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PLAN D'ACTION POUR LA MEDITERRANÉE

Treizième réunion ordinaire des Parties
contractantes à la Convention pour la protection
de la mer Méditerranée contre la pollution et
à ses protocoles

Catane (Italie), 11-14 novembre 2003

PROPOSITIONS POUR INSCRIPTION SUR LA LISTE DES ASPIM

AVANT-PROPOS

Dans le cadre des Articles 8 et 9 du Protocole ASP, le CAR/ASP a reçu du PFN espagnol pour les ASP, trois rapports de présentation concernant trois sites proposés pour inscription sur la liste des Aires Spécialement Protégées d'Importance Méditerranéenne (ASPIM).

Le présent document présente les résumés des rapports de présentation des ASPIM proposées.

Les propositions espagnoles ci-dessous ont été examinées par la Sixième réunion des Points Focaux Nationaux pour les ASP sous le point 8 de l'ordre du jour. L'examen de ces propositions a permis de vérifier la conformité de ces propositions avec les dispositions de l'Annexe I au Protocole ASP "Critères communs pour le choix des aires marines et côtières protégées susceptibles d'être inscrites sur la liste des ASPIM" pour deux des trois propositions qui seront soumises à l'avis de la réunion des points focaux nationaux du PAM en vue de les transmettre à la treizième réunion des Parties Contractantes.

Les documents UNEP(DEC)/MED WG.228/Inf.12 Ad.1 et Ad.2 présente la proposition de l'Espagne d'inscription des deux sites (le parc national de Cabrera et le parc Acantilados de Marco-Cerro Gordo) selon le format convenu.

RESUME DES PROPOSITIONS D'INSCRIPTION SUR LA LISTE DES ASPIM

PARQUE NACIONAL MARITMO TERRESTRE DEL ARCHIPIELAGO DE CABRERA (ESPAGNE)

Le Parc National de Cabrera a été le premier et le seul Parc National en Espagne jusqu'à 2002. Certains de ses traits physiques, géographiques, biologiques et écologiques sont exceptionnels et il peut être considéré, sans aucun doute, comme la seule région naturelle des Iles Baléares. Il constitue le seul archipel à avoir de telles dimensions en Méditerranée occidentale et a le plus beau port naturel, à l'exception du port Ma à Menorca.

L'archipel a été déclaré Parc National en 1991. Il consiste en 19 îlots situés à 9 km de la pointe au sud de Majorque (Iles Baléares) et de la mer qui l'entoure. Le Parc s'étend sur une superficie de 10.021 ha dont 1.320 terrestre et le reste, soit, 8.680 ha, marine. La profondeur maximale dans l'aire marine protégée atteint 110 m. Il n'existe sur ces îles aucune activité agricole et, en dehors d'une population permanente de 12-25 personnes sur l'île principale, elles demeurent inhabitées. Les eaux de l'archipel se caractérisent par leur oligotrophie qu'accentue la faible influence continentale (il n'y a ni fleuve ni industrie dans l'archipel, de même qu'il n'y en a pas dans l'île de Majorque proche) et, par conséquent, par une grande transparence comparable, l'été, à celle des mers tropicales. La grande hétérogénéité des fonds marins, qui abritent un grand nombre des communautés benthiques les plus caractéristiques de la Méditerranée centrale, ainsi que leur bon état de conservation, font de l'archipel un lieu privilégié pour l'étude de la biodiversité marine dans les régions oligotrophiques de la Méditerranée occidentale et des facteurs qui déterminent la structure de ses communautés. La présence, par ailleurs, de falaises sous-marines continues et ininterrompues entre 0 et -65m est particulièrement intéressante pour mener des études sur la zonation benthique et sur les facteurs environnementaux qui l'imposent.

Les limites inférieures de l'étage infralittoral (-40 à -50m) et de la croissance algale ont été déterminées au niveau de l'archipel; elles se placent parmi les plus profondes de la Méditerranée occidentale. L'archipel étant calcaire, le nombre de grottes et de galeries marines est considérable.

Sur les deux îles principales, existent plusieurs grottes anchialines abritant une faune marine endémique.

Les biotes marines recensés à ce jour consistent en 455 espèces de plantes marines (Diatomées, Macroalgues et Phanérogames marines) et en 951 métazoaires. Des inventaires détaillés de plusieurs de ces groupes ont été publiés dans une monographie sur l'Histoire Naturelle de l'archipel (Alcover *et al.* (edts), 1993) ; Ils comprennent des Diatomés, Macroalgues, Phanérogames marines, Cnidaires, Cténophore, Plathelminthes, Némertes, Polychètes, Sipunculidés, Equiuridés,

Crustacés, Mollusques, Phoronidés, Bryozoaires, Brachiopodes, Foronidés, Chaetognates, Echinodermes, Ascidiacés, Thaliacés, Larves, Poissons, Mammifères marins et Reptiles.

L'archipel est exceptionnel pour son extraordinaire variété en populations de poissons dépassant en nombre d'espèces tous les autres sites BIOMARE, à l'exception de ceux se trouvant en Macaronésie. L'abondance du crustacé décapode thermophile *Scyllarides latus* est également exceptionnelle. La faune des grottes anchialines est remarquable ; elle comporte 8 espèces endémiques propres à l'archipel.

Le paysage de Cabrera est dominé par deux variétés d'étendues d'arbrisseaux : un maquis littoral avec la prédominance de buissons sclérophylles (Al. *Oleo-Ceratonion*), et une étendue d'arbrisseaux dominés par des buissons malacophilles (Al. *Rosmarino-Ericion*) et, dans certains endroits, d'une couche arboricole de *Pinus halepensis*. Non loin de la mer, sur les îles principales et les îlots, se trouve une ceinture continue de végétation halonitrophile qui inclue localement des communautés endémiques remarquables de buissons épineux (*Launaeetum cervicornis* et *Teucrietum subspinosum*). Les falaises calcaires présentent de nombreuses fentes qui abritent des communautés remarquables y compris des endémiques (As. *Hippocrepidetum balearicae* and As. *Micromerio-Allietum a-bolossi*). A ce jour, près de 500 plantes vasculaires terrestres, dont 30 taxons endémiques, ont été inventoriées.

Cabrera est le site principal des îles Baléares pour les oiseaux marins et les rapaces de falaises marines; il abrite des populations reproductrices de toutes les espèces pouvant être rencontrées en Méditerranée occidentale, y compris dans certains cas, un nombre remarquable de couples reproducteurs (plus de 400 couples de *Hydrobates pelagicus* et *Calonectris diomedea*, 9-10 couples de *Falco peregrinus*, plus de 100 couples de *Puffinus mauretanicus*, 100 couples de *Phalacrocorax aristotelis* et plus de 250 couples *Larus audouinii*, comme les espèces les plus importantes. L'archipel abrite 80% de la population mondiale de l'endémique lézard des Baléares *Podarcis lilfordi*, une population qui se subdivise en plusieurs sous-espèces. Les arachnides se composent d'une multitude d'espèces dont des endémiques des Baléares comme *Nemesiabrauni*. Deux coléoptères (*Percus spagnoli* et *Phyllan nitidicollis*) sont des endémiques de l'archipel. D'autres groupes d'invertébrés terrestres, avec plusieurs endémiques, sont bien représentés. La faune terrestre n'a pas encore fait l'objet d'une étude exhaustive.

L'impact humain :

Le impacts humains potentiels sur le site résultent de l'activité d'une flotte de pêche dans les ports voisins de Majorque (des permis pour 59 navires avec un maximum de 20 par jour ayant l'autorisation d'opérer) et des visiteurs. Seule la pêche artisanale sélective traditionnelle est autorisée (filets maillants, lignes). On ne connaît pas la production annuelle puisque les navires opèrent à l'extérieur du Parc mais, celle-ci avoisinerait les 100 Tm. Le Parc a reçu 60.000 visiteurs en 2001. Le rythme des visites demeure constant avec une concentration de 50% de visiteurs en juillet et août. Les débarquements sont limités et ne sont permis qu'autour du port de Cabrera.

Recherches en cours :

Cabrera est le site de recherche habituel et favori des laboratoires de recherches sur la biodiversités des Iles Baléares (c'est-à-dire IMEDEA, IEO et l'Université des Iles Baléares) ou de Catalogne (CEAB , ICM et l'Université de Barcelone). Sept chercheurs consacrent une partie importante de leur temps à cette recherche. Plusieurs ONG mènent également des recherches en biologie marine dans l'archipel. En dehors du travail de taxonomie de base, les projets se focalisent sur l'effet des réserves marines sur les populations de poissons et sur les herbiers de Posidonie.

Les installations :

Le Parc n'est accessible que par bateau ou en hélicoptère. Il s'agit d'une traversée de 30 minutes sur un bateau gonflable de Colònia de Sant Jordi (le port le plus proche de Cabrera sur la côte sud de Majorque, à environ 50 Km de Palma de Mallorca). Au printemps et en été, des bateaux en location pour touristes font quotidiennement la navette dans l'Archipel à partir de Colònia de Sant Jordi et Porto Petro ; la traversée dure à peu près 1 heure. Les bateaux pour touristes ne fonctionnent pas en automne et en hiver, mais peuvent être utilisés à la demande. De plus, la location de bateaux est possible. Les bateaux du Parc ne sont, en principe, pas mis à la disposition des chercheurs et les équipements de plongée sous-marine se limitent à un compresseur. Il n'existe pas, sur les îles, de laboratoire construit ou équipé pour la recherche biologique, à l'exception d'un espace d'expérimentation qui se trouve au port de l'île principale de Cabrera. Il est possible de loger au Parc, à la demande, jusqu'à 8 chercheurs.

Base de données disponible :

Il n'existe pas encore de banques de données en ligne sur les Biotes de l'archipel. Toutefois, Alcover *et al.* (eds, 1993) offre des chapitres détaillés (et des check-lists) sur les Zoo- et Phytoplancton, le Macrozoobenthos et le Macrophytobenthos, ainsi que sur la faune et la flore terrestres.

Site Web :

Le ministère espagnol de l'environnement a un site institutionnel (<http://www.mma.es/parques/lared/cabrera/index.htm>) qui fournit des informations générale sur la gestion et la richesse biologique de l'archipel.

Le document MED WG.228/Inf.12 Ad.1 présente le rapport de présentation de cette proposition selon le format convenu.

ACANTILADOS DE MARO-CERRO GORDO (ESPAGNE)

La Place Naturelle de Acantilados de Maro-Cerro Gordo constitue une région d'une grande importance environnementale du fait de l'originalité de ses composantes géologiques et de sa grande diversité biologique terrestre et marine.

La principale voie d'accès est la route N-340. La présence humaine est concentrée surtout dans les villages de la région : Maro à Nerja (Malaga) et La Herradura à Almuécar (Granada), et à Rio de la Miel, Barranco del Pino et Cantarrijan.

La région est caractérisée morphologiquement par une série de falaises à partir de la partie intermédiaire du complexe de l'Alpujarride. Ces caractéristiques appartiennent à la Sierra Almirajara, point culminant de la région. La région renferme des pierres de chaux dolomitiques qui induisent la formation de sols sombres et moyennement consolidés dans les régions à pente douce, et des sols clairs et peu consolidés dans les régions à pente plus abrupte.

La flore terrestre de cette région est très diversifiée. La végétation potentielle appartient au Betic calcicole du *Quercus ilex*. Actuellement, la région comprend des espèces de broussailles méditerranéennes telles que *Pistacia lentiscus*, *Rosmarinus officinalis*, sous-espèces d'*Ulex*, *Chamaerops humilis*, et d'autres espèces comme *Pinus halepensis*. Les endémiques sont également importants dans cette région. Il existe deux endémiques du sud de l'Andalousie *Limonium malacitanum* et *Rosmarinus tomentosus*, classés comme en voie d'extinction par le Catalogue de l'Andalousie sur la Flore Sauvage Menacée (ACTWF) et deux endémiques de la Méditerranée occidentale, qui sont tous les deux inclus dans la Directive Habitat : *Buxus balearica*, en danger d'extinction selon ACTWF), et *Maytenus senegalensis* sous-espèce *europaea*, déclarée vulnérable par ACTWF.

En ce qui concerne la faune, il existe un grand nombre d'espèces saisonnières et résidentes, telles que *Vulpes vulpes*, *Felis silvestris*, *Mustela nivalis*, *Martes foina*, *Erinaceus europaeus*, *Meles meles*, *Hemidactylus turcicus*, *Malpolon monspesselanus*, *Chamaeleo chameleon* et *Bufo calamita*. Il existe également des métapopulations de *Capra pyrenaica hispanica*.

Les oiseaux marins constituent le groupe le plus important, en particulier, les espèces suivantes *Larus ridibundus*, *Larus cachinnans*, *Larus fuscus*, *Ardea cinerea*, *Hydrobates pelagicus* – en danger d'extinction en Andalousie -, *Morus bassana*, *Milvus migrans*, *Pandion haliaetus* – populations hivernales cataloguées comme vulnérables en Andalousie -, *Circaetus gallicus*, *Hieraaetus fasciatus* - en danger d'extinction en Andalousie -, *Buteo buteo*, *Falco tinnuculus*, *Falco naumanni*, et *Falco peregrinus*, vulnérables en Andalousie.

La bande maritime de la région offre une diversité biologique plus importante que la diversité terrestre. Plusieurs espèces habitent les fonds marins. Parmi cette flore, des espèces telles que, *Posidonia oceanica*, *Zostera marina* et *Cymodocea nodosa*, développent des herbiers complexes considérés comme habitats prioritaires par l'UE. Ces herbiers constituent des lieux de ponte et des nurseries pour de nombreuses espèces de poissons. De plus, on peut rencontrer un grand nombre

d'algues macroscopiques dans l'étage infralittoral avec de nombreuses espèces associées appartenant aux trois principaux groupes d'algues macroscopiques.

La faune marine présente également des espèces très abondantes. Il existe un grand nombre d'invertébrés, particulièrement des Cnidaires, des Coraux, des Anémones, des Echinodermes et des Mollusques. Parmi les Crustacées, il existe des espèces importantes telles que les crevettes, le crabe araignée et le homard. Les populations d'espèces vulnérables d'*Astroides calycularis* (B.O.E. n. 148, 22/06/1999) sont très importantes.

La diversité des poissons est liée à l'hétérogénéité des habitats due à l'existence d'herbiers de phanérogames marines et de fonds rocheux. Il convient de citer, comme espèces principales, *Gobius niger*, les Blennidés, *Scorpaena porcus*, la murène et *Epinephelus guaza* - quoique cette espèce est le plus important prédateur de Méditerranée, il a pratiquement disparu du fait de la pêche sauvage. Il existe d'autres espèces intéressantes : *Coris julis*, *Astronothus ocellatus*, *Apogon imberbis*, *Anthias anthias*, *Diplodus annularis*, *Diplodus cervinus*, *Sparus auratus* et *Mola mola*.

On trouve, par ailleurs, des espèces protégées dans la région telles que, *Caretta caretta*, et des mammifères marins *Delphinus delphis*, *Stenella coeruleoalba*, *Tursiops truncatus* et *Balaenoptera physalus*.

Malgré le contrôle et la surveillance de la zone, la pêche illégale et/ou sportive ainsi que l'augmentation de la pression humaine en été, induisent de grandes perturbations dans la région.

Son paysage côtier original, sa très grande richesse en espèces et l'importante valeur naturelle de ses écosystèmes marins, font de la Place Naturelle de Acantilados de Maro-Cerro Gordo, une région très importante du point de vue environnemental ; elle mérite une protection au plus haut degré.

Le document MED WG.228/Inf.12 Ad.2 présente le rapport de présentation de cette proposition selon le format convenu.

**ANNOTATED FORMAT FOR THE PRESENTATION
REPORTS FOR THE AREAS PROPOSED
FOR INCLUSION IN THE SPAMI LIST**

PARQUE NACIONAL
MARÍTIMO TERRESTRE
DEL ARCHIPIÉLAGO
DE CABRERA

SPAIN

1. AREA IDENTIFICATION

1.1. COUNTRY/COUNTRIES (in the case of transboundary areas)

Spain.

