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**REPORT**

**ON THE SPOT EXPERT APPRAISAL OF THE  
DESERTAS ISLANDS NATURE RESERVE  
(MADEIRA - PORTUGAL)**

10-11 April 2019

*Document prepared  
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## 1. INTRODUCTION



Photo: Rui Cunha

The Committee of Ministers of the Council of Europe, by means of its Resolution CM/ResDip(2014)1, awarded the European Diploma for Protected Areas category "A" to the Desertas Islands Nature Reserve (Portugal) at its meeting of 2<sup>nd</sup> July 2014.. The deadline established for its renewal was 1<sup>st</sup> July 2019.

Having regard to the decision of the Group of Specialists on the European Diploma for Protected Areas at its meeting of 5<sup>th</sup> - 6<sup>th</sup> March 2019 to perform on-the-spot appraisal visits to areas subject to EDPA renewal in 2019, the undersigned was invited as independent expert to carry out the visit to Desertas Islands Nature Reserve in Portugal. The objective stated was "*to assess whether the conditions of the site remain the same as when the Diploma was awarded, or whether they have improved or deteriorated*", following the provisions of the Terms of Reference stated in Appendix 3 of Resolution CM/ResDip(2008)1 on the revised regulations for the European Diploma for Protected Areas.

The visit took place from 10 to 11 April 2019. A Programme of the visit, enclosed as annex I to this report, was previously established.

On 10<sup>th</sup> April, after being received at the harbour by the Regional Secretary of the Environment and Natural Resources, Mrs Susana Prada, some areas of the Reserve were visited with the Reserve's managers and staff, conducted by Mr. Paulo Oliveira, Vowel of the Directive Board, and Mrs. Dilia Menezes, Head of Division, responsible for the protected areas of Madeira, both from the Instituto das Florestas e Conservação da Natureza IP-RAM, Regional Government of Madeira. The visit was possible thanks to the expert command of the staff in charge of the boat, Mr. Manuel Jesus and Mr. Sandro Correia, both Nature Wardens, and the cooperation of the Nature Wardens on-duty at this moment, Mr. Ricardo Rodrigues, Mr. Sérgio Pereira and Mr. Lourenço Alves.

During the second day of the visit, 11<sup>th</sup> April, a meeting with the following representative stakeholders took place:

Institutions	Legal status
Command of the Madeira Maritime Zone/ Maritime Police	State of Portugal
Madeira Territorial Command of the National Republican Guard	State of Portugal
General Direction of the Environment and Land Management	Madeira Regional Government
Regional Directorate of Tourism	Madeira Regional Government
Regional Directorate of Fishing	Madeira Regional Government
Natural History Museum of Funchal	Funchal Municipal Chamber
Museum of Baleia	Machico Municipal Chamber
Association of Municipalities of Madeira.	Association
Association of Nature Wardens of Madeira	Association
Portuguese Society for Bird Study	NGO
VMT – Catamarans	Private - Maritime Tourism
Ventura do Mar.	Private - Maritime Tourism
Ship-owner of Tuna Fishing	Private
University of Madeira	University
CIIMAR Madeira	Research Body
Mr. Francis Zino	Naturalist

During the meeting some issues were raised and treated, and the attendants were requested to express their points of view in complete freedom. The conversation took place in harmony and frankness and all the opinions were stated with respect and mutual understanding. As it will be thoroughly described hereafter the conclusion of the undersigned expert is that, certainly, there are issues to solve, but the atmosphere is very favorable to find solutions that can be accepted by all parties, concerning basically fishing and tourism, the two main economic activities of the Madeira Autonomous Region.

All attendants are aware that a good conservation status of the Desertas Islands can represent some inconveniences for their business, but also that it is a major opportunity for their sustainable development and their prosperity.

After the meeting with stakeholders some interesting conversations took place also with Mr. Manuel Filipe, President of the Directive Board of the Instituto das Florestas e Conservação da Natureza IP-RAM, Regional Government of Madeira.

