the competent authorities.

In Marina di Alberese there is an Integrated Service Centre with one of these stations along with centralised toilets. It has a system of phyto-depurating system of wastewater powered with photovoltaic panels.



Selective centralized station of waste collection in the Marina di Alberese picnic area. Special attention has been paid to its integration in the landscape.

IV.8 - Use of renewable energy systems

As stated in section IV.7, solar panels provide electricity to the Integrated Service Centre in Marina di Alberese facilities.

V - USES AND SOCIO-ECONOMIC ACTIVITIES

V.1 - Exploitation of natural resources

The agriculture and livestock farming are traditional activities in the area which are in practice in the lower foothill of the protected area and all around the peripheral protection zone. Through the time, farmers have evolved towards the ecological production, which is more appreciated in the markets and provide good revenues. The main agricultural products are olives, olive oil, wine, fruits and cereals. In

addition to ordinary commercial races, farmers are also interested in raising local races of beef cattle and horses, like the “Maremmana” cow.

All farming activities are implemented in common agreement with the Regional Park managers, since this administration has been very active in defining the principal guidelines for the development of these practices in such a way to fully respect the ecological needs of the protected area, such as the use of Integrated Pest Control methods instead of using chemicals against harmful organisms, the selection of species and varieties with low water requirements, etc. Many tourism businesses are coordinated with local farmers, in a way that all partners benefit from the excellent quality of the local production and the high demand of their products.

V.2 - Tourism and leisure activities

The location of the Maremma Regional Park, south to the Tuscany region occupies the last piece of unaltered coast and is greatly attractive for many tourists from all around Italy and abroad. The pressure for building tourism infrastructures has been very strong in the past, giving rise to important conflicts. However, over time the situation has significantly changed in a positive sense.

The Park managers have maintained their position against any kind of infrastructure inside the protected area, but in return they have designed a complete system of paths well equipped and maintained whereby the visitors can move around the territory, either by walking, bicycle, horseback riding, chariot or canoe. The basic criteria have been to exclude as much as possible the use of private motor vehicles, establishing limitations over time and space related to maximum of visitors, frequency, timetable, etc., according to the weight capacity of the different sites, and fully respecting the most sensitive areas where animals or plant species are vulnerable to the human presence. Many of these tours must compulsorily be made in the company of an official guide. The different pathways are indicated with the adequate infrastructure like wooden trails and security banisters, where necessary, observatories, information panels on important landmarks like defensive towers, crossroads, etc. Every itinerary is distinguished by an alphanumeric and a colour code.

Visitors entering the park must pay for an entrance ticket, either at the Visitor Centre or on the web page the day before the visit. An excellent map is provided to the visitors, to easily move around the area and highlighting the most relevant places and clearly explaining the rules and how people must behave to maintain the visited sites in good condition.

In 2019 EUROPARC certified that the Ente Parco Regionale della Maremma qualifies for joining the prestigious European Chart for Sustainable Tourism in Protected Areas (CETS). This means not only recognition of the progress towards the sustainability but also the commitment to respect the principles of the Chart.

V.3 - Education and awareness raising

The Maremma Regional Park has developed an intensive activity in relation with visitors, such as education activities and awareness raising, with particular (not exclusive at all) attention to the local population. The main activities can be summarised as follows:

V.3.1 - Organisation or participation in annual events:

- Participation in the “Festambiente Festival” in Enaoli, near the protected area. Many activities, latest updates, recent videos on the natural heritage of the Park and/or local food products or handcraft of the area are presented to the public with great success.
- Organisation of the “Park Festival” for two weekends in May each year.
- Organisation of the “Festa del Parco” with free access to all the pathways for residents.
- Photographic Contest “Le stagioni del Parco”.
- “Horse Ride Meeting” during two weekends in March and October.

V.3.2 - Education activities

- Didactic Project addressed to scholars, participating in laboratories, excursions and awareness raising.
- Project “Estate nel Parco”. The students can stay for a week living in the house of Pinottolai with different activities to study and appreciate the natural and cultural heritage.