1.2. ADMINISTRATIVE PROVINCE OR REGION

Illes Balears (Balearic Islands)

1.3. NAME OF THE AREA

Parque Nacional Marítimo-Terrestre del Archipiélago de Cabrera

1.4. GEOGRAPHIC LOCATION

Describe its geographical boundaries, e.g. rivers, roads, geographical or administrative boundaries (do not describe the co-ordinates here; please make a separate annex with a map and a description of geographical co-ordinates as stated in the legal declaration of the area).

Cabrera is a small archipelago situated to the south of Majorca (Balearic Islands, Spain), around 9 km to the SSW of Cape Salines. The main islands are Cabrera Gran (1118 ha) and Conillera (137 ha) with a subset of 17 rocky islets of variable size, ranging from 0.1 ha (Illot de l'Olló) to 10.7 ha (Na Redona), with rocky limestone ground and high cliffs. Islands and islets are aligned approximately in a NE to SW direction. Although the closest municipalities are Ses Salines and Campos, it is included in the administrative boundaries of the municipality of Palma. Vegetation in the islets is dominated by the halo-nitrophilic communities (*Limonietum caprariense*, al. *Arthrocnemion fruticosi* and al. *Salsolo-Peganion*, Rita & Bibiloni, 1993), while in the main islands they form a narrow belt in the vicinity of the seashore. At Cabrera Gran and Conillera, mediterranean shrubs are the dominant communities, including small woods of *Pinus halepensis*. For a review, see Alcover et al. (1993).

1.5. SURFACE OF THE AREA (total)

10021 ha, of which 1320 are land and the rest – 8680 ha, are open waters

1.6. LENGTH OF THE MAIN COAST (Km)

53.87 km of coast, distributed between the islands and small islets.

2. EXECUTIVE SUMMARY (maximum 3 pages)

Supply a summary of the information contained in sections 3 to 9.

Cabrera National park is the first, and up until 2002, the only National park of the Spanish network. It is unique in some of its physical, geographical, biological and ecological characteristics, and can be considered undoubtedly as the main natural area in the Balearics. It is the only uninhabited archipelago



Panorama of Cabrera's harbour. Photo Archivo PN de Cabrera

of its size in the western Mediterranean, including the best natural harbour –after Maó harbour, Menorca-.

The Archipelago was declared National Park in 1991. It consists of 19 islets situated some 9 km of the S tip of Mallorca (Balearic Islands), plus the surrounding sea. Total extension of the park is 10021 ha, of which 1320 are land and the rest –8680 ha, are open waters. The maximum depth in the protected marine zone reaches 110 m. The islands do not support any agricultural practice and remain uninhabited except for a standing population of between 12-25 people on the main island. The waters of the Archipelago are characterised by their oligotrophy, accentuated by the low continental influence (there are no rivers or

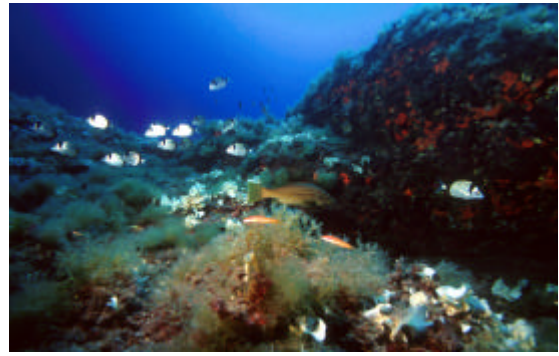
industry in the Archipelago nor in the vicine Mallorca), and in consequence by an elevated transparency comparable, in Summer, to those of tropical seas. The great heterogeneity of the bottoms, harbouring a large number of the more characteristic benthic communities of the central Mediterranean, and their good state of conservation, makes the Archipelago an ideal place for the study of marine biodiversity in the oligotrophic areas of the Western Mediterranean, and the factors that determine its community structure. In addition, the presence of undisturbed and continuous underwater cliffs between 0 and -65 m are of major interest to carry out studies on benthic zonation and on environmental factors forcing it. Lowermost bathymetric limits for the infralittoral zone (-40 to -45 m) and algal growth (-110 m) have been determined in the Archipelago, and rank amongst the deepest in the W. Mediterranean. Due to the calcareous condition of the Archipelago, the number of marine caves and tunnels is considerable. Several anchialine caves harbouring endemic marine fauna are known also on the two main islands.

The censused marine biota consists thus far of 455 species of marine plants (Diatoms, Macroalgae and Seagrasses) and 951 metazoans. Comprehensive inventories of many of these groups have been published in a monograph dealing on the Natural History of the Archipelago (Alcover et al. (Eds), 1993): these include Diatoms, Macroalgae, Seagrasses, Cnidarians, Ctenophora, Plathelminthes, Nemertean, Polychaeta, Sipunculids, Equiurids, Crustacea, Mollusca, Phoronida, Bryozoa, Brachiopoda, Foronidea, Chaetognata, Echinodermata, Ascidiacea, Thaliacea, Larvacea, Fishes, marine Mammals and Reptiles. The Archipelago is outstanding for its extraordinarily diverse fish assemblage, surpassing in number of species any other BIOMARE site except those placed in Macaronesia. The great abundance of the thermophilic Decapod crustacean *Scyllarides latus* is also remarkable. Anchialine cave fauna is noteworthy, with up to 8 endemic species exclusive of the archipelago.

The landscape of Cabrera is dominated by two main shrublands communities: a litoral *màquia* with the prevalence of sclerophyllous bushes (Al. *Oleo-Ceratonion*), and a shrubland dominated by malacophyllous bushes (Al. *Rosmarino-Ericion*) with an arboreal stratum of *Pinus halepensis* in some areas. Close to the sea on the main islands, and on the islets, there is a continuum belt of halonitrophilous vegetation, locally including remarkable endemic communities of spiny bushes (*Launaeetum cervicornis* and *Teucrietum subspinosum*). The calcareous cliffs are rich in crevices that host remarkable communities with some endemics (As. *Hippocrepidetum balearicae* and As. *Micromerio-Allietum a.-bolossi*). Nearly 500 of terrestrial vascular plants have been inventoried so far, including 30 endemic taxa.

Cabrera is the main site for seabirds and sea-cliff raptors in the Balearic Islands, hosting breeding populations of all the species that can be found in the western Mediterranean, with remarkable numbers of breeding pairs in some cases (over 400 breeding pairs of *Hydrobates pelagicus* and *Calonectris diomedea*, 9-10 pp. of *Falco peregrinus*, over 100 pp. of *Puffinus mauretanicus*, 100 pp. of *Phalacrocorax aristotelis* and >250 pp. of *Larus audouinii* as the most relevant species). The

archipelago hosts 80% of the world population of the endemic Balearic lizard, *Podarcis lilfordi*, a population splitted into several subspecies.. Aracnids are rich in species, with some Balearic endemics like *Nemesia brauni*. Two coleoptera (*Percus spagnoli* and *Phyllan nitidicollis*) are endemics of the archipelago. Other groups of terrestrial invertebrates are well represented and with several endemics. Terrestrial fauna has not been surveyed completely.



Diplodus vulgaris, *Coris julis*, and *Epinephelus costae* at Cala Galiota. Photo Archivo PN de Cabrera

Human impact:

The potential human impacts on the site derive from the activity of a fishery fleet based on the vicine ports of Mallorca (59 licensed ships, but only a maximum of 20 permitted to operate per day), and from the visitors. Only traditional artisan selective fishing (gill nets, line) is allowed. The annual crop is unknown since the ships work also outside the Park, but the volume could be around 100 Tm. On 2001, the Park received 60.000 visitors. The regime of visits is very stational, 50% of total visitors concentrating on July-August. Landing is very restricted and only permitted around Cabrera's harbour.

On-going research:

Cabrera is the ordinary research playground for the major biodiversity research laboratories of either the Balearic Islands (i.e., IMEDEA, IEO and the University of the Balearic Islands) and Catalonia (CEAB, ICM and University of Barcelona). Seven scientists spend a significant proportion of their time on this research. Several NGO's carry out marine biological work on the Archipelago also. Apart of basic alpha-taxonomic work, the main projects focus on the efect of marine reserves on fish populations and *Posidonia* meadows.

Facilities:

The Park is only accessible by boat or helicopter. There is a 30 minutes cruise on inflatable boat from Colònia de Sant Jordi (the closest harbour to Cabrera on Mallorca south coast, at about 50 km from Palma de Mallorca). During Spring and Summer, several touristic charter boats operate daily with the Archipelago from Colònia de Sant Jordi and Porto Petro; the cruise lasts about 1 h. Touristic charter boats do not operate daily during Winter and Fall, but can be arranged for a precise date. In addition, access to charter boats is possible. The Park boats are not, in principle, accessible to researchers, and the facilities for SCUBA diving in the Park reduces to availability of a compressor. There is no laboratory on the islands purposely built or equipped for marine biological work aside bench space available in Cabrera's main island harbour.. Housing is available in the Park for up to 8 researchers depending on demand.

Database available:

So far there are no on-line databases available on the Archipelago's Biota. Nevertheless, Alcover et al. (Eds, 1993) includes comprehensive chapters (and check-lists) on Zoo- and Phytoplankton, Macrozoobenthos and Macrophytobenthos, and terrestrial fauna and flora.

Website:

The Spanish Ministry for the Environment holds an institutional website (<http://www.mma.es/parques/lared/cabrera/index.htm>) including general information on the management and biotic riches of the Archipelago.

3. SITE DESCRIPTION

3.1. TYPOLOGY OF THE SITE

3.1.1. Terrestrial surface, excluding wetlands (ha):		1320
3.1.2. Wetland surface (ha):		
3.1.3. Marine surface (Sq. Km):	Marine internal waters	8680
	Territorial sea	8680
	High sea	

3.2. MAIN PHYSICAL FEATURES

3.2.1. Geology/Geomorphology

Give a brief description of: (i) geological aspects (lithologic and tectonics); (ii) processes of sedimentation and erosion observable in the area; (iii) coastal geomorphology and (iv) island system. Indicate bibliographical sources.

The Cabrera Island has many geologic similarities with the Serres de Llevant (Majorca). The older rocks belong to Triassic (Keuper facies). They are followed by early Jurassic marine shelf rocks, Middle and Late Jurassic marly limestones of submarine talus facies, and Lower Cretaceous basin marls. Big stratigraphic gaps exist and Cenozoic sedimentary record is discontinuous; it includes Eocene litoral calcarenites, and Upper Miocene and Quaternary sediments. Normal faults are the most conspicuous structures of Cabrera Island. A conjugated normal fault system, Middle and Late Jurassic in age, has been described between the Cap des Morobutí and the Cova Blava (Blue Cave). Another set of normal faults cut Eocene rocks, thus they are post-Eocene in age. It is suggested they could be latest Miocene and Pliocene in age. Thrust faults play a major role in the structure of Cabrera Island. Es Penyal Blanc, es Burrí and the Clot des Guix thrusts are clearly exposed and suggest the existence of two different structural units: the lower one is the biggest and consists of the complete stratigraphic sequence. The upper one outcrops in the higher parts of the island and only consists of Early Jurassic shelf rocks.

3.2.2. Other interesting physical features: Such as hydrodynamics, volcanic formations, caves, underwater formations, etc.

Cliff morphologies are dominant in the shores of Cabrera, ranging from very high rocky cliffs to complex and stepped ones. Cliffs higher than 50 m are common either in Cabrera Gran and Conillera. Sea caves, either aerial or submarine are frequent and spectacular in some cases, like the Cova des Burri, Cova de sa Llumeta and the Blue Cave.

3.2.3. Length of beaches (in Km), including islands:

a) Length of sandy beaches:

350 m aprox.

b) Length of pebble or stony beaches:

100 m aprox.

c) Length, height and depth of active sand -dunes:

absent

3.3. FRESHWATER INPUTS

3.3.1. Mean annual precipitation (in mm)

380

3.3.2. Main water courses (permanent and seasonal)

There are nor permanent, neither seasonal water courses at Cabrera. Fluvial processes are very scarce both in time and intensity.

3.3.3. Estuarine areas: Existence and brief description

Absent.

3.3.4. Freshwater springs: Existence and brief description, including marine offsprings

Fuente del huerto de Can Feliu (La Mina)
Cueva de la Llumeta, Conillera (Brackish water)
Cueva des Burri, Cabrera Gran (Brackish water)
Dolç de n'Enciola, Cabrera Gran

3.4. BIOLOGICAL FEATURES (B2, Annex I)

3.4.1. Habitats: A brief description of dominant marine and terrestrial habitats, on the basis of the habitat classifications adopted within the framework of MAP (and their coverage in ha)

Terrestrial habitats

Malacophyllus shrub (470 ha)
 Sclerophyllus shrub (519 ha)
 Mixture of malacophyllus-sclerophyllus shrub (121 ha)
 Xerocantic shrub (25 ha)
 Nitro-halophyllus shrub with *Whitania frutescens* (4ha)
 Halophyllus shrub with *Lavatera arborea* (8 ha)
 Rocky cliff communities (6 ha)
 Littoral communities with *Limonium* sp. and *Chritmum maritimum* (85 ha)

Marine habitats

-Association with *Lithophyllum lichenoides* (ç ha)
 -Association with *Zostera noltii* on superficial muddy sands in sheltered waters (ç ha)
 -Maërl facies (ç ha)
 -*Posidonia oceanica* meadows
 -Association with *Cystoseira compressa* (*Cystoseiretum mediterraneae*)
 -Association with *Sargassum vulgare* (*Cystoseiretum balearicae*)
 -Association with *Cystoseira spinosa*
 -Facies and associations of Coralligenous biocenosis (in enclave)
 -Biocenosis of the coastal detritic bottom: association with *Laminaria rodriguezii*
 -Coralligenous biocenosis: Association with *Cystoseira zosteroides*; facies with *Paramuricea clavata*
 -Semi-dark caves: facies with *Corallium rubrum*
 -Biocenosis of deep sea corals
 -Caves and ducts in total darkness

List here ONLY those species protected by international agreements, particularly those marine species included in Annex II of the Protocol, which are present in the area. Any other species may be listed if it is clearly considered of regional importance given its high representation in the area. Display the species list under the headings Marine Plants, Terrestrial Plants, Marine Invertebrates, Fish, Amphibians and Reptiles, Birds, and Mammals. For each species state:

- its relative abundance as Common (C), Uncommon (U) or Occasional (O),
- Its global status as rare (r), endemic (e) and/or threatened (t), and
- its status as an important resident population (R), or important for its breeding (B), feeding (F), wintering (W) or migratory passage (M)

SPECIES	Rel. Abundance (C) (U) (O)	Global STATUS (r) (e) (t)	Local STATUS (R) (B) (F) (W) (M)
Marine plants			
<i>Posidonia oceanica</i>	C	et	
<i>Zostera noltii</i>	U		
<i>Cystoseira mediterranea</i>	C	e	
<i>Cystoseira spinosa</i>	C	e	
<i>Cystoseira zosteroides</i>	C	e	
<i>Laminaria rodriguezii</i>	C	e	
<i>Lithophyllum lichenoides</i>	C		
Terrestrial plants			
<i>Medicago citrina</i>	U	et	
Marine invertebrates			
<i>Aplysina cavernicola</i>			
<i>Aplysina aerophoba</i>			
<i>Godia cydonium</i>			
<i>Tethya aurantium</i>			
<i>Ophidiaster ophidianus</i>			
<i>Centrostephanus longispinus</i>	U		
<i>Lithophaga lithophaga</i>			

<i>Pinna nobilis</i>	C		
<i>Pinna rudis</i>	C		
Fishes			
<i>Hippocampus ramulosus</i>			
<i>Hippocampus hippocampus</i>			
<i>Mobula mobular</i>	O	r	
Reptiles			
<i>Caretta caretta</i>	U	t	F M W
<i>Podarcis lilfordi</i>	C	et	
Birds			
<i>Pandion haliaetus</i>	C	r	B F
<i>Calonectris diomedea</i>	C		B F
<i>Hydrobates pelagicus melitensis</i>	C		B F
<i>Puffinus mauretanicus</i>	C	et	B F
<i>Larus audouinii</i>	C	e	B F
<i>Falco eleonora</i>	C	r	B F
<i>Phalacrocorax aristotelis</i>	C		B F W
<i>Sylvia balearica</i>	C	e	B F W
Mammals			
<i>Delphinus delphis</i>	O	r	
<i>Tursiops truncatus</i>	C	r	F
<i>Monachus monachus</i>	Extinct		B
<i>Miniopterus schreibersi</i>	C	r	W

3.4.3. Flora: Describe in a few sentences the main plant assemblages significant in the area.

The landscape of Cabrera is dominated by two main shrublands communities: a littoral *màquia* with the prevalence of sclerophyllus bushes (Al. *Oleo-Ceratonion*), and a shrubland dominated by malacophyllus bushes (Al. *Rosmarino-Ericion*) with an arboreal stratum of *Pinus halepensis* in some areas. Close to the sea on the main islands, and on the islets, there is a continuum belt of halonitrophilous vegetation, locally including remarkable endemic communities of spiny bushes (*Launaetum cervicornis* and *Teucrietum subspinosum*). The calcareous cliffs are rich in crevices that host remarkable communities with some endemics (*As. Hippocrepidetum balearicae* and *As. Micromerio-Allietum a.-bolossi*). Nearly 500 of terrestrial vascular plants have been inventoried so far, including 30 endemic taxa.