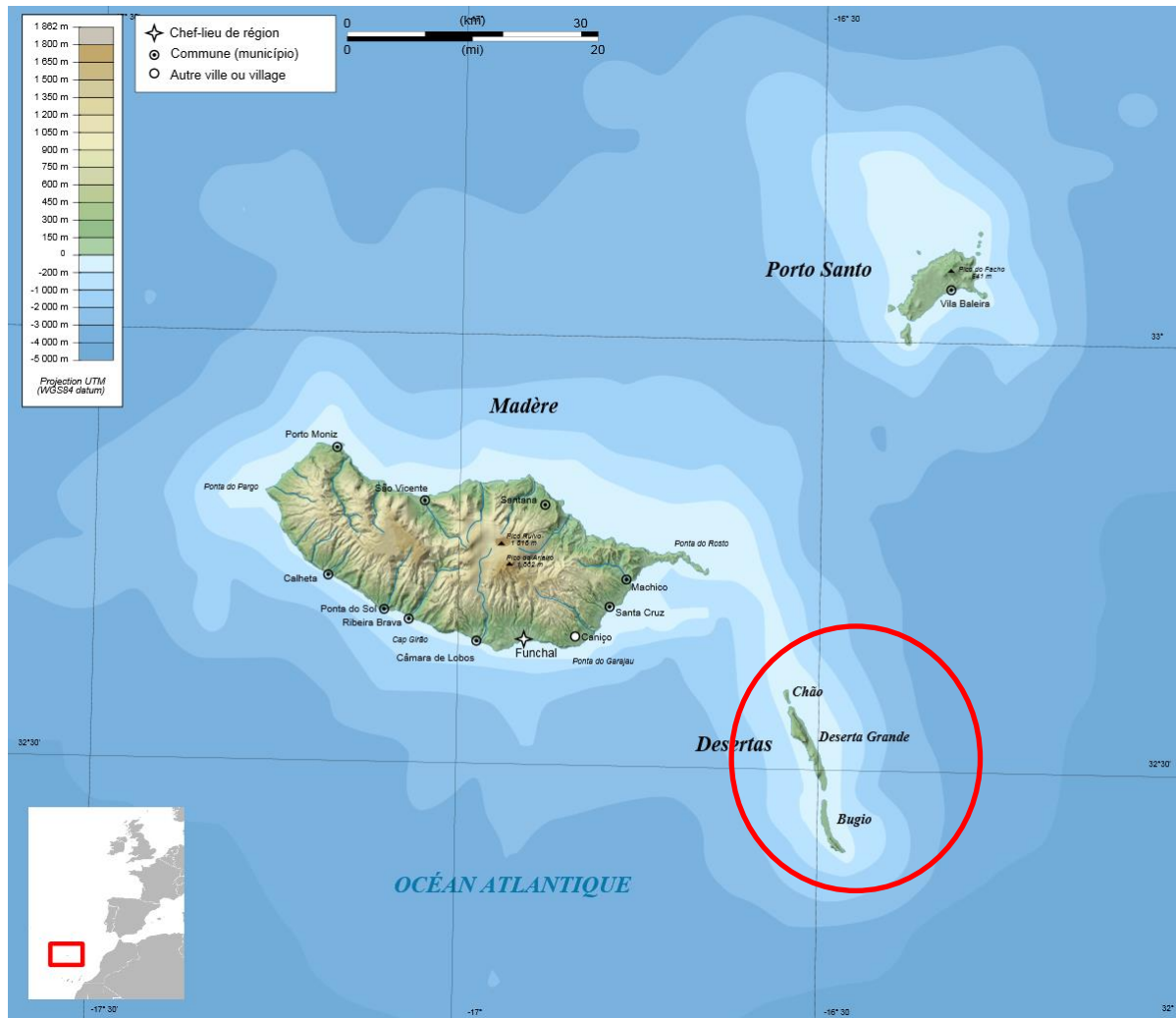


## **2. BRIEF DESCRIPTION OF THE DESERTAS ISLANDS NATURE RESERVE**

The Madeira Archipelago is located in the eastern North Atlantic, about 1000 km SW to Portugal mainland and 630 km W to the Morocco coast, and comprises the oceanic islands of volcanic origin: Porto Santo, Madeira and Desertas Islands. Along with the Selvagens, Azores, Canary and Cape Verde Archipelagos, constitute the Macaronesian Biogeographic Region.