V.3.3 - Volunteer Programmes

- Volunteer youngsters can participate in the conservation activities like protection of the beaches during the touristic season in Principina del Mare and Marina di Alberese, helping to protect the nesting sites of shorebirds, the threatened plants and possible nesting of sea turtles. The students can stay at the Pinottolai guest house.
- The association “Friends of the Park”, recently created, cooperates with the Park managers in different conservation activities

V.3.4 - Attention to visitors

The Visitor Centre of Alberese is open all year round, closing only on Christmas Day. There is an exhibition of the Park and many written information (booklets, maps, etc.) and advice on the options for visiting the Park can be obtained there. In summer an information point is also on duty in Marina di Alberese

V.3.5 - Guided visits and tours

Several itineraries are located in sensitive areas and the presence of a guide is obligatory. Other pathways can be assisted by guides on visitor’s request. Moreover, at certain moments the Park offers specific activities with guides to observe interesting natural events. The public is informed from the web page where they can also book a place.

V.3.6 - Web page and Social Networks

The Park is continuously updating its website <https://parco-maremma.it/> including a specific window to interact with the public. Maremma has accounts in the most important Social Networks like Pinterest, Facebook, Instagram, etc. During the lock down due to the COVID-19 pandemic, all the activities in the field were interrupted between 10th March and 20th June 2020. However, many audio-visual materials were produced to maintain the interest of the public through Social Networks.

V.3.7 - Continuous updates of brochures, maps, etc.

These materials are available in the visitor centre and also on the web page and a special effort is made to make them accessible to disabled people.

V.4 - Vessel traffic and public access

There are not public open roads inside the protected area. There are several lanes where the traffic for motor vehicles is very restricted. Visitors can use them by walking, bike, horseback riding, etc. The public access to the village of Alberese is actually the North-East limit of the Park.

The National motorway “Aurelia” and the railway of the national high-speed network are the limits of the peripheral protection zone of the Maremma Regional Park, but do not intersect the protected area.

V. 5 - Hunting/fishing

Hunting is forbidden in the whole Maremma Regional Park. Sport fishing with angling in the Ombrone river is allowed under certain conditions. Please refer to section II.3.3.

V.6 - Human occupation

The protected area of Maremma Regional Park has no infrastructures allowing human occupation. There are only a few constructions devoted to specific functions, for instance a pumping station for water level management of the floodplain channels located in the mouth of the Ombrone river.

V.7 - Cultural heritage

Numerous findings from archaeological investigations reveal that the area occupied by the Maremma Regional Park has been intensively used by the humans since the earliest times. To date an important architectural heritage can be found in Maremma area. The most relevant testimonies are the following:

- Ruins of the Benedictine Abbey of San Rabano or Santa Maria Alborense. It was built in the XI Century, fortified in the XIV and inhabited until the XVI century. The building has been restored only at the sites where information on its original architecture existed. The remaining areas have been consolidated to avoid accidents, waiting for new documentary evidence allowing an accurate and reliable reconstruction. In 2017 the original access road used in the Middle Age was discovered.
- Vigilance fortified towers. The Maremma Regional Park conserves five towers built from X – XI centuries onwards, with the intention to early detect possible attacks from the sea by pirates or any other kind of enemies that historically have attempted invasions. They have been built following a straight line at a distance lower than 3 miles from each other. Some of them are ruins at



present. The tower of Colle Lungo is maintained good conditions and has been included in one of the pathways for visitors:



- Ruins of a Romanesque church were discovered near Collecchio. It is still to be studied in depth.
- Archaeological works have revealed human occupation from the prehistoric times

VI - CONNECTIVITY OF THE AREA

VI.1 - Ecological connectivity with other areas

The Regional Law 30/2015 on the conservation and valorisation of the naturalistic-environmental regional heritage determines that all the Tuscany protected areas configure a network in which the cooperation and the mutual help are mostly enhanced. In particular article 2 (Regional system of natural protected areas), art. 5 (Regional system of biodiversity) and article 7 (Areas of functional ecological cooperation and structural and functional elements of the Tuscany ecological network) contain the provisions for the synergic management of the Tuscany biodiversity and protected areas.

The intrinsic features of wetlands make them functioning as networks, by sharing with other wetlands the populations of migratory birds. Consequently, the Ombrone estuary and La Trappola marshes are in close relationship with nearby wetlands. They are as well included in the most important network of wetlands at international level, since they are included in the Italian List of Wetlands of International Importance of the Ramsar Convention. See section VI.2.2.