The marine flora is rich in species : a total of 455 marine plants (Diatoms, Macroalgae and Seagrasses) have been inventoried so far.

These include :

Cyanophyta: 13 [Ballesteros E.1993. Algues bentòniques i fanerògames marines. In: Alcover J.A., Ballesteros E. & Fornós J.J. (Eds.), *Història Natural de l'Arxipèlag de Cabrera* : 503-530. CSIC-Moll, Palma de Mallorca]

Diatoms: 163 [Ballesteros, 1993]

Rhodophyta: 177 [Ballesteros, 1993]

Phaeophyta: 46 [Ballesteros, 1993]

Chlorophyta: 35 [Ballesteros, 1993]

Magnoliophyta (sea-grasses): **3** [Ballesteros, 1993]

Phytoplankton: Data including also neighboring coastal waters to the Park

Dinoflagellates: 84 [Vives, 1993]

Diatoms: 62 [Vives, 1993]

Chrysophyta: 5 [Vives, 1993]

Most of the littoral and the continental shelf benthic communities described for the Central Mediterranean are well represented in the area. Species diversity and conservation of the communities is very high for Mediterranean standards [Ballesteros, 1993]. Medio, infral and circalittoral of hard beds and rock communities are the best represented at Cabrera. *Posidonia* beds are very well conserved in some areas (Cala Santa Maria) , ranging from 2.5- 35 m depth, the deepest value recorded for the whole Mediterranean at present.

Lowermost bathymetric values for algal growth (-110 m) is one of the deepest recorded at present in the Mediterranean sea.

3.4.4. Fauna: Describe in a few sentences, which are the main fauna populations present in the area.

Cabrera is the main site for seabirds and sea-cliff raptors in the Balearic Islands, hosting breeding populations of all the species that can be found in the western Mediterranean, with remarkable numbers of breeding pairs in some cases (over 400 breeding pairs of *Hydrobates pelagicus* and *Calonectris diomedea*, 9-10 pp. of *Falco peregrinus*, over 100 pp. of *Puffinus mauretanicus*, 100 pp. of *Phalacrocorax aristotelis* and >250 pp. of *Larus audouinii* as the most relevant species). The archipelago hosts 80% of the world population of the endemic Balearic lizard, *Podarcis lilfordi*, a population splitted into several subspecies. Not less than 8 crustaceans of anchihaline lakes of coastal caves are exclusive of Cabrera, most of them stygobionts. Aracnids are rich in species, with some Balearic endemics like *Nemesia brauni*. Two coleoptera (*Percus spagnoli* and *Phyllan nitidicollis*) are endemics of the archipelago. Other groups of terrestrial invertebrates are well represented and with several endemics of the balearics. Terrestrial fauna has not been surveyed completely.

The censused marine fauna consists thus far of 951 metazoans. Comprehensive inventories of many of these groups have been published in a monograph dealing on the Natural History of the Archipelago (Alcover et al. (Eds), 1993): these include Cnidarians, Ctenophora, Plathelminthes, Nemerteans, Polychaeta, Sipunculids, Equiurids, Crustacea, Mollusca, Phoronida, Bryozoa, Brachiopoda, Foronidea, Chaetognata, Echinodermata, Ascidiacea, Thaliacea, Larvacea, Fishes, marine Mammals and Reptiles. The Archipelago is outstanding for its extraordinarily diverse fish assemblage, surpassing in number of species any other BIOMARE site in the Mediterranean. The great abundance of the thermophilic Decapod crustacean *Scyllarides latus* is also remarkable.

3.5. HUMAN POPULATION AND USE OF NATURAL RESOURCES

3.5.1 Human population

a) Inhabitants inside the area:

	Number	Date of data
Permanent	15-20 (rotatory)	October-May
Seasonal number (additional to permanent)	15	June-September

Description of the population

The island has no permanent inhabitants. Only the park staff (rangers, guides and workers), two members of the Guardia Civil (a military corpse) and a farmer and his wife live in the island, and always for short periods of time. During the summer months the populations nearly doubles, due to the presence of some fishermen, fire surveillance staff and reinforces of the rangers and guides.

Main human settlements and their populations

There is no permanent human settlement in the archipelago

3.5.2 Current human use and development

a) Briefly describe the current use of the area by subsistence, artisan, commercial and recreational fishing, hunting, tourism, agriculture and other economic sectors.

Only tourism and fisheries are economically important activities that takes place in the area. Sport fishing and hunting, are strictly prohibited. Only professional fishermen, using artisan gear and belonging to fleets which have operated traditionally in the Cabrera waters are allowed to fish in the Cabrera waters, and from 2003, with a compulsory weekly license.
An important amount of visitors are transported to the park by means of small ferries of three different private companies located in the economical area of influence of the park. The rest reach Cabrera with private boats, which in nearly half of the cases are charter. There are also three diving enterprises that include in their offer diving tours to the park.

b) Enter how many of the users depend on these resources, seasonality, and assessment of the social and economic importance of their use and of the perceived impact on the conservation of the area, in a score of 0-1-2-3 (meaning null, low, medium, high).

ACTIVITY AND CATEGORY	ASSESS IMPORTANCE OF		Estimated No. of Users	Seasonality
	Socio-economic	Conserv. Impact		
FISHING				Whole year
Subsistence	0	0	59 boats (closed list)	
Commercial, local	3	1		
Commercial, non-local	0	0		
Controlled recreational	0	0		
Un-controlled recreational	0	0		
Other	0	0		
TOURISM				Whole year, but ferries only operate from February to November. Around 70% of the visitros come to the park during the summer months
Regulated	3	1	60.000/year aprox.	
Unregulated	0	0		
Indicate the type of tourism				
One-day colective visitors coming on ferry boat	3	1	15277 (1991)	
Visitors coming with a boat, either their own or rented	1	1	38228	
Divers	2	1	1484	
Tourism facilities	0	0		
FOREST PRODUCTS				
Subsistence	0	0		
Non-timber commercial, local	0	0		
Non-timber commercial, non-local	0	0		
Timber commercial, local	0	0		
Timber commercial, non-local	0	0		
Agriculture	0	0		
Stockbreeding	0	0		
Aquaculture	0	0		
EXTENSIVE STOCK GRAZING				
Subsistence	0	0		
Commercial, local	0	0		
Commercial, non-local	0	0		
OTHER ACTIVITIES				

3.5.3. Traditional economic or subsistence uses

Name any environmentally sound traditional activities integrated with nature, which support the well being of the local population. E.g. land, water use, target species, if closed seasons or closed zones are used as management techniques.

4. MEDITERRANEAN IMPORTANCE OF THE SITE

This Section aims at stressing the importance of the site for conservation at the regional or global scales, as set in Art. 8 para. 2 of the Protocol and B2-a, B2-b and B2-c in Annex I.

4.1. PRESENCE OF ECOSYSTEMS/HABITATS SPECIFIC TO THE MEDITERRANEAN REGION

Name the type of habitats considered of Mediterranean specificity, on the basis of the habitat classifications adopted within the framework of MAP, and their estimated cover (Ha).

Terrestrial habitats

Malacophillus shrub (470 ha)
 Sclerophillus shrub (519 ha)
 Mixture of malacophillus-sclerophillus shrub (121 ha)
 Xerocantic shrub (25 ha)
 Nitro-halophillus shrub with *Whitania frutescens* (4ha)
 Halophillus shrub with *Lavatera arborea* (8 ha)
 Rocky cliff communities (6 ha)
 Littoral communities with *Limonium* sp. and *Chritum maritimum* (85 ha)

Marine habitats

-Association with *Lithophyllum lichenoides* (¿ ha)
 -Association with *Zostera noltii* on superficial muddy sands in sheltered waters (¿ ha)
 -Maërl facies (¿ ha)
 -*Posidonia oceanica* meadows
 -Association with *Cystoseira compressa* (*Cystoseiretum mediterraneae*)
 -Association with *Sargassum vulgare* (*Cystoseiretum balearicae*)
 -Association with *Cystoseira spinosa*
 -Facies and associations of Coralligenous biocenosis (in enclave)
 -Biocenosis of the coastal detritic bottom: association with *Laminaria rodriguezii*
 -Coralligenous biocenosis: Association with *Cystoseira zosteroides*; facies with *Paramuricea clavata*
 -Semi-dark caves: facies with *Corallium rubrum*
 -Biocenosis of deep sea corals
 -Caves and ducts in total darkness

4.2. PRESENCE OF HABITATS THAT ARE CRITICAL TO ENDANGERED, THREATENED OR ENDEMIC SPECIES

A critical habitat is an area essential to the conservation of the species concerned. These species should be those included in Annex II of the Protocol. E.g. Islets and sea stacks, as small islands in the sea or in large bodies of water, mostly important for water-bird colonies; caves appropriate for monk seals; undisturbed sand beaches where marine turtle nesting occurs; coastal lagoons where threatened fish or bird species feed or breed; tidal flats, coastal or benthic substrates important for marine invertebrates, etc.

Name the habitat types and the species linked to it.

Mediolittoral; hard beds and rocks infralittoral hard beds and rocks	<i>Lithophyllum lichenoides</i> , <i>Cystoseira mediterranea</i> , <i>Cystoseira spinosa</i> <i>Lithophaga lithophaga</i> , <i>Ophidiater ophidianus</i>
Superficial muddy sands in sheltered waters Circalittoral; coastal detritic Phanerogams marine beds	<i>Zostera noltii</i> <i>Laminaria rodriguezii</i> <i>Posidonia oceanica</i> , <i>Pinna nobilis</i> , <i>Pinna rudis</i> , <i>Hippocampus ramulosus</i> , <i>H. hippocampus</i> , <i>Caretta caretta</i>
Sea cliffs and Islets	<i>Pandion haliaetus</i> , <i>Falco eleonora</i> , <i>Calonectris diomedea</i> , <i>Puffinus mauretanicus</i> , <i>Hydrobates pelagicus</i> , <i>Larus audouinii</i> , <i>Phalacrocorax aristotelis</i>
Sea caves	<i>Monachus monachus</i> (ext.), <i>Aplysina cavernicola</i> , <i>Aplysina aerophoba</i> , <i>Godia cydonium</i> , <i>Tethya aurantium</i>
Coralligenous	<i>Paramuricea clavata</i> , <i>Corallium rubrum</i> , <i>Cystoseira zosteroides</i>
Open waters and sheltered bays	<i>Delphinus delphis</i> , <i>Caretta caretta</i> , <i>Tursiops truncatus</i> , seabirds ap.II

4.3. OTHER RELEVANT FEATURES (Art. 8 paragraph 2 in the Protocol)

4.3.1. Educational Interest (B-3 in Annex I)

E.g. particular values for activities of environmental education or awareness

The park carries out and finances an educational program called *Descobrir Cabrera (Discover Cabrera)*. Since 1991, a total of 32982 students have visited the park by means of this project. Only in 2001 a total of 2297 scholars + 874 adults visited the park, which is addressed not only to the scholar community of the Balearics (primary and secondary school) but also to social groups and collectives of particular interest: third age, special educational centers, youth clubs, etc. The program is supported by a specific annual budget, technical staff and guides-interpreters, with specific qualifications in the field of environmental education.

4.3.2. Scientific Interest (B-3 in Annex I)

Explain if the site represents a particular value for research in the field of natural or heritage sciences.

Cabrera is the ordinary research playground for the major biodiversity research laboratories of either the Balearic Islands (i.e., IMEDEA (CSIC), Instituto Español de Oceanografía (IEO) and the University of the Balearic Islands) and Catalonia (CEAB, ICM and University of Barcelona). Seven scientists of these laboratories spend a significant proportion of their time on this research at present. Since 1991 hundreds of researchers have carried out scientific activities in the park, mainly dealing with seabird ecology, the effect of marine reserves on fish populations, ecology and conservation of *Posidonia* meadows, lizard ecology, plant-pollinators interaction, marine and terrestrial archeology, passerine migration, algal ecology and productivity and so on. Several NGO's carry out marine biological work on the Archipelago also. As a result, dozens of papers and two monographies (*Natural History of the Cabrera archipelago* Ed. Moll-CSIC 1993 ; and *The birds of Cabrera National Park*, GOB-Ministerio de Medio Ambiente, 2001) have been published.

Cabrera archipelago is widespread considered as a major site for marine biodiversity research, terrestrial and marine archaeology, seabird ecology, *Posidonia oceanica* ecology, biogeography and evolution.

4.3.3. Aesthetic Interest (B-3 in Annex I)

Name and briefly describe any outstanding natural features, landscapes or seascapes.

The waters of the Archipelago are characterised by their oligotrophy, accentuated by the low continental influence (there are no rivers or industry in the Archipelago nor in the vicine Mallorca), and in consequence by an elevated transparency comparable, in summer, to those of tropical seas. The great heterogeneity of the bottoms, harbouring a large number of the more characteristic benthic communities of the central Mediterranean, and their good state of conservation, makes the Archipelago an ideal place for diving in the the Western Mediterranean. Due to the calcareous condition of the Archipelago, the number of marine caves and tunnels is considerable, and some of them, like the Blue Cave (Cova Blava) are visited each year by thousands of people on ferry boats.

Cabrera is the only uninhabited archipelago of its size in the western Mediterranean, and this fact increases extraordinarily its aesthetic and spiritual value in the context of an overcrowded turistic destination as Majorca. Its rather pristine long coastline -with spectacular calcareous sea cliffs-, the clarity and richness of its waters, the beauty of its nights in summer time -with no light pollution nearly at all and the absence of buildings apart from the tiny harbour and the military camp are facts that are nearly impossible to be found in the rest of the Balearics nowadays.

4.3.4. Main cultural features

Indicate if the area has a high representative value with respect to the cultural heritage, due to the existence of environmentally sound traditional activities integrated with nature which support the well-being of local populations.

The practice of fisheries is at present the main and only economical and traditional sound activity that takes place at Cabrera. The archipelago has been traditionally a major fishing ground in the south of Majorca, mainly carried out with the support of small wooden vessels (Illaüts) and artisan fishing gear

5. IMPACTS AND ACTIVITIES AFFECTING THE AREA

5.1. IMPACTS AND ACTIVITIES WITHIN THE SITE

5.1.1. Exploitation of natural resources

Assess if the current rates of exploitation of natural resources within the area (sand, water and mineral exploitation, wood gathering, fishing, grazing...) are deemed unsustainable in quality or quantity, and try to quantify these threats, e.g. the percentage of the area under threat, or any known increase in extraction rates.