Lying next to Madeira Island, at a distance of about 22 nautical miles southeast Funchal city, the capital of Madeira Autonomous Region, Desertas Islands are about 3.5 million years old. Formerly they were one island and part of a single volcano. With a total area of 114,57km<sup>2</sup>, Desertas Islands Nature Reserve is delimited by the isobaths of the 100 m and includes all the islands and islets (north to south):

- Ilhéu Chão - Length: 1,6 km. Width: 500 m. Maximum height: 98 m. Shaped like a plateau with an average altitude of 80 meters.
- Deserta Grande - Length: 12 km. Width: 2 km. Maximum height: 479 meters. Shaped like a tall mount with strong cliffs at both sides, its northern sector contains the Castanheira valley.
- Bugio - Length: 7,5 km. Width: 700 meters. Maximum height: 388 meters. At both sides (east and west) it shows dangerous and steep cliffs. There are two small plateaus on top of the island.



Its situation between parallels 32° and 33°, and its remote position in relation to continental areas, along with the oceanic influence, explain that the site has a relatively warm climate, allowing these islands to escape from the influence of the diverse climatic events of the final Tertiary and early Quaternary periods. This is the reason why part of the characteristic paleo-subtropical vegetation from the Tertiary, of relict character, survive in such relatively high latitudes (Capelo et al. 2005).

Marine and wind erosion acting across the centuries on this volcanic substrate have produced numerous caves (approx. 75) totally or partially submerged, gravel ditches and beaches all along the 38 km of coastal fringes of the islands, which provide shelter to the local population of Mediterranean Monk Seals. The slopes offer also excellent conditions to several species of seabirds (some of them endemic) as breeding grounds. An endemic lizard and many invertebrates also inhabit these islands.

Madeira archipelago was discovered by the Portuguese navigators in early XV century. Desertas islands have been subject to successive unsuccessful attempts to make them inhabitable. The lack of water and its rugged relief seem to have been an insurmountable obstacle to create human settlements on them. The release of domestic herbivores like rabbits or goats have been repeatedly made across recent centuries and, along with other invasive species coming along with humans (mice, cats, Argentine ant, etc.), have dramatically changed the original natural vegetation and the ecology of the islands.

Desertas sub-archipelago has been a private property, basically as hunting grounds, until 1971, when the Portuguese State purchased the islands. Before that, young Cory's shearwaters and other seabirds were chased for human consumption and other species, including Mediterranean monk seals, were frequently shot. In 1990 the terrestrial and the submerged zone up to the isobaths 100 meters were legally protected, currently as a Nature Reserve with a total area of 11.457 ha. Desertas Islands have

also been included in the Portuguese Natura 2000 Network and submitted to progressive conservation actions, as will be described hereafter.

### 3. EUROPEAN INTEREST OF THE SITE

The Desertas Islands Nature Reserve was awarded the European Diploma, as a special recognition of its remarkable natural values. A complete description can be seen at the Application Form and the most relevant are mentioned in further sections. In general, their merits for the award can be summarised as follows:

- As remarkable examples of threatened plant and animal communities
- As habitats for a large number of unique species
- As representative samples of rare habitat types at European scale
- As habitat of endemic and/or threatened species in unfavourable conservation status
- As breeding grounds of species protected under the Bern Convention
- As outstanding examples of natural phenomena and geologic formations
- As example of well-preserved natural heritage, feeding back economic activities like tourism and traditional fishing
- As remnant of historic uses of the territory, like whaling or watch out infrastructures used during the Second World War.
- As example of good management practices
- As recognition of the protection of the islands since 1990, classified as Special Protection Area of the Desertas Islands and in 1995 reclassified as Nature Reserve. The implementation of measures for the conservation of seabirds and monk seals were critical, like banning the capture of seabird chicks and adults for human consumption and the fishing activity, which started to be made under sustainable principles.