The same occurs with the European Union Natura 2000 Ecological Network, to which the Maremma Regional Park belongs to. See section VI.2.1.

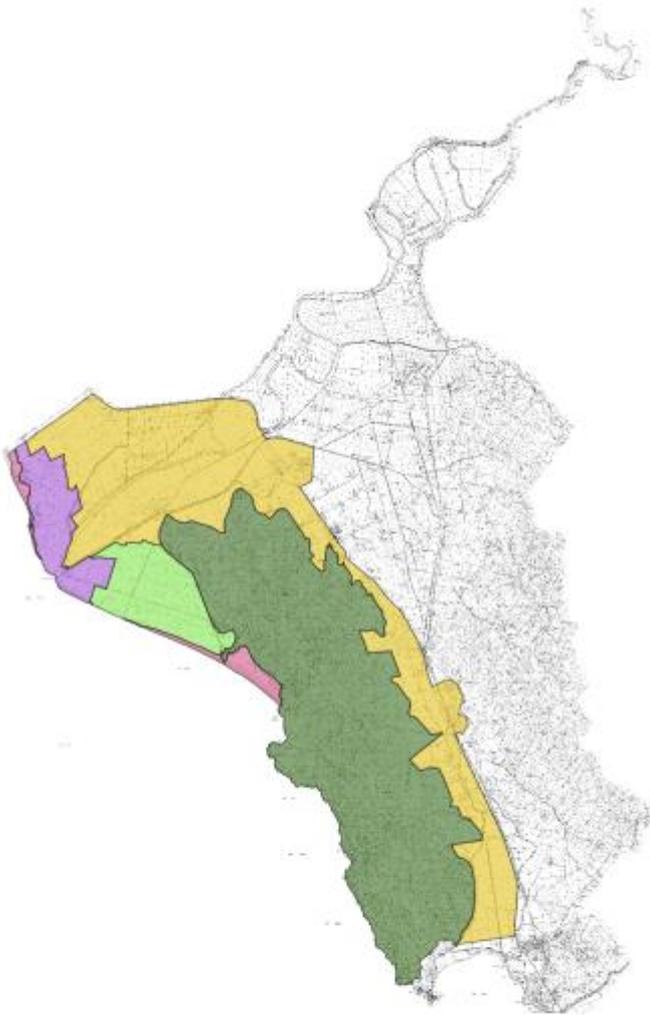
An important case of ecological connectivity arises from the reintroduction project of the Osprey (*Pandion haliaetus*), made in cooperation with Sardinian authorities and protected areas. Moreover, birds released in Maremma have established their nesting territories in other Tuscany areas. A similar case can be raised with the sea turtles *Caretta caretta*, which repeatedly try to find nesting grounds in many Tuscany beaches and in a few cases young turtles have been reported to have successfully hatched. In all these

cases the managers of the concerned protected areas are in contact to cooperate and join their capacities for the benefit of these species.

VI.2 - Other forms of recognition awarded

VI.2.1 - Natura 2000 Network

The 8.920 ha of the Maremma Regional Park has been included in the Natura 2000 Network, both as Special Protection Area (ZPS in the map below) pursuant Directive 2019/147/CE on the conservation of wild birds, and as Special Area of Conservation (ZSC in the map) under Directive 92/43/EEC on the conservation of the natural habitats and of wild fauna and flora:



ZSC SIR ZPS

- ZPS IT51A0013 - ZSC IT51A0039 - PADULE DELLA TRAPPOLA, BOCCA D'OMBRONE
- ZSC-ZPS IT51A0014 - MONTI DELL'UCCELLINA
- ZSC-ZPS IT51A0015 - DUNE COSTIERE DEL PARCO DELL'UCCELLINA
- ZSC-ZPS IT51A0016 MONTI DELL'UCCELLINA
- SIR-ZPS IT51A0036 - PIANURE DEL PARCO DELLA MAREMMA

The Management Plans of all the Natura 2000 sites have been made and are available from the web page: <https://parco-maremma.it/amministrazione-trasparente/pianificazione-e-governo-del-territorio/piani-di-gestione-s-i-c-e-s-i-r/>