Professional fishing with is the only economically sound activity which is accepted and integrated in the park's management objectives. There is a management plan for 84 licensed ships, with only 20 permitted to operate per day; only traditional artisan fishing gear (gill nets, line) is allowed, trawling, long lines and sport fishing being strictly forbidden. Actually the number of weekly licenses is reduced to 10-15, mostly in summer time. The fleet is based on the vicine ports of Porto Petro (Santanyi), Colònia de Sant Jordi (Ses Salines), Porto Colom (Felanitx), and Palma, all on Mallorca. The annual crop is unknown since the ships work also outside the Park, but the volume has been roughly estimated around 100 Tm/year. Within the present framework, there are no chances to increase the fishing pressure, as the limits in number of vessels, types and numbers of fishing gear per day and closed seasons have a firm legal basis (Royal Decree 941/2001) which can not be changed through the Management Plan, which have a five years life span and is in fact under revision at present. Only the zonification of the marine waters, including the marine reserves and fishing grounds are adopted within the framework of the Management Plan and are subjected to potential changes, that theoretically might reduce the protective measures, but this is a rather improbable scenario.

The situation of the fishing stocks are monitored regularly since 1993 by independent scientific bodies, trying to evaluate the reserve effect between the marine reserve areas and the fishing grounds inside and in the vicinity of the park. The results have shown that the productivity per unit effort is higher inside than outside the park.

5.1.2. Threats to habitats and species

Mention any serious threats to marine or coastal habitats (e.g. modification, desiccation, disturbance, pollution) or to species (e.g. disturbance, poaching, introduced alien species...) within the area.

Only pollution eventually derived from nautical tourism (e.g. accidental gas-oil spills or pouring out of bilges) There is no industrial or agricultural pollution, neither mining, dumping or dredging activities in the archipelago or in the vecine coast of Majorca. Trawler are forbidden since 1995. No marine alien species have been detected, with specific surveys for *Caulerpa taxifolia* with negative results until now. The Black rat *Rattus rattus* is a serious threat to colonies of seabird nesting species on islets.

5.1.3. Demand by an increased population and infrastructures

Assess whether the current human presence or an expected increase in frequentation (tourism, passage of vehicles and boats) and any human immigration into the area, or plans to build infrastructures, are considered a threat.

There are closed numbers of visitors (on private boats, ferry boats and divers) currently established in the management plan, which are well under the charge capacity of the ecosystem, either marine or terrestrial. These limits are not expected to change in the near future. There is a visitor center under construction at present, but is being erected in the vicinity of the park. The management plan forbids any increase in the number or size of new buildings or facilities inside the park.

5.1.4. Historic and current conflicts

Make a brief statement of any historic or current conflicts between users or user groups.

Private sailing clubs were actively against the regulation of sailing and mooring in the park the first years after declaration, but they have assumed quite well the regulations and there are no conflict nearly at all at present.

Professional fishermen have been consulted and participated actively in the preparation and development of the fisheries management plan. They have also a representative in one of the main management bodies of the park, the Management Board or "Patronato". The level of conflict with this local constituent is rather low.

5.2. IMPACTS AND ACTIVITIES AROUND THE SITE

In Art.7.2-e the Protocol calls for the regulation of activities compatible with the objectives for which a SPA was declared, such as those likely to harm or disturb species or ecosystems (Art.6.h), while Section B4 in Annex I asks to consider "the existence of threats likely to impair the ecological, biological, aesthetic or cultural value of the area" (B4-a in Annex I), recommending the existence, in the area and its surroundings, of opportunities for sustainable development (B4-d) and of an integrated coastal management plan (B4-e).

5.2.1. Pollution

Name any point and non-point sources of external pollution in nearby areas, including solid waste, and especially those affecting waters up-current.

None

5.2.2. Other external threats, natural and/or anthropogenic

Briefly describe any other external threat to the ecological, biological, aesthetic or cultural values of the area (such as unregulated exploitation of natural resources, serious threats on habitats or species, increase of human presence, significant impacts on landscapes and cultural values, pollution problems, any sectorial development plans and proposed projects, etc.), likely to influence the area in question.

A marine reserve have been recently (2002) declared attached to the park by the Balearic Regional Government, thus increasing the marine fisheries protection in the vicinity of the park, and creating a sort of buffer zone which was absent up until now. The reduction in the trawler activity in the area poses presumably a threat to *Larus audouinii* colonies in the park, as this species is highly dependent of trawlers discharges during the breeding season.

5.2.3. Sustainable development measures

Comment whether the area is covered by an integrated coastal management plan, or bordering upon a zone under such a plan. Are there other opportunities for sustainable development provided for in the neighbouring areas?

The spanish national park network defines the **socioeconomic area of influence** of the National Parks, which includes the municipalities partially or completely included inside the park's limits. There is a program of subsidies to local population, directly oriented to support local economies. Potential agents are: enterprises, fishermen, resident population, councils, NGOs, etc. Direct subsidies from 1999 to 2003 amount 67.378.000 ptas (404.950 euros).

6. EXPECTED DEVELOPMENT AND TRENDS¹

The foreseeable development and trends of the site do not appear in the list of common criteria for the choice of protected marine and coastal areas that could be included in the SPAMI list, as established in the Protocol and its Annex I. Moreover, this is not always easy to assess and it is necessary to have knowledge about the site, which is not always available to all managers of protected areas; Thus, it is not obligatory to fill in the boxes in this Section 6.

On the other hand, the assessment of this foreseeable evolution and trends constitutes a dynamic supplement to the static knowledge of the site, as it appears in Sections 3, 4 and 5 above. Moreover, it is of significant importance for the definition of the objectives and the management plan of the site.

It thus appears desirable to bringing out the main outlines at least in respect to the following points:

6.1. EXPECTED DEVELOPMENT AND TRENDS OF THREATS TO AND PRESSURES UPON THE AREA

Deal briefly in succession with:

- The demographic development in and around the site
- The development of economic activities (other than tourism and recreation) within the area
- The development of local demand on tourism and recreation
- The development of tourism pressure on the area

All data afforded below refers to the vicinity of the park.

Demographic development: presumably a slight increase in the next years

Development of economic activities other than tourism and recreation: none

Local demand on tourism and recreation: slight increase in the near future

Tourism pressure in the area: very little or none at all in the park; slight increase in the vicinity.

6.2. POTENTIAL CONFLICTS IN THE AREA

Make a brief statement of potential use conflicts between the users or group of users of the site.

Fishermen, diving clubs and enterprises of ferry boats are the main economical agents working in the park. Present level of conflict with them is rather low at present, and focused on particular items; the general view of Cabrera as a protected area is rather well accepted by all of them. Most of the conflicts have been already discussed and debated the years before on the main management bodies of the park: the Management Board and the Joint Management Committee. The new management plan will undoubtedly fire up new discussions, but the setting up of the document is open to public debate and social participation.

¹ By expected development and trends are meant the development, which is thought most likely to occur in the absence of any deliberate intervention to protect and manage the site.

6.3. EXPECTED DEVELOPMENT AND TRENDS OF THE NATURAL LAND ENVIRONMENT AND LANDSCAPES OF THE AREA: as expected arising from the evolution of the pressures

The level of protection of the land is very high at present inside the park, and quite high in the vicinity. This status will continue in the future. A serious potential problem will be natural or accidental fires at Cabrera Gran, as the masses of *Pinus halepensis* are increasing in range from year to year, and are extremely inflammable. There are no fires in the archipelago for more than 60 years, so the probability to suffer one is growing each year. This will affect the landscape value of the island and in the short term the management of vegetation.

6.4. EXPECTED DEVELOPMENT AND TRENDS OF THE MARINE ENVIRONMENT AND SEASCAPES OF THE AREA: as expected arising from the evolution of the pressures

There is a positive evolution in terms of protection of the marine resources inside and in the vicinity of the park since the declaration of the Marine Reserve of Mitjorn by the Regional Government of the Balearics, attached to Cabrera NP. This will interconnect protected areas, create some kind of buffer zone to the park and presumably homogenize the levels of protection inside and outside the limits of the National Park. The seaside of the coast of Majorca close to the park has suffered and still suffers from touristic development, but land protection is rather high at present. There is a project of a new sportive harbour close to the park (s'Estanyol) which is being debated at present.

7. PROTECTION REGIME

7.1. LEGAL STATUS (General Principles “e” and Section C-2 both in Annex I)

7.1.1. Historical background of the protection of the site

1916: the Spanish army buys the island to private owners in order to keep Spain's neutrality during the First World War.
 1991: Cabrera archipelago is declared National park, the top protection legal figure in Spain. It got also the maximum legal protection under the Natural Areas Law (LEN; 1991) of the Balearic regional government.

7.1.2. Legal texts currently ruling the protection on the site

Enter the national conservation category, the dates and the present enforcement status of the legal instrument declaring the protection of the area. Consider both the land and the marine areas of the site. Include the full text(s) as an annex.

LEGAL FRAMEWORK : LEY 4/89, DE 27 DE MARZO, DE CONSERVACIÓN DE LOS ESPACIOS NATURALES Y DE LA FLORA Y FAUNA SILVESTRES. (BOE. NUM.74 DE 28.03.1989). MODIFIED BY LAW 41/97

DECLARATION LAW: LEY 14/1991, DE 29 DE ABRIL, DE CREACION DEL PARQUE NACIONAL MARITIMO-TERRESTRE DEL ARCHIPIELAGO DE CABRERA. (BOE NUM.103 DE 30.04.1991)

NATURAL RESOURCES MANAGEMENT PLAN (previous to park declaration) REAL DECRETO 1431/1992, DE 27 DE NOVIEMBRE, POR EL QUE SE APRUEBA EL PLAN DE ORDENACION DE LOS RECURSOS NATURALES DEL PARQUE NACIONAL MARITIMO-TERRESTRE DEL ARCHIPIELAGO DE CABRERA. (BOE. NUM. 42 DE 18.02.1993)

MANAGEMENT PLAN: REAL DECRETO 277/1995, DE 24 DE FEBRERO, POR EL QUE SE APRUEBA EL PLAN RECTOR DE USO Y GESTION DEL PARQUE NACIONAL MARITIMO-TERRESTRE DEL ARCHIPIELAGO DE CABRERA. (BOE NUM. 69 DE 22.03.1995).

MANAGEMENT BODIES, COMPOSITION AND RULES: REAL DECRETO 1760/1998, DE 31 DE JULIO, POR EL QUE SE DETERMINA LA COMPOSICIÓN Y FUNCIONAMIENTO DEL CONSEJO DE LA RED DE PARQUES NACIONALES, DE LAS COMISIONES MIXTAS DE GESTIÓN DE DICHOS PARQUES Y DE SUS PATRONATOS. (BOE. NUM.209 DE 01.09.1998)

FISHERIES MANAGEMENT PLAN: REAL DECRETO 941/2001 DE 3 DE AGOSTO POR EL QUE SE ESTABLECE EL REGIMEN DE PROTECCION DE LOS RECURSOS PESQUEROS DEL PARQUE NACIONAL MARÍTIMO-TERRESTRE DEL ARCHIPIÉLAGO DE CABRERA (BOE. NUM.214 DE 06.09.2001)

7.1.3. Objectives (General Principles “a” and D-1 in Annex I)

Name in order of importance the objectives of the area as stated in its legal declaration.

- a) *To protect the gea, flora and fauna, either marine or terrestrial, and the sea bottoms, as well as its landscape and cultural values than the are includes.*
- b) *To preserve the natural systems located in the area, and to cooperate in international conservation programs.*
- c) *To guarantee the preservation and well being of the biotopes and habitats present in the area.*
- d) *To promote the scientific research, and the educational and cultural activities which will serve to increase the public awareness of this area and of its natural values.*
- e) *To provide to the Spanish National Park Network with a good representation of natural systems included in the Mediterranean continental shelf and littoral zone.*

7.1.4. Indicate whether the national protection regime arises from international treaties enforced or from implementation measures of treaties (Art. 6.a in the Protocol).

The national protection regime arises from Spanish's own legal framework.

7.2. INTERNATIONAL STATUS

7.2.1. Transboundary or high seas areas

Complete this section only if the area is transboundary, totally or partially in the high sea, or within areas where the limits of national sovereignty or jurisdiction have not yet been defined. In this case, mention the modalities of the consultation (Art. 9 para. 3A in the Protocol and General Principles “d” in Annex I).

7.2.2. International category

Mention if the area, or part of it, has been designated and on what date, with an international conservation category (e.g. Specially Protected Area, Biosphere Reserve, Ramsar Site, World Heritage Site, European Diploma, Natura 2000, Emerald network, etc.).

Cabrera was declared *Specially Protected Bird's Area* under the provisions of the 79/409 Birds Directive of the European Union (SPA number 83, official designation E 32885, January 1990), and has been preselected as one of the sites to be included in the Natura 2000 network, under the provisions of the 92/43 Habitat Directive. included in a wider area.

7.3. PREVIOUS LEGAL BACKGROUND AND LAND TENURE ISSUES

Briefly mention if the area or part of it is subject to any legal claim, or to any file open in that connection within the framework of an international body. Describe the land tenure regimes within the area, and append a map if existing.

The whole of the archipelago is public land at present. The property belongs to the Spanish Ministry of Defence. The administration and management of the National Park is shared between the Spanish Ministry of Environment, National Parks network, and the Regional Government of the Balearic islands.

The former owners of the island, the Feliu family, are trying to recover the property of the island, as the original reason for the expropriation has finished long time ago, they claim.

7.4. LEGAL PROVISIONS FOR MANAGEMENT (Section D-1 in Annex I)

7.4.1. Zoning

Briefly state if the legal text protecting the area provides for different zones to allocate different management objectives of the area (e.g. core and scientific zones in both land and sea, fishing zones, visitation, gathering, restoration zones etc) and in this case the surface area in ha of these zones. Include a map as an annex

Spanish National Parks define four different areas for zonification purposes:

- a) Reserves (no public use at all, only management and scientific activities allowed)
- b) Special use areas (buildings and paths connecting them)
- c) Restricted use areas (public use allowed with strict limitations. Normally an administrative authorization is necessary to visit these areas, and accompanied by park's staff)
- d) Moderate use areas (public use allowed with limitations and regulations)

Cabrera, due to its mixed character –marine and terrestrial-, has 8 different kinds of zones, 4 in the marine area and 4 in the terrestrial area. Extension of the reserve areas is as follows:

Marine reserve: 257 ha. Diving zones (restricted use areas) –ranging 24 ha- and Cabrera gran harbour –ranging 71 ha- are closed areas for fishing so they are factual marine reserves.

Terrestrial reserve: 615 ha.

A zonification map is included as an annex

7.4.2. Basic regulations

Mention the provisions, which apply to the area concerning the implementation of Article 6 of the Protocol (paragraphs a to i), Section D5 (a to d) in the Annex I and Article 17 of the Protocol.

Article 6 of the Protocol

b) Management Plan (RD 277/95), article 5 1^a (prohibition of dumping and discharge. Definition of both concepts)

c) Management Plan (277/95) Point 3D.a.1^a (regulation of navigation and limit numbers, regulation and/or prohibition of anchoring and mooring)

d) Management Plan (RD 277/95), Point 5 2^a.2^o and 3^o (prohibition of the introduction of animal and plants alloctonous or exotics, and domestics)

e) Management Plan (RD 277/95), point 5 2^a 9^o, 10^o and 11^o (protection of the soils and seabeds, as well as the recolection or extraction of minerals, rocks and sands)

f) Management Plan (RD 277/95), Point 3.C.a and point 5 10^a.6^o (regulation of any scientific and research activity. Administrative authorization by Park staff, and compulsory inform to the management board)

g) Management Plan (RD 277/95), Point 3.F (professional fishing considered the only extractive activity allowed. Prohibition of sport fishing and regulation of professional fishing through zonification. Professional fishing is specifically regulated through the Fisheries Management Plan (RD941/2001)). Point 5.2^a.1^o (prohibition of taking animals, plants, either as a whole or parts of them -bones, propagules, flowers, etc)

h) Management Plan (RD 277/95), Point 5 2^a.4^o, 5^o and Point 5.5^a, 6^a and 7^a (aditional measures of protection of animals, plants and ecosystems, and specifically sport fishing and hunting)

i) Management Plan (RD 277/95), Point 5.