The Application Form (document of the Council of Europe T-PVS/DE (2013) 04), used for the European Diploma award, is extremely detailed and comprehensive. The main natural values thoroughly described on it are the following:

#### 3.1. Fauna

Vertebrate fauna is particularly important in Desertas Natural Reserve:

- **Mammals:** Desertas Islands Nature Reserve represents for the **Mediterranean Monk Seal** (*Monachus monachus*) the only population of its world distribution area with positive trend. Classified as "Critically endangered" in the red Data Book of Portugal, in 1988 the total population was estimated in 6 to 8 individuals and was considered to be on the brink of extinction. A Monk Seal Conservation and Monitoring Program started in 1988 by Madeira Nature Park Service. In addition to the declaration of Desertas as Nature Reserve harmful fishing gears were prohibited and the authorities helped the fishermen to replace them by alternative methods. As a result of these efforts, by 2011 the total population was estimated in 30 to 35 individuals (Hale et al., 2011). Nevertheless, new methods based on photographic traps and the use of non-invasive technological devices have modified these estimations to the current 25 to 30 individuals (Oliveira and Menezes com. pers.). Each year females give birth to 3-4 baby seals. However, this species bears a relatively high natural mortality rate, specially of youngsters, caused by accidents with the rocks of the shoreline when the storms hit the islands. In spite of this, the total population is slightly increasing year after year.

In the ocean areas surrounding the islands about 20 species of cetaceans have been recorded. Striped dolphins (*Stenella coeruleoalba*), sperm whales (*Physeter macrocephalus*), fin whales



(*Balaenoptera physalus*) or spotted dolphins (*Stenella frontalis*) are frequently seen in the islands. Other cetaceans, some of them being very endangered and/or rare, like the blue whale (*Balaenoptera musculus*) have also been recorded.

- **Birds:** The slopes and the plateaus existing on the three islands are excellent grounds for a number of seabirds, some of them protected under the Bern Convention and Birds Directive, of great ecological and conservation value:
  - **Desertas' petrel** (*Pterodroma deserta*): endemic exclusive species breeding in Bugio, with approximately 160 - 180 breeding pairs
  - **Bulwer's petrel** (*Bulweria bulwerii*): the largest colony of the Atlantic and probably of the world, with about 45.000 breeding pairs.
  - **Cory's shearwater** (*Calonectris borealis*),
  - **Madeiran storm Petrel** (*Hydrobates castro*),
  - **Little shearwater** (*Puffinus lherminieri baroli*)

Two endemic passerines can also be mentioned: the Madeiran subspecies of Berthelot's pipit *Anthus berthelotii madeirensis* and the canary *Serinus canaria canaria*. There are also two Macaronesian bird subspecies: the kestrel (*Falco tinnunculus canariensis*) and the quail (*Coturnix coturnix confisa*) as well as two Madeiran subspecies of raptors: the common buzzard (*Buteo buteo harterti*) and the Barn Owl (*Tyto alba schmitzi*)

- **Reptiles:** There is an endemic subspecies of lizard: *Teira dugesii mauli*. It occupies many habitat types, from coastal to high elevations, although they prefer rocky areas with scarce or medium plant coverage (Salvador, 2015). Loggerhead sea turtles (*Caretta caretta*) is common in the marine habitats surrounding the islands. Other sea turtles very endangered have been reported, like leatherbacks (*Dermochelys coriacea*), hawksbills (*Eretmochelys imbricata*), the green turtle (*Chelonia midas*) and the Atlantic ridley sea turtle (*Lepidochelys kempii*).

As far as Invertebrates are concerned, it is relevant to highlight that Desertas Islands are also an important biodiversity hotspot for this fauna group:

- At least 44 Madeiran endemic terrestrial molluscs have been described. Several, like *Discus gerinianus* subsp. *calathoides*, are exclusive.
- About 305 Madeiran endemic terrestrial arthropods have been described. 104 of them are exclusive, like the Desertas tarantula *Hogna ingens* and the cerambycid beetle *Paradeucalion desertarum*.