VI.2.2 - Ramsar Site

A surface area of 536 hectares called “La Trapola Marshes and Ombrone River Mouth” has been included in the Italian List of Wetlands of International Importance of the **Ramsar Convention** by virtue of National Decree DM 304 21/10/2013. The site has been included in the Ramsar Convention database with number 2284 (<https://rsis.ramsar.org/ris/2284>):



Source: Ramsar Convention web page <https://rsis.ramsar.org/ris/2284>

VI.2.3 - European Chart for Sustainable Tourism in Protected Areas (CETSPA) on 2nd December 2019.



VII - IMPLEMENTATION OF PREVIOUS RECOMMENDATIONS

When the European Diploma was renewed in 2012, Resolution CM/ResDip(2012) 9, no condition was formulated, but 7 recommendations were attached to the renewal.

According to the information collected during the appraisal visit and from relevant sources, the undersigned consultant could draw the following conclusions:

Assessment of RECOMMENDATION 1 – *Develop, in collaboration with the local authorities concerned an approach to the management of the Ombrone river basin, pursuant to the EU Water Framework Directive, with a view to attaining good ecological status for the watercourse within the meaning of that Directive.*

The formulation of this recommendation is unclear and the Park authorities consider that any intervention at Ombrone river basin scale is far beyond their statutory scope, since its geographical area covers a large surface area of the Tuscany region. Certainly, many of the problems raised in previous reports in relation to water quality, especially the contamination by wastewater, have been solved. Consequently, the aspects dealing with water quality have been addressed.

This recommendation, though, seems to have been formulated to tackle, among others, the problems related to the erosion process at the Ombrone delta, which seem to have been attributed to a great extent to a reduction of the sediment burden transported by the river, although this assertion is a matter of discussion, as detailed in section III.6.1. Many studies have been made on the geo-morphological dynamics of the Ombrone estuary, but the undersigned has no capacity to ascertain whether or not they are sufficient to attribute the erosion problems to causes whose origin is far beyond the limits of the park and neither if these problems have solutions. The managers of the Park feel that their capacity of action is limited and therefore they have adopted measures under their scope, like the construction of 6 submerged dikes to counteract the erosion process and to allow the recovery of the surface areas eroded and also a new dike in parallel to the shoreline, to replace an old one very affected by the erosion. This kind of action is in the hands of the responsible administration of the Park, and thus, measures on this sense can not only be more efficient in the short-medium term, but also more achievable.

The recommendation has been fulfilled, as far as water quality is concerned, but not in relation to the erosion causes, which still persist. Therefore, for the ongoing renewal, **this recommendation should be reformulated** in the sense of engaging in consultations with specialists, involving the Scientific Committee, to request a diagnosis of the situation and possible measures for solving the problem.

Assessment of RECOMMENDATION 2 – *Finalise within a maximum of three years the extension of the Park to include the marine environment under conditions to be decided in agreement with local players.*

Since the last renewal, this proposal seemed to be quite advanced, because there were even both a regulation and a proposed perimeter for this new maritime area. However, the Ministry of the Environment has refused to continue the initiative and the proposal is in a deadlock.

Therefore, this recommendation has not been fulfilled. Nevertheless, it continues to be a very appropriate measure which would reinforce the protection of the Regional Park, providing conservation measures to the platform constituted by the estuary and the adjacent sea, characterised by an enormous biological richness. Consequently, this recommendation would benefit not only to the terrestrial habitats connected but also to the quality, diversity and abundance of fishery species of commercial interest usually exploited in the area. For all these reasons, for the ongoing renewal, **this recommendation should be maintained.**

Assessment of RECOMMENDATION 3 – *Designate the Trappola (Ombrone delta) as a wetland of international importance under the Ramsar Convention on wetlands.*

The Trappola area, with a surface area of 536 ha, has been included in the Italian List of Wetlands of International Importance of the Ramsar Convention, by virtue of national Decree DM 304 21/10/2013. Link to the Ramsar database: <https://rsis.ramsar.org/ris/2284>

This recommendation has been perfectly fulfilled and, therefore, for the ongoing renewal, **this recommendation should be dropped.**

Assessment of RECOMMENDATION 4 – *Considerably increase human resources in the Park responsible for field inspections and ensure a level of funding consistent with the increasing needs of optimum management of the diploma-holding area.*

The Director of the Park reports that an internal rule at national level from the Ministry of the Environment does not allow increasing the permanent staff, which must be maintained at most at the financial level of 2013, for budgetary reasons.