Section D5 (a to d) in the Annex I

Idem as the part before, with the exception of D.4.d of the Annex I. The marine reserve of Mitjorn, adjacent to the north of Cabrera NP, has its own protective measures of the species of commercial interest though specific prohibitions (sand extraction, list of protected species) and future zonification.

Article 17 of the Protocol.

Natural resources Management Plan (Royal Decree 1431/1992. Point 5: at Cabrera National park, the activities that need an environmental impact assesment are not allowed generically.

7.4.3. Legal competencies

Section D4 in Annex I states that the competence and responsibility with regard to administration and implementation of conservation measures for areas proposed for inclusion in the SPAMI List must be clearly defined in the texts governing each area. Additionally Art.7.4. of the Protocol calls for the provision of clear competencies and co-ordination between national land and sea authorities, with a view to ensuring the appropriate administration and management of the protected area as a whole. Mention in which way do the legal provisions clearly establish the institutional competencies and responsibilities for the administration and conservation of the area, and if being the case, their co-ordination means, including those between land and sea authorities.

The Management Plan (RD 277/95) and Fisheries management Plan (RD 941/2001) clearly states that park administration (Spanish National Park Network, Ministry of Environment) and the rangers of the park are responsible for the well being and application of the regulatory and compulsory measures for the management of the area, including the policy of those environmentally sound activities that takes place or are detected in the park, with special attention to fisheries and control of fishing activity. Park's administration and planification are coordinated and shared between central and Regional Government through the Joint Committee (Law 4/89, modified by La 41/1997).

Fisheries inspectors depending on the Regional Government (inner waters) and National Government (outer waters) are also competent in the implementation of regulations or protective measures of general application, either inside or outside the park, but Park legal status has prevalence over any other legal or administrative decision affecting the natural resources of the area if these go against the provisions of the Management Plan, Fisheries Management Plan or in general the legal framework that assist Park's declaration, management and provisions. That means that either regional or national fisheries administration can increase the protective measures inside the park if these are general provisions –eg applicable in the rest of the spanish or regional waters-, but they can not rule against park's legislation.

7.4.4. Other legal provisions

Describe any other relevant legal provisions, such as those requiring a management plan, the establishment of a local participation body, binding measures for other institutions or economic sectors present in the area, allocation of financial resources and tools, or any other significant measures concerning the protection and management of the area or its surrounding zones.

The management bodies, composition and rules are stated via Royal decree 1760/1998. (BOE. núm.209 de 01.09.1998), Spanish Ministry of Environment

Subsidies in the socioeconomic area of influence of the park are regulated via Royal Decree 940/99 (BOE de 18.06.1999) and a yearly Order of the President of the Spanish National Park Network.

8. MANAGEMENT

Through the General Principles, para. (e) in the Annex I, the Parties agree that the sites included in the SPAMI List are intended to have a value as examples and models for the protection of the natural heritage of the region. To this end, the Parties ensure that sites included in the List are provided with adequate legal status, protection measures and management methods and means.

8.1. INSTITUTIONAL LEVEL

8.1.1. Authority/Authorities responsible for the area

National Park Network (Spanish Ministry of Environment)
Balearic Ministry of Environment (Regional Government)

8.1.2. Other participants in the management body

Such as other national or local institutions, as stated in Section D6 in Annex I.

Joint Management Committee (Law 41/97 and RD 1760/1998)

- 2 representatives of the Regional Government: Balearic Minister of Environment and General Director of Biodiversity.
- 2 representatives of the National Government, Spanish Ministry of Environment: The Chief Director of the National Park Network and a member of the General Secretary of Environment.

8.1.3. Participants in other committees or bodies

Such as a scientific committee, or a body of representatives from the local stakeholders, the public, the professional and non-governmental sectors, as in Sections B4-b and B4-c in Annex I.

Cabrera National Park Board composition (Law 41/97 and RD 1760/1998)

- a) President
- b) 4 representatives of the State administration.
- c) 4 representatives of the Regional administration.
- d) 1 representative of the Mallorca Island Government (Consell Insular de Mallorca)
- e) 1 Representative of the Palma Council.
- f) 1 Representative of the Balearic Islands University
- g) 1 Representative of the Oceanographic Institute.
- h) 2 representatives of environmental NGOs.
- i) 1 Representative of fishermen
- j) The Chief Director of Cabrera NP
- k) 1 Representative of the Rangers of Cabrera NP
- l) Eventually, 1 representative of the Guardia Civil.

8.1.4. Effectiveness

As stated in Section B4 of Annex I, assess as very low, low, moderate, satisfactory, very satisfactory, and comment as needed on the following aspects:

a) Effectiveness of the co-ordination, where existing:

Satisfactory. The balance between representatives of the national and regional government either in the Joint Management Committee or in the Cabrera National Park Board guarantees equilibrium in the decision-making process.

b) Quality of involvement by the public, local communities, economic sectors, scientific community:

Satisfactory. The Cabrera NP Board is the consultant body where the opinion of social agents, scientists, NGOs, fishermen and municipalities is heard and often taken into consideration.

8.2. MANAGEMENT PLAN (as set out in D7 of Annex I)

8.2.1. Management Plan

State if there is a management plan (MP) and in this case include the document as an annex. In the absence of a MP, mention if the main provisions governing the area and the main regulations for its protection are already in place and how (D7 in Annex I) and if the area will have a detailed management plan within three years (D7 in Annex I).

The Management Plan (RD 277/95) has a general lifespan of 6 years for the Spanish national parks. After that period, it has to be set up a new one. During the time of preparation of the new document, open to public participation, the older one is kept on and applied until the new document is published with legal rank. At present, the new Cabrera NP Management Plan is being prepared, and will be probably finished at the end of next year (2003).
(RD 277/95 included as an annex.)

8.2.2. Formulation and approval of the Management Plan

Mention how the MP was formulated, e.g. by an expert team and/or under consultation and/or participation with other institutions or stakeholders. State the legal status of the MP, whether it is officialized, and how, and if it is binding for other institutions and sectors involved in the area.

The following applies to the new management plan, which preparation is now under way. An expert team composed by four members, assisted by Cabrera NP technical staff and elected by the Joint Committee prepares a preliminary document, open to public consultancy and participation, which includes a diagnose, a definition of objectives and the selection of the best solution available for the problems detected. After that, the document is sent to the Board for preliminary information, and a period of at least 1 month of public consultancy is open. If that gives rise to modifications of the original document, a new public consultancy period is open. If the Joint Committee accepts the final document sends it to the Board, for compulsory information. Finally the document has to be sent to the Regional Government for its publication as a legal document (Decree)

8.2.3. Contents and application of the Management Plan

State the degree of detail in the MP by entering YES or NO in the following list of potential contents, and assess the degree of implementation of the MP by using the 0-1-2-3 score on the right hand side:

	Existing in MP	Degree of application
Detailed management objectives	YES	3
Zoning	YES	3
Regulations for each zone	YES	3
Governing body(ies)	YES	3
Management programmes as:		
Administration	NO	
Protection	YES	3
Natural resource management	YES	3
Tourism and Visitation	YES	2
Education and Training	YES	2
Research and Monitoring	YES	2
Services and Concessions	YES	1
Fund raising activities	YES	1
Periodic revisions of the MP	YES	2

8.3. PROTECTION MEASURES

By Art. 6 of the Protocol the Parties agree to take all the necessary protection measures required for the conservation of the area, particularly the strengthening the application of the other Protocols to the Convention, and through the regulation of any other activity likely to harm the natural or cultural value of the area, such as economic, recreation or research activities. As per Section D2 in Annex I, the protection measures must be adequate to the site objectives in the short and long term, and take in particular into account the threats upon it.

8.3.1. Boundaries and signing

Briefly, state if the boundaries of the area and its zones are adequately marked in the field, both on land, in the sea, and at the principal points of access.

Sea limits of the park (39°13'30"N 2°58'E; 39°13'30"N 3°E; 39° 6'30"N 3°E; 39° 6'30"N 2°53'30"E; 39°10'N 2°53'30"E) are signaled using huge buoys with radar reflectors. The only disembarkment point has informative pannels and signals including information about the limitations in the different zones of the park, which is also included in the application form to be fulfilled for the expedition of the sailing, night mooring and scuba diving permissions.

8.3.2. Institutional Collaboration

Name the different national and local institutions or organisations with legal responsibilities or involved in the protection and surveillance of land and sea zones, and any measures or mechanisms through which their co-ordination is pursued.

- Spanish National Park Network –OAPN- (Ministry of Environment): management of the National Park. Representatives in the Joint Committee and in the Board.
- Spanish Ministry of Defence: owner of the land and buildings inside Cabrera. Coordination with the Park's staff and OAPN for the shared use of some of the buildings and facilities. Representative in the Board.
- Regional Ministry of Environment (Balearic Regional Government): Co-manager of the park via de Joint Committee. Representative in the Board.
- Regional Ministry of Fisheries and Agriculture (Balearic Regional Government): Directly involved in the preparation and implementation of the Fisheries Management Plan with the coordination of OAPN and the Park's staff, as fisheries as a resource is under its competence in inner waters. Representative in the Board.
- National Ministry of Fisheries and Agriculture: Directly involved in the preparation and implementation of the Fisheries Management Plan with the coordination of OAPN and the Park's staff, as fisheries as a resource is under its competence in outer waters. Representative in the Board.

8.3.3. Surveillance

Consider the adequacy of the existing protection means (human and material), and your present ability to survey land and sea uses and accesses

Human: adequate

Material: considered adequate in general terms, but the fishing activity and its surveillance can be optimized by means of increased night time surveys for illegal fishing and the use of land radars and videocams, which are not installed at present.

8.3.4. Enforcement

Briefly, consider the adequacy of existing penalties and powers for effective enforcement of regulations, whether the existing sanctions can be considered sufficient to dissuade infractions, and if the field staff is empowered to impose sanctions.

Administrative penalties can be imposed with firm legal support (Law 4/89; RD 277/95; RD 941/01), and a limited number (5-15) are presented each year, mainly for illegal sport fishing, illegal professional fishing (in marine reserve areas, out of the closed seasons, etc) or to the ferry boat enterprises for exceeding the numbers of visitors allowed per day per company. It seems that they have not been sufficient to stop illegal sport fishing which continues at low intensity. Field staff is effectively encouraged to denounce infractions, but the administrative procedure depends and relies on administrative staff, sometimes belonging to a different administration. This is the case of penalties imposed to professional fishermen when denounces are set up by the park staff but are delivered to the regional Government fisheries administration. In these cases, denounces often are archived. On the other hand, when denounces are delivered to the environmental administration –Spanish Ministry of Environment-, they have more chances to proceed properly and result in an effective penalty.

9. AVAILABLE RESOURCES

9.1. HUMAN RESOURCES (Art. 7.2.f in the Protocol)

9.1.1. Available staff

Assess the adequacy of the human resources available to the management body, in number of employees and training level, both in central headquarters and in the field. Indicate if there are staff training programmes.

- Technical staff (Chief Director, Vice-director, Technical assistant)
- Administrative staff (2 permanent positions, 4-5 partial time)
- Rangers (7 permanent, 2-4 reinforces in summer time)
- Guide-Interpreters (6 permanent, 2 reinforces in summer time)
- Marine staff (3 members)
- Support workers: fire surveillance, maintenance, cleaning, etc (4-8 depending on the time of the year)

There is a specific training program for the Spanish National park Network staff, and a more general one for the whole Ministry of Environment.

9.1.2. Permanent field staff

Answer YES or NO on the current existence of the following FIELD staff categories. If YES, enter the number of staff either permanent or part-time in that category, and evaluate on a 0-1-2-3 score (0 is low, 3 is high) the adequacy of their training level.

	YES/NO	NUMBER Permanent/Part-time	ADEQUACY OF TRAINING LEVEL
Field Administrator	YES	1	3
Field Experts (scientific monitoring)	YES	1	3
Field Technicians (maintenance, etc)	YES	1	3
Wardens	YES	7	2
Of which marine wardens	YES	7	2
Guides	YES	6	2
Other	YES	7-15	2

9.1.3. Additional Support

Briefly, describe if the area currently has the advantage of other external human resources in support of its objectives, either from other national or local institutions, volunteer programmes, non-governmental organisations, academic or international organisations. Mention if there are any significant changes in prospect for the near future.

As mentioned before, the fisheries inspectors of the Spanish Ministry of Fisheries and Agriculture (state administration) and of the Regional Government of the Balearics (regional administration) are qualified for fisheries inspection tasks.

The Guardia Civil, a military body with tasks assigned either at sea and on land, has a small permanent position at Cabrera, and regularly helps the rangers in the inspection activity and the enforcement of regulations and sanctions.

The Friends of the Park, a volunteers body, cooperates effectively with the park by means of camps of volunteers since 1998. Works carried out include cleaning of beaches, restoration of traditional buildings and support of the work of the guides.

9.2. FINANCIAL RESOURCES AND EQUIPMENT

By Art. 7 in the Protocol, the Parties agree to adopt measures or mechanisms to ensure the financing of the specially protected areas (Art.7.2.d), and the development of an appropriate infrastructure (Art.7.2.f). The General Principles para. "e" in the Annex I call upon the Parties to provide the areas with adequate management means.

9.2.1. Present financial means

Note if the basic financing is ensured: a core funding for basic staff, protection and information measures. Who provides this core funding? Briefly assess the degree of adequacy of the present financial means for the area, either low, moderate, satisfactory; e.g. the implementation of the management plan, including protection, information, education, training and research.

Basic financing (100%) is ensured by means of budget from the Spanish National Park Network, Spanish Ministry of Environment. 2002 budget summed a total amount of 1.975.388 euros –excluding salaries and subsidies-, which is considered satisfactory for the area.

9.2.2. Expected or additional financial sources

Briefly describe any alternative sources of funding in use or planned, and the perspectives for long-term funding from national or other sources.

Cohesion funds were used in 1994 for the restoration of Es Celler, an old farm building which has been adapted and transformed into an eco-museum. Although current legislation permit the co-financing of the Regional Government of the Balearics, at present it has not been implemented any funding coming from this potential source. In the short term, most if not all of the budget will continue to come from the state administration.

9.2.3. Basic infrastructure and equipment

Answer YES or NO to the following questions, and if YES, assess with a score of 1-2-3 (1 is low, 3 is high) the adequacy of the basic infrastructure and equipment.

	YES/NO	ADEQUACY
Office and laboratory in the field	YES	2
Signs on the main accesses	YES	1
Guard posts on the main accesses	YES	2
Visitors information centre	YES	1
Self guided trails with signs	YES	1
Terrestrial vehicles	YES	3
Marine vehicles	YES	2
Radio and communications	YES	2
Environmental awareness materials	YES	2
Capacity to respond to emergencies	YES	1

Comment on basic infrastructure and equipment

The park is well equipped in terms of vehicles, either marine or terrestrial. The staff is very well equipped, including scuba diving and sailing gears, personal equipment and communications. Facilities and infrastructure inside the park is quite enough, including an excellent eco-museum which serves as the main interpretation center at Cabrera archipelago. Administrative headquarters in Palma are short of space and a new building will be available in the short term. The park has no interpretation center in the vicinity of the park, but a marine one is being erected in the closest harbour –Colonia de Sant Jordi.

9.3. INFORMATION AND KNOWLEDGE

By Section D3 of Annex I, the Parties agree that the planning, protection and management of a SPAMI must be based on an adequate knowledge of the elements of the natural environment and of socio-economic and cultural factors that characterize each area. In case of shortcomings in basic knowledge, an area proposed for inclusion in the SPAMI List must have a programme for the collection on the unavailable data and information.

9.3.1. State of knowledge

a) Assess the general state of knowledge of the area

			3
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b) Briefly describe the extent of knowledge of the area, considering at least specific maps, main ecological processes, habitat distribution, inventories of species and socio-economic factors, such as artisan fishing.