### 3.2. Flora

As previously described, Desertas Islands, along with other Atlantic archipelagos, contain the remnants of the late - Tertiary vegetation, disappeared in most northern hemisphere during the adverse climatic events of the Quaternary period. These archipelagos host the so-called Macaronesian vegetation and constitute the Macaronesian bio-geographic region.

The human occupation, encompassing direct chasing of fauna and the release of wild and domestic non-native species, has dramatically changed the original ecology of these islands. However, they still show a number of highlighting species of exceptional ecological value. More than 200 vascular native and naturalised plant species have been inventoried, being 30 % of them (37) endemic to Madeira and 10 % (20) to Macaronesia. Its rate of exclusive endemic species is among the highest, since it is estimated in more than 10 taxa per 100 km<sup>2</sup>. There are some endemic species exclusive of Desertas, like *Sinapidendron sempervivifolium* (Fam. *Cruciferae*) and *Musschia isambertoii* (Fam. *Campanulaceae*),



described by Menezes de Sequeira et al. in 2007, with specimens from Deserta Grande, separating the species from *Campanula aurea* (= *Muschia aurea*).

At present the vegetation of Desertas Islands is basically of creeping and herbaceous species, many of them being endemic. The islands could have had laurel forests in past centuries. At present, particularly at Deserta Grande, a few remnants still occur, like *Apollonias barbujana*, *Chamaemeles coriacea*, *Semele androgyna*, *Convolvulus massoni*, *Heberdenia excelsa* and *Sideroxylon mirmulans*. They probably constitute the replacement plant community subsequent to successive disruptions, most of them of human origin (fire, cutting, introduction of non-native species, etc.) during the last 500 years. The richness of bryophyte flora, with 96 species (*Frullania sergiae* only occurring in Deserta Grande and Porto Santo), can be interpreted as a testimony of this approach.

A detailed description of the Desertas flora and fauna is provided in the application form for the European Diploma and in the revised Management Plan of 2016.

### **3.3. Exploitation of resources**

Desertas Islands Nature Reserve is owned by the Portuguese State, so that it is a public property and it is not subject to exploitation of any kind. It is devoted exclusively to the conservation of its rich geodiversity, biodiversity and ecosystem services.

### **3.4. European interest justifying the Diploma**

According to the information collected during the appraisal visit, the Desertas Nature Reserve maintains (sometimes improves) all merits justifying in 2014 the European Diploma award, summarized at the beginning of this section II. In particular, it may be worth to highlight the following actions implemented during these 5 years:

1. Goats, rabbit and common mice have been removed from Bugio. Mice from Ilhéu Chão and the goat population of Deserta Grande has been reduced to a great extent. This measure has found some objection from local NGO defending animals, which consider this practice as animal cruelty. The vegetation and some invertebrates very affected are showing obvious signs of recovery.
2. Some plant and fauna inventories have been made, particularly in Bugio, to reliably verify the positive consequences of this measure.
3. The seabird colonies are regularly inventoried and mostly show a stable trend. The populations of the endemic petrels and shearwaters maintain good levels with very little influence from the local Yellow-legged gulls (*Larus michahellis atlantis*) also nesting in the area (about 600 pairs). This predator species can be very harmful for nesting colonies in general, but their population levels, far from growing, show a stable or even slightly negative trend with no intervention from managers.
4. Protection and monitoring of Mediterranean monk seals are among the main management activities. This species is subject to intensive follow-up by non-invasive methods, like camera-traps and other modern technological devices, including when possible individual identifications. The local population of monk seals maintain good levels and a slightly increasing trend. Until recent years the total population was estimated in 30-35 individuals, but with the new devices these figures have been revised to 25-30 animals. Each year 3-4 baby seals are born, although their mortality rate is about 50 %. Young seals show also a relatively high rate of mortality by natural (in principle) causes, mostly related to accidents with the rocks during storm surges, although this age group is also affected by non-natural mortality factors caused by some kinds of fishing devices.