This recommendation has not been satisfactorily fulfilled, as detailed in section “IV.3 – Capacities”. Therefore, for the ongoing renewal, **this recommendation should be maintained and reinforced** to cope with existing and new challenges derived, for instance, from the climate change and the increasing risks of devastating events like surges, droughts, floodings or wildfires, along with the rising tourism pressure.

Assessment of RECOMMENDATION 5 – *Step-up technical support for local enterprises involved in developing integrated agro-environmental activities and promoting local products and services.*

This recommendation has been satisfactorily fulfilled. Nevertheless, for the ongoing renewal, **this recommendation should be maintained**, but in the sense of continuing efforts to increase the quality and the appreciation in the markets of local farming products.

Assessment of RECOMMENDATION 6 – *Develop action to promote the protection and the enhancement of the Park’s anthropological heritage.*

This recommendation has been fulfilled. For the ongoing renewal it should be convenient to stress the importance of continuing the efforts in this sense and, therefore, **this recommendation should be maintained**.

Assessment of RECOMMENDATION 7 – *Prepare a plan for the management of the wolf population.*

Since the return of the wolf, it has been subject to intense monitoring actions, covering not only the way in which the wolfs managed to occupy the area but also how they influence the local populations of wild and domestic herbivores as potential prey species. The information collected basically by means of photo-trapping, genetic studies and analysis of droppings, provide the relevant information for decision making in relation to the bundle wolf-herbivores. Therefore, although no management plan has been drafted, the management of the wolf is well based on scientific evidence, and consequently the decisions are being very appropriate. Nevertheless, the Wolf Management Plans continue to be a good suggestion and, therefore, for the ongoing renewal, **this recommendation should be maintained but reformulated**.

FINAL APPRAISAL

The preliminary conclusion of the undersigned consultant is **to recommend the renewal of the European Diploma for Protected Areas to the Maremma Regional Park for 10 more years, since the area is of exceptional European interest and it is managed in an exemplary way.**

For the renewal of the European Diploma to **Maremma Regional Park no condition seems to be necessary, although the following recommendations are proposed:**

RECOMMENDATION 1 – Entrust the Scientific Committee of the Maremma Regional Park to consult with the most relevant scientists specialised in geo-morphological, hydrological and ecological dynamics of the Ombrone river basin, with respect to the effects of erosion on the Ombrone delta and adjacent beaches, in order to:

- i. Gather and analyse all the existing scientific information concerning the causes of the increase of the ratio erosion/sedimentation
- ii. Establish a diagnosis of the drivers of deterioration of the delta and coastal areas, including (if relevant) factors associated to the climate change,
- iii. Identify possible measures, in different time and space scales, to respond to the identified causes of the deterioration
- iv. Analyse from the ecological, economic and environmental impact point of views the feasibility of the options for the regeneration of the delta and coastal areas affected by the increase of erosion processes.

RECOMMENDATION 2 – Reopen the dialogue with the Ministries competent for Environment, and Commercial Fishing with a view to protect the marine area adjacent to the Maremma Regional Park, in order to ensure the protection of the fishing resources and of the habitats of marine species and foster a sustainable coexistence with the local tourism actors.

RECOMMENDATION 3 – Given the important **and increasing** challenges that the managers of the Maremma Regional Park are facing, the Italian national authorities should ensure the adequate level of permanent staff to guarantee the efficient protection and surveillance of the Diploma holding area and ensure the renewal of the existing staff.

RECOMMENDATION 4 – Pursue the efforts of the managers to contribute to the socio-economic development of the area by fostering sustainable economic activities and the quality labels. Promote internationally the exemplary model of coexistence of conservation and development achieved with the contribution of all stakeholders.

RECOMMENDATION 5 – Continue the efforts for investigating, restoring and conserving the outstanding cultural and archaeological values of Maremma.