Basic and complete –depending on the taxonomical group- inventories of terrestrial and marine fauna and flora are available since 1993. Basic and specific cartography is available as well, either on maps or in GIS layers, but this aspect needs to be improved. Basic and relevant ecological processes either at sea or on land have been assessed and monitored on a regular basis since 1991, with a special effort focussed on seabird ecology, migration, *Posidonia oceanica* conservation and ecology, fisheries reserve effect, vegetation, biogeography and evolution in the archipelago and so on. Polls in the socioeconomical area of the park and on visitors have been carried out regularly since 1991, including the fishermen. The level of knowledge of the area can be considered rather high.

9.3.2. Data collection

Describe and assess the adequacy of any programme and activities to collect data in the area.

Birds are the taxonomical group which have received more continuous attention since park's declaration in 1991. Main terrestrial and marine taxonomical groups of flora and fauna have been surveyed, and there are available comprehensive inventories well updated. The vegetation has been surveyed, and a good phytosociological map is available. The effect of fisheries on the marine communities as well as the reserve effect is surveyed on a yearly basis, as well as the *Posidonia oceanica* beds. Level of knowledge of the park's biota has increased dramatically since park's declaration. Knowledge on marine and terrestrial archaeology has increased notably as well these last years.

9.3.3. Monitoring programme

Section D8 in Annex I states that to be included in the SPAMI List, an area will have to be endowed with a monitoring programme having a certain number of significant parameters, in order to allow the assessment of the state and trends of the area, as well as the effectiveness

and protection and management measures, so that they may be adapted if need be (indicators may, for instance, supply information about species status, condition of the ecosystem, land-use changes, extraction of natural resources -sand, water, game, fish-, visiting, adherence to the provisions of the management plan, etc.).

a) Is there a monitoring programme?

YES	
-----	--

b) If NO, are there plans to start one, and when?

--

c) If YES, assess as low, medium, satisfactory, its adequacy and present level of development.

MEDIUM

d) If YES, who is/are carrying out the monitoring programme?

Park's administration is responsible for the monitoring programme, but most of it is carried out by independent and external scientific groups and/or environmental enterprises.
--

e) If YES, briefly describe how the monitoring programme will be used in reviewing the management plan.

The monitoring programme will serve as a basic tool to propose changes in the zonification of the park—new diving zones, new marine reserves, etc- and management priorities concerning fauna and flora.
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10. Other information, if any

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11. CONTACT ADDRESSES (name(s), position(s) and contact address(es) of the person(s) in charge with the proposal and that compiled the report)

José Amengual Ramis
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Fax: 971 725585
e-mail: jose.amengual@oapn.mma.es

12. SIGNATURE(S) ON BEHALF OF THE STATE(S) PARTY/PARTIES MAKING THE PROPOSAL

Director del Organismo
Autónomo Parques
Nacionales
Ministerio de Medio
Ambiente

Jefe del Gabinete
Técnico de la
Secretaría General de
Medio Ambiente
Ministerio de Medio
Ambiente

Consellera de Medi
Ambient
Govern de les Illes
Balears

Director General de
Biodiversitat
Govern de les Illes
Balears

Directora General de
Conservación de
la Naturaleza
Ministerio de Medio
Ambiente

Fdo. : Ilmo. Sr. D.
Basilio Rada Martínez

Fdo.: Ilmo. Sr. D.
Javier Ferrero Berlanga

Fdo.: Hble. Sra. D^a.
Margalida Rosselló
Pons

Fdo.: Ilmo. Sr. D.
José Manuel Gómez
González

Fdo.: Ilma. Sra. D^a.
Inés González Doncel

13. DATE

20th March 2003.

**ANNOTATED FORMAT FOR THE PRESENTATION
REPORTS FOR THE AREAS PROPOSED
FOR INCLUSION IN THE SPAMI LIST**

ACANTILADOS DE MARO-CERRO GORDO

SPAIN

1. AREA IDENTIFICATION

1.1. COUNTRY/COUNTRIES (in the case of transboundary areas)

SPAIN

1.2. ADMINISTRATIVE PROVINCE OR REGION

MÁLAGA-GRANADA (ANDALUCIA)

1.3. NAME OF THE AREA

ACANTILADOS DE MARO-CERRO GORDO (Maro-Cerro Gordo cliffs)

1.4. GEOGRAPHIC LOCATION

Describe its geographical boundaries, e.g. rivers, roads, geographical or administrative boundaries (do not describe the co-ordinates here; please make a separate annex with a map and a description of geographical co-ordinates as stated in the legal declaration of the area).

Acantilados de Maro-Cerro Gordo Natural Place is located at the Southern border between the provinces of Málaga and Granada (Andalusia Autonomous Region, Spain). It is a narrow strip of 12 Km length along the coastline, extended 1 mile from coast into the Alborán Sea, and limited at the Northern side by the N-340 Road.

The inland surface of the Acantilados de Maro-Cerro Gordo Natural Place extends over 395 ha. It is mainly characterised by steep cliffs, reaching 75 m of high ground, and numerous inlets originated through erosion and marine regression over the last foothills of the Sierra de Aljara. Some rivers as Barranco de la Maro, de la Miel, Cantarrián, Colmenarejos and Barranco de la Coladilla are running through the area, appearing seasonable the last two rivers, and becomes streams.

The area belongs to the municipalities of Nerja (Málaga) and Almuñecar (Granada). Both villages have the agriculture as mainly activity, which develops specially subtropical fruits –avocados, custard apples, mangos -, and traditional crops are also common in the area –tomatoes, beans -. Other kind of activity is the tourism. By other hand, fisheries does not constitute a relevant sector in the area.

The main access to the Acantilados de Maro-Cerro Gordo Natural Place is the N-340 Road.

1.5. SURFACE OF THE AREA (total)

1.814,685 Has. (in national unit)	1.814,685 Has. (in Ha)
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1.6. LENGTH OF THE MAIN COAST (Km)

12 Km.

2. EXECUTIVE SUMMARY (maximum 3 pages)

Acantilados de Maro-Cerro Gordo Natural Place is an area of great environmental value due to the singularity of its geological features as well as the high marine and terrestrial biological diversity.

The main access is the N-340 Road. Human presence is mainly concentrated within the villages belongs to the area: Maro in Nerja (Málaga) and La Herradura in Almuñecar (Granada), and in Río de la Miel, Barranco del Pino and Cantarriján.

The area is morphologically characterised by a set of cliffs from the intermediate unit of the Alpujárride Complex. These features belong to the Sierra Almirajara, being the summit last line of the area. Referring to the stony, the area contains dolomitic limestones, which leads to the formation of dark and medium consolidated soils over the area of less slope, and clear and poorly consolidated soils over the areas of higher slopes.

The terrestrial flora of the area is diverse. The potential vegetation belongs to the Betic calcicolous of the *Quercus ilex*. Nowadays the area holds Mediterranean scrubs species such as *Pistacia lentiscus*, *Rosmarinus officinalis*, *Ulex* sp., *Chamaerops humilis*, and other species as *Pinus halepensis*. Endemisms are also important in the area, two endemisms from Southern Andalusian are considered in danger of extinction by the Andalusian Catalogue of Threatened Wildflora (ACTWF), these species are *Limonium malacitanum* and *Rosmarinus tomentosus*, and two endemisms from Western Mediterranean; both are included in the Habitat Directive, these are *Buxus balearica* - in danger of extinction according to ACTWF - and *Maytenus senegalensis* subsp. *europaea* - vulnerable according to ACTWF.

As fauna is concerned, there is a number of seasonal and resident species in the area, such as *Vulpes vulpes*, *Felis silvestris*, *Mustela nivalis*, *Martes foina*, *Erinaceus europaeus*, *Meles meles*, *Hemidactylus turcicus*, *Malpolon monspesselanus*, *Chamaeleo chameleon* and *Bufo calamita*. It is also relevant the presence of metapopulations of *Capra pyrenaica hispanica*.

The most relevant group is the marine birds. Of special relevance are the following species such as *Larus ridibundus*, *Larus cachinnans*, *Larus fuscus*, *Ardea cinerea*, *Hydrobates pelagicus* - in danger of extinction in Andalousia -, *Morus bassana*, *Milvus migrans*, *Pandion haliaetus* - winter populations catalogued as vulnerable in Andalousia -, *Circaetus gallicus*, *Hieraaetus fasciatus* - in danger of extinction in Andalousia -, *Buteo buteo*, *Falco tinnuculus*, *Falco naumanni*, and *Falco peregrinus* - vulnerable in Andalousia -.

The maritime strip of the area presents a higher biological diversity than the terrestrial one. Many species are resident of the marine floor. Within the flora, species such as *Posidonia oceanica*, *Zostera marina* and *Cymodocea nodosa*, develop complex meadows considered as priority habitats in the EU context. These meadows represent vital areas of spawning and nursery grounds for many fish species. In addition, a great deal of macroscopic algae can be found in the infralitoral area, being present numerous genus of the three main groups of the macroscopic algae.

In relation to the marine fauna, it presents a high richness of species as well. There is a wide number of invertebrates, specially Cnidaria, Corals, Anemones, Echinodermata and Mollusca. In Crustacea are as relevant species, shrimps, spider crab and lobster. Of special importance are the populations of the vulnerable species, *Astroides calycularis* (B.O.E. n. 148, 22/06/1999).

Within fish group, diversity is related to habitat heterogeneity due to the existence of marine phanerogam meadows and rocky beds. As main species, it needs to highlight *Gobius niger* and Blenidae, *Scorpaena porcus*, moray eel and *Epinephelus guaza* – this species is the most important predator in the Mediterranean, although almost extinct because of illegal fishing. Other species of interest are *Coris julis*, *Astronothus ocellatus*, *Apogon imberbis*, *Anthias anthias*, *Diplodus annularis*, *Diplodus cervinus*, *Sparus auratus* and *Mola mola*.

In addition, there are some protected species in the area such as *Caretta caretta*, and the marine mammals, *Delphinus delphis*, *Stenella coeruleoalba*, *Tursiops truncatus* and *Balaenopteraa physalus*.

In spite of the control and the surveillance in the area, illegal and/or sportive fishing, and human pressure increase in summer, and that produces a high grade of perturbation in the area.

Because of the singularity of its coastal landscape, added to the extremely important species richness and the high natural value of its marine ecosystems, Acanilados de Maro-Cerro Gordo Natural Place becomes an area of great environmental importance worthy of the highest degree of protection.

3. SITE DESCRIPTION

3.1. TYPOLOGY OF THE SITE

3.1.1. Terrestrial surface, excluding wetlands (ha):	395 ha
3.1.2. Wetland surface (ha):	
3.1.3. Marine surface (Sq. Km):	Marine internal waters
	Territorial sea
	High sea
	1.419,685 ha
	0

3.2. MAIN PHYSICAL FEATURES

3.2.1. Geology/Geomorphology

Give a brief description of: (i) geological aspects (lithologic and tectonics); (ii) processes of sedimentation and erosion observable in the area; (iii) coastal geomorphology and (iv) island system. Indicate bibliographical sources.

Acantilados de Maro-Cerro Gordo Natural Place is located at the South of Almijara Mountain, belonging to the Alpujarride Complex. This complex crops out in the Alpujarras zone, and the materials are structured into three slipped layers. The layer of Almijara, in the medium position, is the one that makes and gives the name to the Sierra. It is represented by two formations: an inferior structure of filites and a superior one of dolomitic limestones (mainly marble), forming the main materials of Almijara and Tejada Sierra.

Strong swell causes a recurrent marine erosion at the South of the Almijara Sierra, and that has sculpted the current cliffs and coves landscape. Cliffs contain by a strip of rocky materials from erosion and collapse, and it is formed a narrow strip extended along the shore to 10 m depth.

Beaches are limited to the less exposed areas, or in the case they are embedded by all sides; this kind of beach is characterised by pebbles and coarse sand as well as by steep slopes.

The most important geological features in the formation of landscape have been caused by the sea effect and superficial waters, as well as the type of material. Moreover human activity has been changed the landscape due to the de-vegetation, other land uses such as the agriculture and housing.

3.2.2. Other interesting physical features: Such as hydrodynamics, volcanic formations, caves, underwater formations, etc.

Numerous caves and submarine grottos are present, like Genoveses Cave and Cajilla Cave, which are interconnected with the surface through a narrow, long chimney.

3.2.3. Length of beaches (in Km), including islands:

a) Length of sandy beaches:

0

b) Length of pebble or stony beaches:

10 Km.

c) Length, height and depth of active sand-dunes:

0

3.3. FRESHWATER INPUTS

3.3.1. Mean annual precipitation (in mm)

464 mm (data registered in the municipality of Nerja)

3.3.2. Main water courses (permanent and seasonal)

Rivers: Barranco de la Coladilla, Maro, de la Miel and Cantarriján

3.3.3. Estuarine areas: Existence and brief description

Not applicable in this proposal

3.3.4. Freshwater springs: Existence and brief description, including marine offsprings

Not applicable in this proposal

3.4. BIOLOGICAL FEATURES (B2, Annex I)

3.4.1. Habitats: A brief description of dominant marine and terrestrial habitats, on the basis of the habitat classifications adopted within the framework of MAP (and their coverage in ha)

Habitat Code	Habitat	Surface
1240	Vegetated sea cliffs of the Mediterranean coasts with endemic <i>Limonium</i> spp.	2,615
92 D0	Southern riparian galleries and thickets (<i>Nerio-Tamaricetea</i> , <i>Securinegion tinctoriae</i>)	0,273
1110	Sandbanks, which are slightly covered by sea, water all the time	19

5110	Stable xerothermophilous formations with <i>Buxus sempervirens</i> on rocky slopes	20
5335	Sclerophyllus shrubs. Thermomediterranean shrubs: <i>Retama</i> and gorse	12,494
5334	Sclerophyllus shrubs. Thermomediterranean shrubs: shrubs and thyme	6,719
5220	Arborescent matorral with <i>Zyziphus</i>	75
1430	Halo-nitrophilous scrubs (<i>Pegano-Salsoletea</i>)	0,055
1120	<i>Posidonia</i> beds	0,76
1210	Annual vegetation of drift lines	0,015
8211	Casmophytic vegetation: calcicolous subtype	4,941

3.4.2. List of regionally important species (flora and fauna) (B-2a, Annex I)

List here ONLY those species protected by international agreements, particularly those marine species included in Annex II of the Protocol, which are present in the area. Any other species may be listed if it is clearly considered of regional importance given its high representation in the area. Display the species list under the headings Marine Plants, Terrestrial Plants, Marine Invertebrates, Fish, Amphibians and Reptiles, Birds, and Mammals. For each species state:

- its relative abundance as Common (C), Uncommon (U) or Occasional (O),
- Its global status as rare (r), endemic (e) and/or threatened (t), and
- its status as an important resident population (R), or important for its breeding (B), feeding (F), wintering (W) or migratory passage (M)

SPECIES	Rel. Abundance (C) (U) (O)	Global STATUS (r) (e) (t)	Local STATUS (R) (B) (F) (W) (M)
PLANTS			
<i>Limonium malacitanum</i>	(O)	(e)	(R)
<i>Buxus balearica</i>	(U)	(e)	(R)
<i>Rosmarinus tomentosus</i>	(U)	(e)	(R)
MARINE PLANTS			
<i>Zostera marina</i>	(C)	(r)	
<i>Posidonia oceanica</i>	(C)	(r)	
MARINE INVERTEBRATES			
<i>Astroides calycularis</i>	(U)	(r) (t)	
FISH			
<i>Hippocampus hippocampus</i>	(U)	(r) (t)	
REPTILES			
<i>Caretta caretta</i>	(U)	(t)	(B) (F) (M)
BIRDS			
<i>Larus audouinii</i>	(U)	(t)	(F)
MAMÍFEROS			
<i>Balaenoptera physalus</i>	(O)	(t)	(M)
<i>Delphinus delphis</i>	(O)	(R)	(M)
<i>Stenella coeruleoalba</i>	(O)	(R)	(M)
<i>Tursiops truncatus</i>	(O)	(R)	(M)

3.4.3. Flora: Describe in a few sentences the main plant assemblages significant in the area.

In the biogeographical context, the terrestrial vegetation is included in the Betic Region (Alpujarrense sector), and belongs to the calcicolous serie of *Quercus ilex*. In the lowest and more consistent soil areas its trend is forming a forest of *Quercus ilex*. At present the landscape presents species as *Pistacia lentiscus*, *Chamaerops humilis*, *Olea europaea*, *Thymus* sp., *Rosmarinus* sp., *Ulex* sp. and *Genista* sp. The presence of endemic species of southern Andalusia is to be pointed out. Of special importance in the marine flora is the presence of meadows of *Posidonia oceanica* and *Zostera marina*.