5. The problem of the non-natural mortality of youngsters affected by accidental captures in a fishing device locally called "covos" is being addressed by the nature conservation authorities with the local fishermen. As the traps are fed with fishes or squids, the young seals are attracted and sometimes they enter the trap and get drowned. This issue was treated during the meeting with stakeholders and the fishermen are aware of the problem. The ongoing conversations with the nature conservation authorities will, hopefully, provide good results. A change of design of "covos" avoiding seal entrance or their replacement with other fishing gears are being tested and will probably be adopted by the local fishermen.
6. The Monk Seal Rehabilitation Center, constructed in 1997 in the area of Doca, close to the house of the Wardens, is being used for the recovery of animals found in difficulties (starving, wounded, sick, etc.). They are here maintained and treated in this facility and reintroduced into the wild once they recovered.
7. Many conservation measures are being implemented for the conservation of the Desertas habitats. For example, the habitat of the Desertas tarantula *Hogna ingens*, located in the Castanheira valley, is being improved by eradication of the non-native species *Phalaris aquatica* (fam. Poaceae), which invade the spider's habitat and compresses the ground, preventing this animal to dig their holes. 94% of the 43 hectares affected has already been successfully controlled.
8. Research and long-term monitoring activity focusing on ecological processes are continuously improving knowledge to feed-back management measures and increasing the list of fauna and flora taxa, sometimes with new species/subspecies for the science.
9. Propagation actions with native plants are being implemented in Bugio and Deserta Grande
10. The tourism activity is under authorities control to guarantee that natural values will not be affected. A maximum daily and monthly number of visitors have been established and no impact has been identified so far.
11. The nature conservation authorities are very involved in properly training professional Guides delivering tourism and educational services in Desertas Reserve.
12. The fishing activity is also under nature conservation control, by establishing a strict fishing reserve south to Doca and with sustainable fishing methods in the rest of the SPA.
13. Measures avoiding the accidental entrance of alien/invasive species from boats and ships have been implemented. They cannot be tied up to terrestrial grounds, as their ropes must be tied to submerged structures and buoys.
14. The new wooden building replacing the old one in Doca area, is being used as local headquarters for Wardens on duty and also provides accommodation for scientists studying the area. It has been equipped with a small infrastructure, panels, shop, etc. for the visitors. This new building is placed in a safer place, where it cannot be affected by the frequent landslides and rock falls. The infrastructures of Doca area are well integrated in the landscape and are equipped with solar panels as a clean energy source.

15. Surveillance is permanent all around the islands, both onshore and offshore, all year round. Teams of three Nature Wardens are detached and replaced every 15 days. They use Doca lodge as local headquarters and make continuous surveillance rounds.
16. Wardens play a key role, not only in surveillance services, but also as supporters of all the management and scientific activity occurring in Desertas Islands Nature Reserve. They have an excellent knowledge of local fauna and flora and also contribute to visitors' attention.
17. A maximum of 250 persons per day, with a maximum per month of 2.500, can visit Desertas Islands Nature Reserve, namely Doca, by tourism companies and private boats. The area has been equipped with some paths around the house, informative panels and well marked borders to avoid deterioration of soils and vegetation. Professional Guides (trained and authorised by the nature conservation authorities) and Nature wardens provide the visitors with instructions and talks to avoid garbage duping and to know and fully respect the fauna and flora of the area. Small wild birds like canaries and pipits, and the endemic lizard, are actually very tame, which reflects that they are well treated by humans. Visitors also receive interesting information concerning the endangered and endemic species, namely seabirds and monk seals, and they often have the chance to see these species and some cetaceans during the sea journey, making these trips very attractive. In 2018 the total number of tourists was of about 3.000. Including visitors arrived in private boats the total was 3.474. All of them must obtain a previous permission to get to Desertas by any means.
18. Old infrastructures used in past centuries for whaling industry (lookout points and tanks) or during the Second World War, as well as others historical infrastructures like a threshing floor very well preserved, have been consolidated and some of them are used now as beacons, shelters or as observation points for Desertas fauna, namely for monk seals and seabirds.
19. The European Diploma logo is exhibited in the facilities of Desertas Islands Nature Reserve and in their leaflets and publications.