RECOMMENDATION 6 –Draft a management plan for the wolf in light of the experience gained with the management of the species and in correlation with the management of the ungulates.

RECOMMENDATION 7 – Elaborate a tourism strategy in light of the outcomes of monitoring indicators and alert thresholds of excessive human presence in the area with a view to prevent possible overcrowded sites and subsequent damages to the environment.

ACKNOWLEDGEMENTS

The undersigned wishes to warmly thank the whole staff of the Maremma Regional Park for its availability. In particular, the Director Mr Enrico Giunta and the Head of the Warden Corps of the protected area, Mr Luca Tonini, and also Ms Helena Orsulic from the Secretariat of the Council of Europe for the perfect organisation of the visit.

All the members of the Park's staff have been extremely kind and helpful. The Wardens, the technicians and the ancillary staff have been all time paying attention to all needs, much beyond the simple rules of politeness. To all of them a huge THANK YOU!!!

The participation of the scientists of the University of Siena has been extremely useful for obtaining updated information on key issues during the visit, which was also very welcome and appreciated.

Many stakeholders participated in the meetings and provided useful and pertinent comments and opinions. Thanks a lot to all of them, since their contribution was needed to assess whether or not possible relevant conflicts and/or disruptions were potentially or really acting against the conservation of the Park. All of them have shown their maximum cooperation and honest opinions. It could be seen that most past conflicts have progressively turned into a general atmosphere of agreement and confidence among all concerned parties.

For all these reasons, the undersigned wishes not only to acknowledge the attentions received but also AND ESPECIALLY to send all partners the warmest congratulations for overcoming the obstacles occurring in the past, having achieved a model of socio-economic development compatible with the excellent state of conservation of the Maremma Regional Park, which has been a collective success worth of recognition.

Granada, Spain, January 2023

Blanca Ramos
Conservation Biologist

ANNEX I

AGENDA OF THE APPRAISAL VISIT TO MAREMMA REGIONAL PARK

DAY	TIME	PROGRAMME	ACCOMPANYING PERSON
Sunday 13 th Nov.	Afternoon/evening	Arrival in Italy. Transfer from the airport. Room-check and dinner	Member of the Warden Corps
Monday 14 th Nov.	09:00	Meeting with the Director and managers of the technical, administrative and supervisory areas of the Park. Presentation of the Park with indications of critical points and strengths in the light of previous report drawn up for the 2012 renewal.	Director of the Park Arch. Francesca Olivi Dr. Catia Biliotti Comm. Luca Tonini Geom. Beatrice Antoni Dr. Laura Tonelli Prof. Francesco Ferretti Dr. Andrea Machetti Rag. Maurizio Lunardi
	13:30	Lunch	Technical team
	14:30	First visit of Park to learn about ecosystems, habitats, management organisation, emergencies and points of maximum human use	Director of the Park Comm. Luca Tonini Geom. Beatrice Antoni Dr. Laura Tonelli
	17:30	Meeting with the President and the Director of the Park	President of the Park Director of the Park
	19:00	Meeting with the Director of Ente Terre Regionali Toscana	Director of ETRT Director of the Park
Tuesday 15 th Nov.	08:30	Second visit to the Park to learn about ecosystems, habitats, management, organisation, emergencies and points of maximum human use	Director of the Park Comm. Luca Tonini Dr. Laura Tonelli
	11:00	Meeting with stakeholders: environmental associations, area associations, friends of the Park, farmers' representatives	President of the Park Director of the Park Arch. Francesca Olivi Geom. Beatrice Antoni Dr. Laura Tonelli Rag. Maurizio Lunardi
	13:00	Lunch	President of the Park Director of the Park
	15:00	Meeting with representatives of the Park Community: President of the Province of Grosseto, Major of Grosseto, Major of Orbetello, Commissioner of Magliano in Toscana	President of the Park Director of the Park
	18:00	Meeting with the Director and technical/administrative staff of the Park to summarise the visit	Director of the Park Arch. Francesca Olivi Dr. Carla Biliotti Comm. Luca Tonini Geom. Beatrice Antoni Dr. Laura Tonelli Rag. Maurizio Lunardi