3.4.4. Fauna: Describe in a few sentences, which are the main fauna populations present in the area.

The presence of birds is constant and relevant in Acantilados Maro-Cerro Gordo Natural Place as other coastal sites - seagulls, herons, snake eagles, gannets, peregrine falcons. In terrestrial fauna are relevant foxes, mustelidae, moles, Spanish ibex.

The invertebrate fauna is worthy the presence of orange coral, which is a vulnerable specie, and a great number of crustaceans, echinodermata, mollusca.

The highest biodiversity is present in the group of fish - *Gobius niger*, moray eel, *Coris julis*, *Epinephelus guaza*, *inter alia*.

The marine mammals which are present: *Delphinus delphis*, *Stenella coeruleoalba*, *Tursiops truncatus*, *Balaenoptera physalus*, and the marine turtle *Caretta caretta*.

3.5. HUMAN POPULATION AND USE OF NATURAL RESOURCES

3.5.1 Human population

a) Inhabitants inside the area:

		Number	Date of data
a) Inhabitants inside the area:	Permanent	100	01-01-2002
	Seasonal number (additional to permanent)	500	01-01-2002
b) En el entorno inmediato		Number	Date of data
b) En el entorno inmediato	Permanent	3800	01-01-2001
	Seasonal number (additional to permanent)	variable	01-01-2001

Description of the population

The population of Molino de Papel and some houses and residential villages are located in Acantilados Maro-Cerro Gordo Natural Place. The nearest populations are in the adjacent towns Maro in Nerja (Málaga) and La Herradura in Almuñecar (Granada).

The number of inhabitants of both towns, specially in La Herradura, has been increased in summer. Nevertheless there is an small decreasing of the inhabitants around the year due to the recreation activities developing in the coves.

Main human settlements and their populations

Near municipalities and population :

- Maro (Nerja, Málaga) 800 inhabitants
- La Herradura (Almuñecar, Granada) 3.000 inhabitants

3.5.2 Current human use and development

- a) Briefly describe the current use of the area by subsistence, artisan, commercial and recreational fishing, hunting, tourism, agriculture and other economic sectors.

The inhabitants of Maro are in charge to the agriculture activity (subtropical fruits: mango, avocados, custard apples, and others more traditional as beans or tomatos) and to the fishing sector (to a lesser extent), meanwhile in La Herradura the main activity is tourism and the others two abovementioned activities.

- b) Enter how many of the users depend on these resources, seasonality, and assessment of the social and economic importance of their use and of the perceived impact on the conservation of the area, in a score of 0-1-2-3 (meaning null, low, medium, high).

ACTIVITY AND CATEGORY	ASSESS IMPORTANCE OF		Estimated No. of Users	Seasonality
	Socio-economic	Conserv. Impact		
FISHING				
Subsistence	1	1		
Commercial, local	1	2		
Commercial, non-local	1	2		
Controlled recreational	1	1		
Un-controlled recreational	1	2		
Other				
TOURISM				
Regulated	2	1		
Unregulated	2	2		
Indicate the type of tourism				
-				
-.....				
Tourism facilities	2	2		
FOREST PRODUCTS				
Subsistence	0	0		
Non-timber commercial, local	0	0		
Non-timber commercial, non-local	0	0		
Timber commercial, local	0	0		
Timber commercial, non-local	0	0		
Agriculture	2	1		
Stockbreeding	0	0		
Aquaculture	0	0		
EXTENSIVE STOCK GRAZING				
Subsistence	0	0		
Commercial, local	0	0		
Commercial, non-local	0	0		
OTHER ACTIVITIES				
-				
-				

3.5.3. Traditional economic or subsistence uses

Name any environmentally sound traditional activities integrated with nature, which support the well being of the local population. E.g. land, water use, target species, if closed seasons or closed zones are used as management techniques.

The most important traditional use in the zone is agriculture, which changes currently because of the regression of this activity and the import of subtropical products, as well as the introduction of intensive agriculture.

4. MEDITERRANEAN IMPORTANCE OF THE SITE

This Section aims at stressing the importance of the site for conservation at the regional or global scales, as set in Art. 8 para. 2 of the Protocol and B2-a, B2-b and B2-c in Annex I.

4.1. PRESENCE OF ECOSYSTEMS/HABITATS SPECIFIC TO THE MEDITERRANEAN REGION

Name the type of habitats considered of Mediterranean specificity, on the basis of the habitat classifications adopted within the framework of MAP, and their estimated cover (Ha).

Habitat Code	Habitat	Surface	Priority Habitat
92D0	Southern riparian galleries and thickets (<i>Nerio-Tamaricetea</i> , <i>Securinegion tinctoriae</i>)	0,273	
1240	Vegetated sea cliffs of the Mediterranean coasts with endemic <i>Limonium</i> spp	2,615	
1430	Halo-nitrophilous scrubs (<i>Pegano-Salsoletea</i>)	0,055	
1120	<i>Posidonia</i> beds	0,76	*
1110	Sandbanks which are slightly covered by sea water all the time	19	
1210	Annual vegetation of drift lines	0,015	
5110	Stable xerothermophilous formations with <i>Buxus sempervirens</i> on rocky slopes	20	
5220	Arborescent matorral with <i>Zyziphus</i>	75	*

4.2. PRESENCE OF HABITATS THAT ARE CRITICAL TO ENDANGERED, THREATENED OR ENDEMIC SPECIES

A critical habitat is an area essential to the conservation of the species concerned. These species should be those included in Annex II of the Protocol. E.g. Islets and sea stacks, as small islands in the sea or in large bodies of water, mostly important for water-bird colonies; caves appropriate for monk seals; undisturbed sand beaches where marine turtle nesting occurs; coastal lagoons where threatened fish or bird species feed or breed; tidal flats, coastal or benthic substrates important for marine invertebrates, etc.

Name the habitat types and the species linked to it.

- The cliffs of the Mediterranean coasts due to the presence of species like *Limonium malacitanum*, *Buxus balearica* and the *Rosmarinus tomentosus*.
- The coastal mile due to the presence of the *Delphinus delphis*, *Stenella coeruleoalba*, *Tursiops truncatus* and *Balaenoptera physalus*.
- The marine phanerogams meadows by the presence of *Posidonia oceanica* and *Zostera marina*.
- The marine environment and shores due to the presence of the marine turtle *Caretta caretta*. It is an occasional visitor of Acantilados Maro-Cerro Gordo Natural Place during its migration.
- The marine bottoms due to the presence of the coral *Astroides calycularis*.

4.3. OTHER RELEVANT FEATURES (Art. 8 paragraph 2 in the Protocol)

4.3.1. Educational Interest (B-3 in Annex I)

E.g. particular values for activities of environmental education or awareness

In the Natural Place and its surroundings can be found natural, social and cultural features

- Spectacular cliffs landscape caused by the marine erosion
- Habitats diversity: rock and sandy bottoms, marine phanerogams meadows, beaches of boulders and pebbles, Mediterranean forest, caves
- Presence of endemic species
- Historical heritage: Roman stonewalks (Maro), watchtowers (5). Outside the Natural Place: Aqueduct (XIX century).
- Nerja Caves.
- Mills for different uses
- Traditional activities: agriculture and fishing

4.3.2. Scientific Interest (B-3 in Annex I)

Explain if the site represents a particular value for research in the field of natural or heritage sciences.

See 4.3.1.

4.3.3. Aesthetic Interest (B-3 in Annex I)

Name and briefly describe any outstanding natural features, landscapes or seascapes.

Acantilados Maro-Cerro Gordo Natural Place and its environment offer to the visitor a great diversity of landscape:

- **Cliffs**, formed by the erosion of the sea effect. These are many caves, where birds use as nesting ground.
- **Mediterranean forests** in transgression process. Shrub appears prior to the restoration of the tree layer.
- **Inlets of boulders**, formed at the base of the cliffs where de typical "ramblas" end.
- **Cultural landscape**, composed by many watchtowers situated at the cliff tops, the remains of the Roman Stonewalk of Maro, churches, old aqueducts.
- The view of the contrast between the crops in the valley and the innovative intensive agriculture in green-houses.

4.3.4. Main cultural features

Indicate if the area has a high representative value with respect to the cultural heritage, due to the existence of environmentally sound traditional activities integrated with nature which support the well-being of local populations.

- Remains of antique cultures, who were in Acantilados Maro-Cerro Gordo Natural Place and its surroundings: watchtowers, Roman Stonewalk, *inter alia*.
- Remains of industrial architecture: Sugar and paper mills, and machinery.
- More recent monuments: Águila Aqueduct (XIX century), Maro Church (s. XVII).
- Nerja Coves and its antique human settlement.

5. IMPACTS AND ACTIVITIES AFFECTING THE AREA

5.1. IMPACTS AND ACTIVITIES WITHIN THE SITE

5.1.1. Exploitation of natural resources

Assess if the current rates of exploitation of natural resources within the area (sand, water and mineral exploitation, wood gathering, fishing, grazing...) are deemed unsustainable in quality or quantity, and try to quantify these threats, e.g. the percentage of the area under threat, or any known increase in extraction rates.

- Occasionally ilegal fishing activities take place, which could affect the *Posidonia* meadows.
- Angling can ocasionaly bother the marine fauna.
- During the summer time the pressure due to human presence in beaches and coves.
- Agriculture activities can not cause serious problems of erosion and pollution because of the current local regulations.

5.1.2. Threats to habitats and species

Mention any serious threats to marine or coastal habitats (e.g. modification, desiccation, disturbance, pollution) or to species (e.g. disturbance, poaching, introduced alien species...) within the area.

The increase of visitors, specially in summer, can be considered a pressure indicators on coastal habitats, although this situation has been minimized in the last years through more control and surveillance in the zone.

5.1.3. Demand by an increased population and infrastructures

Assess whether the current human presence or an expected increase in frequentation (tourism, passage of vehicles and boats) and any human immigration into the area, or plans to build infrastructures, are considered a threat.

No new building licenses are currently allowed in the limits of Acantilados Maro-Cerro Gordo Natural Place.

5.1.4. Historic and current conflicts

Make a brief statement of any historic or current conflicts between users or user groups.

The majority of the fishing sector has adopted the new fishing control regulations established for the marine and freshwater environments of Acantilados Maro-Cerro Gordo Natural Place although occasionally illegal activities may occurred.

5.2. IMPACTS AND ACTIVITIES AROUND THE SITE

In Art.7.2-e the Protocol calls for the regulation of activities compatible with the objectives for which a SPA was declared, such as those likely to harm or disturb species or ecosystems (Art.6.h), while Section B4 in Annex I asks to consider “the existence of threats likely to impair the ecological, biological, aesthetic or cultural value of the area” (B4-a in Annex I), recommending the existence, in the area and its surroundings, of opportunities for sustainable development (B4-d) and of an integrated coastal management plan (B4-e).

5.2.1. Pollution

Name any point and non-point sources of external pollution in nearby areas, including solid waste, and especially those affecting waters up-current.

No pollution produced by oil spills or soil waste are known.

5.2.2. Other external threats, natural and/or anthropogenic

Briefly describe any other external threat to the ecological, biological, aesthetic or cultural values of the area (such as unregulated exploitation of natural resources, serious threats on habitats or species, any sectorial development plans and proposed projects, etc.), likely to influence the area in question.

The improvement of touristical infrastructures in the neighbouring towns is adding to an increase of visitors, and sailing crafts. Adequate measures applied by the Administration can reduced notably the negative effects of these problems.

5.2.3. Sustainable development measures

Comment whether the area is covered by an integrated coastal management plan, or bordering upon a zone under such a plan. Are there other opportunities for sustainable development provided for in the neighbouring areas?

No Sustainable Development Plan is implementing for Acantilados Maro-Cerro Gordo Natural Place currently.

6. EXPECTED DEVELOPMENT AND TRENDS¹

The foreseeable development and trends of the site do not appear in the list of common criteria for the choice of protected marine and coastal areas that could be included in the SPAMI list, as established in the Protocol and its Annex I. Moreover, this is not always easy to assess and it is necessary to have knowledge about the site, which is not always available to all managers of protected areas; Thus, it is not obligatory to fill in the boxes in this Section 6.

On the other hand, the assessment of this foreseeable evolution and trends constitutes a dynamic supplement to the static knowledge of the site, as it appears in Sections 3, 4 and 5 above. Moreover, it is of significant importance for the definition of the objectives and the management plan of the site.

It thus appears desirable to bringing out the main outlines at least in respect to the following points:

6.1. EXPECTED DEVELOPMENT AND TRENDS OF THREATS TO AND PRESSURES UPON THE AREA

Deal briefly in succession with:

- The demographic development in and around the site
- The development of economic activities (other than tourism and recreation) within the area
- The development of local demand on tourism and recreation
- The development of tourism pressure on the area

The tourist activity is becoming the main economic basis of the neighbouring population. In the last years the existing structures have been improved and new ones are being created. By other hand, the control made by the Administration is far suitable for minimizing, or for avoiding the possible impacts on Acantilados Maro-Cerro Gordo Natural Place.

6.2. POTENTIAL CONFLICTS IN THE AREA

Make a brief statement of potential use conflicts between the users or group of users of the site.

No recorded conflicts are known currently.

6.3. EXPECTED DEVELOPMENT AND TRENDS OF THE NATURAL LAND ENVIRONMENT AND LANDSCAPES OF THE AREA: as expected arising from the evolution of the pressures

Some modern existing constructions were built inside Acantilados Maro-Cerro Gordo Natural Place, previous to the declaration of Acantilados of Maro Cerro-Gordo as a protected area.

¹ By expected development and trends are meant the development, which is thought most likely to occur in the absence of any deliberate intervention to protect and manage the site.

6.4. EXPECTED DEVELOPMENT AND TRENDS OF THE MARINE ENVIRONMENT AND SEASCAPES OF THE AREA: as expected arising from the evolution of the pressures

The tourist development of the neighbouring populations means an increase of the tourist-recreational activities inside Acantilados Maro-Cerro Gordo Natural Place, such as sailing, diving, the underwater fishing, trekking. All these activities, as a whole, will be planned and regulated in order to measure their possible environmental impact..

7. PROTECTION REGIME

7.1. LEGAL STATUS (General Principles "e" and Section C-2 both in Annex I)

7.1.1. Historical background of the protection of the site

Natural Place. Act 2/1989, of 18 of July, by which the Inventory of Protected Natural Areas of Andalusia is adopted and it is established additional norms for their protection.

The Natural Place of Maro-Cerro Gordo was proposed as Site of Community Importance (SCI) in January of 2001.

7.1.2. Legal texts currently ruling the protection on the site

Enter the national conservation category, the dates and the present enforcement status of the legal instrument declaring the protection of the area. Consider both the land and the marine areas of the site. Include the full text(s) as an annex.

Natural Place. Act 2/1989, of 18 of July, by which the Inventory of Protected Natural Areas of Andalusia is adopted and it is established additional norms for their protection.

With provisional character, as Site of Community Importance (SCI), the area has a legal protection in the Habitat Directive (Art. 6 of the Habitat Directive 92/43/EEC) in which it commits to the member states to preserve the environmental integrity of the areas that are in phase of SCI proposal and, therefore, of Special Areas of Conservation.

7.1.3. Objectives (General Principles "a" and D-1 in Annex I)

Name in order of importance the objectives of the area as stated in its legal declaration.