## **4. CONSERVATION MEASURES**

### **4.1. Legal protection status**

Desertas islands were purchased by the Portugal State in 1971 and designated as Special Protection Area in 1990. In 1995 the Desertas Islands and islets were reclassified as Nature Reserve.

Under international nature conservation instruments, apart from the European Diploma of the Council of Europe, the Reserve has been included in the Natura 2000 Network (see section VI.2).

#### 4.2. Boundaries/zoning/buffer zones

Desertas Islands were firstly protected as Special Protection Area in 1990 and in 1995 the site was re-classified under the national legislation as Nature Reserve, covering the terrestrial zone and the surrounding marine area, up to the isobaths 100 m deep. In 2009 it was included in the Natura 2000 network as Special Conservation Area (SAC), with the same boundaries as the Nature Reserve, and Special Protection Area (SPA). The surface area of the latter was expanded in 2014, delimited by the following geographical coordinates:

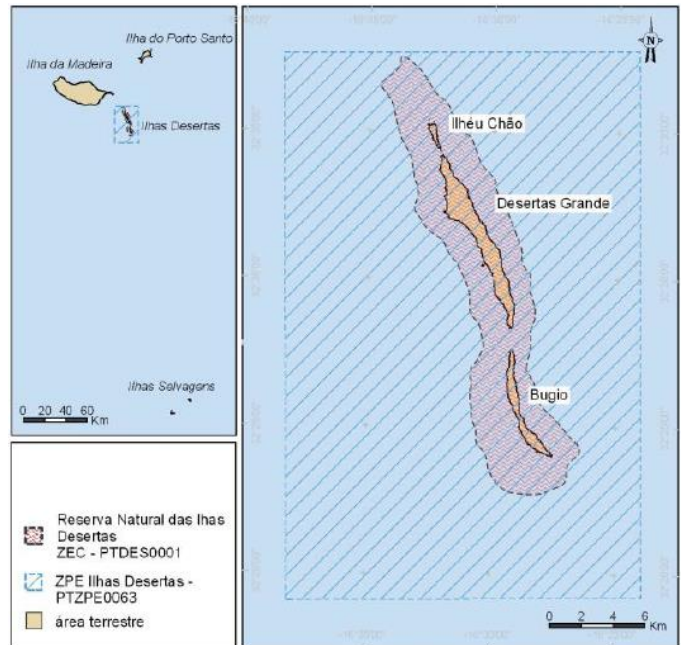
- 32°37'35.675" N, 16°38'28.64" W
- 32°37'46.050" N, 16°24'12.59" W
- 32°19'14.289" N, 16°23'53.79"W
- 32°19'02.431 N, 16°38'06.65"W

Additionally, the marine area of the Nature Reserve (and SAC) located north to Doca and Fajã Grande (more or less in the middle of Deserta Grande) is a Partial Reserve and the marine area located south to this line is a Strict Reserve. This distinction is particularly relevant for fishery regulation. This distinction has been transferred to the revised Management Plan as "Zoning", with two categories:

1. "Total Protection Area": the terrestrial area (except Doca area and all pathways defined by the managing entity) and the marine area of the Strict Reserve (south to Doca and Fajã Grande). In this zone all human activities are forbidden, except in the following situations: dissemination and scientific research; environmental monitoring; nature and bio(geo)diversity conservation; activities that add value to the natural resources; environmental awareness; surveillance and monitoring; catastrophes.
2. "Partial Protection Area": area of Doca and all pathways defined by the managing entity and the marine area of SPA. The partial protection imposes a control of the human activities to develop, privileging the accomplishment of actions of dissemination and scientific research; nature and scientific tourism; environmental awareness; and other human activities, duly authorised by the management entity, which do not impair local values and ecosystem balance.

#### 4.3. Supervision and warding

The management and supervision of Desertas Islands protected area is of the responsibility of the Regional Secretary for the Environment and Nature Resources, and is exercised through the service with competence of intervention in the area, currently Instituto das Florestas e Conservação da Natureza IP-RAM by the Nature Wardens Corps. Without prejudice to the aforementioned, the supervision is also exercised by the entities with jurisdiction on the matter (Maritime Police, Republican Guard, Portuguese Navy, etc).