ANNEX II

LIST OF PARTICIPANTS TO THE MEETINGS WITH STAKEHOLDERS

The meetings held on 15th November 2022 with the stakeholders involved were attended by the President and the Director of the Park, the Head of the Warden Corps and technicians of the Park, in addition to the undersigning, accompanied by the following representatives of the Park Community (*Comunità del Parco*):

- Luca Agresti – Deputy Major of Grosseto
- Roberto Belardi – Advisor of Public Works of the Orbetello Commune
- Riccardo Malpassi – Extraordinary Deputy Commissioner of the Magliano in Toscana Commune
- Cecilia Buggliani – representing the Grosseto province

Day 15th November 2022 at 15:00, meeting with environmental NGOs.

- Dott. Lucia Venturi. Ex-President of the Maremma Regional Park
- Luca Varaglioti – representing the assoc. Pro Loco, Alberese
- Lucia Benvenuti – representing the assoc. LEGAMBIENTE
- Luca Passalacqua – representing WWF Grosseto
- Paola Talluri – Guide of the Park and manager of the Cooperative working at the Visitors' Center
- Sabrina Fiorelli – Guide of the Park working at the Visitors' Center
- Giulia Cislighi – Cooperating with the Park, responsible for updating the web page and the Social Networks.

Day 15th November 2022 at 16:30, meeting with representatives of the agriculture and tourism sectors.

- Ente Terri Regionali Toscane - Cristofer Ricca Lizandre
- Frantoio del Parco: Mara Cinque, Cristina Olivero and Lucia Cavallin.
- Azienda Agricola La Fata and Agriturismo La Fata: Letizia Mastropietro
- Azienda Agricola Donato Giuliano: Donato Giuliano and Gessica Giuliano
- Agrobiologica Le Tofane: Daniele Francioli and Marika Franciolo

TRANSLATION NOTES:

- Ente Terri Regionali Toscane: Entity Tuscany Regional Lands
- Frantoio del Parco: Park's Oil Mill
- Azienda Agricola: Farm

ANNEX III

ZONATION OF MAREMMA REGIONAL PARK INTEGRATED MANAGEMENT PLAN

A) Integral Reserves

- A 1: Padule della Trappola and mouth of the river Ombrone
- A 2: Paduletto di Collelungo
- A 3: Porto Vecchio Coastal Band French Cala Rossa Cala
- A 4: Scoglio della Lepre
- A 5: Fosso del Treccione and Monti dell'Uccellina
- A 6: Vallone Salto del Cervo Serrata dei Cavalleggeri
- A 7: Cliffs in the southern area of the Maremma Park

B) General Oriented Reserves

- B 1: Alberese cork oak forest
- B 2: Trappola and San Carlo agricultural areas
- B 3: Trap Grazing Area
- B 4: Rimessini Scoglietto grazing area
- B 5: Ombrone River
- B 6: Marsh area and Macchiozze pasture area, agricultural areas and floodplains of the Ombrone
- B 7: San Paolo water pump marshy area
- B 8: Maremma Park dune belt
- B 9: Cala di Forno
- B 10: Campo al Pino
- B 11: Lasco di Alberese
- B 12: Alberese ecotonal belt
- B 13: Talamone ecotonal belt
- B 14: Talamone reclamation area
- B 15: Wooded pastures Vallone Salto del Cervo and Collelungo olive grove
- B 16: Monti dell'Uccellina wooded area

C) Protection Areas

- C 1: Alberese grand-ducal pine forest
- C 2: Wooded area of Talamone
- C 3: Pineta San Carlo
- C 4: Historical olive groves of Vaccareccia
- C 5: Wooded area Appearing the Cannelle

D) Areas of Economic and Social Promotion

- D 1: Alberese warehouses agricultural area
- D 2: Collecchio agricultural area
- D 3: Dicioccatone agricultural area
- D 4: Historic farm units
- D 5: Collecchio farm
- D 6: Town of Alberese
- D 7: Marina di Alberese service centre
- D 8: SS1 Aurelia strip and Tyrrhenian railway
- D 9: Head of Man
- D 10: Agricultural areas.

Contiguous area:

- E) Areas with high environmental tutelage
- F) Areas of anthropic origin of environmental and naturalistic value
- G) Open territory
- H) Inhabited areas