Natural Place: Areas so declared because of its singular values, as well as for the conservation of its flora, fauna, geomorphological structure, special beauty or other components of very outstanding natural characteristic.

In the Habitat Directive the proposal of a SCI by a member state of the European Union, enforces to the member state to the conservation of the environmental integrity of the proposed area as if such member state were already nominated to enrol the list of the Network Natura 2000 and, therefore, enforces Spain to protect all its natural resources.

7.1.4. Indicate whether the national protection regime arises from international treaties enforced or from implementation measures of treaties (Art. 6.a in the Protocol).

The protection of this place arises from the Regional Government of Andalusia and the application of the Habitat Directive.

7.2. INTERNATIONAL STATUS

7.2.1. Transboundary or high seas areas

Complete this section only if the area is transboundary, totally or partially in the high sea, or within areas where the limits of national sovereignty or jurisdiction have not yet been defined. In this case, mention the modalities of the consultation (Art. 9 para. 3A in the Protocol and General Principles “d” in Annex I).

Not applicable to the proposed area

7.2.2. International category

Mention if the area, or part of it, has been designated and on what date, with an international conservation category (e.g. Specially Protected Area, Biosphere Reserve, Ramsar Site, World Heritage Site, European Diploma, Natura 2000, Emerald network, etc.).

The Natural Place Acantilados de Maro Cerro-Gordo has been proposed as SCI in January of 2001

7.3. PREVIOUS LEGAL BACKGROUND AND LAND TENURE ISSUES

Briefly mention if the area or part of it is subject to any legal claim, or to any file open in that connection within the framework of an international body. Describe the land tenure regimes within the area, and append a map if existing.

Most of the terrestrial zone of Acantilados Maro-Cerro Gordo Natural Place is private property, although some lands close to Alberquilla Beach are property of the Regional Government.

7.4. LEGAL PROVISIONS FOR MANAGEMENT (Section D-1 in Annex I)

7.4.1. Zoning

Briefly state if the legal text protecting the area provides for different zones to allocate different management objectives of the area (e.g. core and scientific zones in both land and sea, fishing zones, visitation, gathering, restoration zones etc) and in this case the surface area in ha of these zones. Include a map as an annex

The aim for protecting communities of great interest and fragility located on the cliffs of Maro-Cerro Gordo is to established a specific regulation for the delimited area including the cliffs of Maro-Cerro Gordo as well as its marine surroundings which limits are indicated in the mapping.

7.4.2. Basic regulations

Mention the provisions, which apply to the area concerning the implementation of Article 6 of the Protocol (paragraphs a to i), Section D5 (a to d) in the Annex I and Article 17 of the Protocol.

The Natural Place is under the environmental protection regulations of the Environmental Council of the Regional Government of Andalusia for the Network of Natural Protected Areas of Andalusia (R.E.N.P.A.) Currently the Natural Resources Regulation Plan is in the proceedings.

7.4.3. Legal competencies

Section D4 in Annex I states that the competence and responsibility with regard to administration and implementation of conservation measures for areas proposed for inclusion in the SPAMI List must be clearly defined in the texts governing each area. Additionally Art.7.4. of the Protocol calls for the provision of clear competencies and co-ordination between national land and sea authorities, with a view to ensuring the appropriate administration and management of the protected area as a whole. Mention in which way do the legal provisions clearly establish the institutional competencies and responsibilities for the administration and conservation of the area, and if being the case, their co-ordination means, including those between land and sea authorities.

- Terrestrial Zone: Ministry of Environment of the Regional Government Andalusia and the Council of Urban Planning of the Municipality Government of Nerja and Almuñecar
- Marine Zone: Ministry of Environment (Central Government) has the competence of the coastal public property, and the Ministry of Agriculture, Fisheries and Food (Central Government) has the competence of fisheries and offshore waters.
- The Municipality Governments has the competence of urban regulations, as well as the cleaning, surveillance and access of their beaches.

7.4.4. Other legal provisions

Describe any other relevant legal provisions, such as those requiring a management plan, the establishment of a local participation body, binding measures for other institutions or economic sectors present in the area, allocation of financial resources and tools, or any other significant measures concerning the protection and management of the area or its surrounding zones.

At present there is no other legal provision in force.

8. MANAGEMENT

Through the General Principles, para. (e) in the Annex I, the Parties agree that the sites included in the SPAMI List are intended to have a value as examples and models for the protection of the natural heritage of the region. To this end, the Parties ensure that sites included in the List are provided with adequate legal status, protection measures and management methods and means.

8.1 INSTITUTIONAL LEVEL

8.1.1. Authority/Authorities responsible for the area

- Terrestrial Zone: Ministry of Environment of the Regional Government Andalusia and the Council of Urban Planning of the Municipality Government of Nerja and Almuñecar
- Marine Zone: Ministry of Environment (Central Government) has the competence of the coastal public property, and the Ministry of Agriculture, Fisheries and Food (Central Government) has the competence of fisheries and offshore waters.

8.1.2. Other participants in the management body

Such as other national or local institutions, as stated in Section D6 in Annex I.

At present there are no other institutions involved.

8.1.3. Participants in other committees or bodies

Such as a scientific committee, or a body of representatives from the local stakeholders, the public, the professional and non-governmental sectors, as in Sections B4-b and B4-c in Annex I.

The public awareness in the protected areas is providing by the Provincial Council of Environment, Forests and Hunting.

8.1.4. Effectiveness

As stated in Section B4 of Annex I, assess as very low, low, moderate, satisfactory, very satisfactory, and comment as needed on the following aspects:

a) Effectiveness of the co-ordination, where existing:

There is an adequate co-ordination between the different competent bodies for the natural resources protection in the area.

b) Quality of involvement by the public, local communities, economic sectors, scientific community:

The co-ordination is achieved by the Provincial Council of Environment, Forests and Hunting, and the research by agreements between the Regional or Central Government and the University. In both cases the co-ordination is adequate.

8.2. MANAGEMENT PLAN (as set out in D7 of Annex I)

8.2.1. Management Plan

State if there is a management plan (MP) and in this case include the document as an annex. In the absence of a MP, mention if the main provisions governing the area and the main regulations for its protection are already in place and how (D7 in Annex I) and if the area will have a detailed management plan within three years (D7 in Annex I).

The Council of Environment is currently developing a Management Plan (Natural Resources Management Plan – P.O.R.N.), which will regulate the use and planning of the natural resources in the area.

8.2.2. Formulation and approval of the Management Plan

Mention how the MP was formulated, e.g. by an expert team and/or under consultation and/or participation with other institutions or stakeholders. State the legal status of the MP, whether it is officialized, and how, and if it is binding for other institutions and sectors involved in the area.

The Management Plan has been developed by a multidisciplinary group of experts in several fields. All social participative entities which are interested in the area, have been taken into account in all the process.

8.2.3. Contents and application of the Management Plan

State the degree of detail in the MP by entering YES or NO in the following list of potential contents, and assess the degree of implementation of the MP by using the 0-1-2-3 score on the right hand side:

	Existing in MP		Degree of application	
Detailed management objectives	YES			3
Zoning	YES			3
Regulations for each zone	YES			3
Governing body(ies)	YES			3
Management programmes as:				
Administration	YES			3
Protection	YES			3
Natural resource management	YES			3
Tourism and Visitation		NO	0	
Education and Training		NO	0	
Research and Monitoring	YES		1	
Services and Concessions	YES			2
Fund raising activities		NO	0	
Periodic revisions of the MP	YES			3

8.3. PROTECTION MEASURES

By Art. 6 of the Protocol the Parties agree to take all the necessary protection measures required for the conservation of the area, particularly the strengthening the application of the other Protocols to the Convention, and through the regulation of any other activity likely to harm the natural or cultural value of the area, such as economic, recreation or research activities. As per Section D2 in Annex I, the protection measures must be adequate to the site objectives in the short and long term, and take in particular into account the threats upon it.

8.3.1. Boundaries and signing

Briefly, state if the boundaries of the area and its zones are adequately marked in the field, both on land, in the sea, and at the principal points of access.

The terrestrial limits of the place are clearly delimited by landmarks, while there are no signals of the marine limits.

8.3.2. Institutional Collaboration

Name the different national and local institutions or organisations with legal responsibilities or involved in the protection and surveillance of land and sea zones, and any measures or mechanisms through which their co-ordination is pursued.

The institutional collaboration is mainly between institutions which have the legal competence of the marine zone; these are the Council of Environment of the Regional Government of Andalusia and the Ministry of Agriculture, Fisheries and Food, with the competence of terms of ecosystem, fisheries and protected areas. This collaboration makes up with other aspects such as human resources and material availability disponibilities, being both optimised.

8.3.3. Surveillance

Consider the adequacy of the existing protection means (human and material), and your present ability to survey land and sea uses and accesses

Due to its small surface, the surveillance of the terrestrial zone is very effective, being the surveillance of the marine zone of the area more difficult.

8.3.4. Enforcement

Briefly, consider the adequacy of existing penalties and powers for effective enforcement of regulations, whether the existing sanctions can be considered sufficient to dissuade infractions, and if the field staff is empowered to impose sanctions.

The rangers of the Regional Ministry of Environment, and those of the Ministry of Agriculture, Fisheries and Food and the Ministry of Environment (Central Government) have the powers for effective enforcement of regulations, to those individuals who does not stand the regulations.

9. AVAILABLE RESOURCES

9.1. HUMAN RESOURCES (Art. 7.2.f in the Protocol)

9.1.1. Available staff

Assess the adequacy of the human resources available to the management body, in number of employees and training level, both in central headquarters and in the field. Indicate if there are staff training programmes.

The existing staff of the Central Headquarters of the Regional Ministry of Environment are located in Granada and Málaga, is adequate for the objectives of protection and conservation of the area. There is the intention of the reinforcement of staff and resources in the next future.

9.1.2. Permanent field staff

Answer YES or NO on the current existence of the following FIELD staff categories. If YES, enter the number of staff either permanent or part-time in that category, and evaluate on a 0-1-2-3 score (0 is low, 3 is high) the adequacy of their training level.

	YES/NO	NUMBER Permanent/Part-time	ADEQUACY OF TRAINING LEVEL
Field Administrator	YES	Permanet 1	3
Field Experts (scientific monitoring)	YES	Part-time 1	2
Field Technicians (maintenance, etc)	YES		2
Wardens	YES		1
Of which marine wardens	NO		0
Guides	NO		0
Other	NO		0

9.1.3. Additional Support

Briefly, describe if the area currently has the advantage of other external human resources in support of its objectives, either from other national or local institutions, volunteer programmes, non-governmental organisations, academic or international organisations. Mention if there are any significant changes in prospect for the near future.

In the Protected Area, the staff disposes of IT and ecological documentation, which come from the Regional Ministry of Environment HQ in Seville. Technicians are from diverse environmental fields, and their work is developing in the branches of the Council of Environment in Granada and Málaga. About fisheries and control of fishing resources, there is additional technical assistance from the Ministry of Agriculture, Fisheries and Food (Central Government). The « Aula del Mar » of Málaga collaborates in the management process of Acantilados Maro-Cerro Gordo Natural Place. The Municipality Governments of Nerja and Almuñecar control periodically the urban sector development.

9.2. FINANCIAL RESOURCES AND EQUIPMENT

By Art. 7 in the Protocol, the Parties agree to adopt measures or mechanisms to ensure the financing of the specially protected areas (Art.7.2.d), and the development of an appropriate infrastructure (Art.7.2.f). The General Principles para. "e" in the Annex I call upon the Parties to provide the areas with adequate management means.

9.2.1. Present financial means

Note if the basic financing is ensured: a core funding for basic staff, protection and information measures. Who provides this core funding? Briefly assess the degree of adequacy of the present financial means for the area, either low, moderate, satisfactory; e.g. the implementation of the management plan, including protection, information, education, training and research.

The core funding is provided by the Regional Ministry of Environment of Andalousia, which covers the basic staff surveillance, research of species conservation, information, communication and divulgation. Ministry of Agriculture, Fisheries and Food (Central Government) covers the expenditures related to the staff, research and material resources.

9.2.2. Expected or additional financial sources

Briefly describe any alternative sources of funding in use or planned, and the perspectives for long-term funding from national or other sources.

Projects under LIFE and INTERREG Funds (European Union).

9.2.3. Basic infrastructure and equipment

Answer YES or NO to the following questions, and if YES, assess with a score of 1-2-3 (1 is low, 3 is high) the adequacy of the basic infrastructure and equipment.

	YES/NO	ADEQUACY
Office and/or laboratory in the field	NO	3
Signs on the main accesses	YES	
Guard posts on the main accesses	NO	
Visitors information centre	NO	
Self guided trails with signs	NO	
Terrestrial vehicles	YES	2
Marine vehicles	YES	2
Radio and communications	YES	3
Environmental awareness materials		
Capacity to respond to emergencies	YES	2
Comment on basic infrastructure and equipment		

9.3. INFORMATION AND KNOWLEDGE

By Section D3 of Annex I, the Parties agree that the planning, protection and management of a SPAMI must be based on an adequate knowledge of the elements of the natural environment and of socio-economic and cultural factors that characterize each area. In case of shortcomings in basic knowledge, an area proposed for inclusion in the SPAMI List must have a programme for the collection on the unavailable data and information.

9.3.1. State of knowledge

a) Assess the general state of knowledge of the area.

		2	
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b) Briefly describe the extent of knowledge of the area, considering at least specific maps, main ecological processes, habitat distribution, inventories of species and socio-economic factors, such as artisan fishing.

Regional Catalogue of Flora and Regional Catalogue of Fauna of the terrestrial zone have been developed, and one of the marine environment is being elaborated.

9.3.2. Data collection

Describe and assess the adequacy of any programme and activities to collect data in the area.

There are basic studies of the flora and fauna, although it should be reviewed and updated all the information of the whole area, especially the endangered species. The knowledge of the accurate location for the populations of *Limonium spp* and *Rosmarinus tomentosus* or the grade of spreading of *Buxus balearica* would be very helpful. There is a preliminary mapping of the marine phanerogams meadows.

9.3.3. Monitoring programme

Section D8 in Annex I states that to be included in the SPAMI List, an area will have to be endowed with a monitoring programme having a certain number of significant parameters, in order to allow the assessment of the state and trends of the area, as well as the effectiveness and protection and management measures, so that they may be adapted if need be (indicators may, for instance, supply information about species status, condition of the ecosystem, land-use changes, extraction of natural resources -sand, water, game, fish-, visiting, adherence to the provisions of the management plan, etc.).

a) Is there a monitoring programme?

	NO
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b) If NO, are there plans to start one, and when?

2003-2004

c) If YES, assess as low, medium, satisfactory, its adequacy and present level of development.

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d) If YES, who is/are carrying out the monitoring programme?

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e) If YES, briefly describe how the monitoring programme will be used in reviewing the management plan.

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3. Other information, if any

Council of Environment of the Regional Government of Andalousia is developing a Program for the Sustainable Managment of the marine resources conservation in Andalousia. By other hand, it is creating a G.I.S. for the coastal area in Andalousia, as well as a system of indicators for the monitoring of the coastal environment for European Landscape Thematic Centre. Finally, it is elaborating the Action Plan for the Protected Marine Areas of Andalusia, in the framework of the Andalousian Strategic Plan of Protected Areas Network.

4. CONTACT ADDRESSES (name(s), position(s) and contact address(es) of the person(s) in charge with the proposal and that compiled the report)

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5. SIGNATURE(S) ON BEHALF OF THE STATE(S) PARTY/PARTIES MAKING THE PROPOSAL

LA DIRECTORA GENERAL DE
 CONSERVACIÓN DE LA NATURALEZA
 MINISTERIO DE MEDIO AMBIENTE

EL DIRECTOR DE LA RED DE ESPACIOS NATURALES
 PROTEGIDOS Y SERVICIOS AMBIENTALES
 JUNTA DE ANDALUCÍA

Fdo.: Inés González Doncel

Fdo.: Hermelindo Castro Nogueira

6. DATE

31th March 2003