#### **4.4. State of conservation of the main species and their habitats.**

According to data stated in the Management Plan, the abundance and state of conservation of the main fauna species is the following

- Monk Seal (*Monachus monachus*): 25-30 individuals. Trend: slightly increasing
- Desertas petrel (*Pterodroma deserta*): 160-180 pairs. Trend: stable
- Bulwer petrel (*Bulweria bulwerii*): 45.000 pairs. Trend: increasing
- Cory's shearwater (*Calonectris borealis*): more than 1.500 pairs. Trend: increasing
- Madeiran storm petrel (*Oceanodroma castro* = *Hydrobates castro*): 5.000 pairs. Trend: unknown
- Little shearwater (*Puffinus assimilis* = *P. baroli*): 300 pairs. Trend: unknown
- Mediterranean Monk Seal (*Monachus monachus*): 25-30 individuals. Trend: slightly increasing

No sign of significant habitat deterioration has been identified so far. As far as plant species is concerned, the eradication or population control of invasive species is being revealed as a positive measure and evident signs of recovery of vegetation are being perceived. Nevertheless, data collected to this end must be analysed and more definitive conclusions must be established.

According to information received after the travel, there are some persons believing that the goats of Desertas may be remnants of an old race of Canary goats, already or nearly disappeared. They think that this possibility should be investigated by the relevant authority and, if confirmed, measures for maintaining stocks should be taken particularly if the eradication of goats occurs sooner or later. The undersigned expert is not against this proposal, with the condition that the goat stock is maintained under control as domestic animals, OUTSIDE Desertas Islands, with all the sanitary guarantees and legal prescriptions fulfilled.

#### **4.5. Land use planning**

According to the territorial ordinance for the Madeira Autonomous Region (Plano de Ordenamento do Território na Região Autónoma de Madeira - POTRAM), Desertas Islands are considered "Natural Areas of Forbidden Usage" and "Natural Areas of usage strongly limited".

At national level the area is under the provisions of the National programme of Territorial Management Policy (Programa Nacional da Política de Ordenamento do Território (PNPOT), approved by Law 58/2007.

#### **4.6. Threats**

A major threat in Desertas Islands is the occurrence or the risk of arrival of invasive non-native species. Domestic goats introduced (probably repeatedly) by man since centuries have caused great deterioration of the natural vegetation cover, increasing the erosion process. This species has been eradicated in Bugio and Ilhéu Chão, with immediate effect on vegetation recovery. In Deserta Grande there is still a small population. The aim is to maintain it at the existing level and, if possible, progressively eradicate them.

Mice are known to cause a great impact on local mollusc terrestrial species, being probably responsible for the strong decline of some of them. Their eradication has shown to produce a positive effect on the Islands ecosystem.

Risks of accidental introduction of species like mice, cats or rats are a real threat and are actually addressed by the authorities with measures for boat anchoring. New accidental reintroductions of goats or rabbits are quite unlikely.

Other threats identified in the Management Plan are the following:

- Illegal fishing

- human pressure, particularly possible increase of tourism
- Soil erosion
- Oil spills caused by tank cleaning of vessels or by accidents

## 5. MANAGEMENT

### 5.1. Management Plan

When the European Diploma was awarded, Desertas Reserve had a Management Plan whereby a number of "Strategic Objectives" were established. Each of them had a number of "Operational Objectives", and specific Actions for their fulfilment.

The award Resolution (CM/ResDip(2014)1), attached the Condition, consisting of updating the Management Plan of the Reserve by 2016, taking into consideration the enlargement of the strictly protected area and improving conservation efforts in terms of personnel, logistics and budget necessary for the proper management of the Reserve.

The revised Management Plan has been actually approved and came into force in 2016. This document is based on a previous strategic analysis using the SWOT (Strengths - Weaknesses - Opportunities - Threats) methodology and maintain the same structure as the previous one:

Strategic Objectives	Operational Objectives
Conserve, improve and protect all ecosystems	<ul style="list-style-type: none"> <li>A. Protecting marine and terrestrial habitats and species</li> <li>B. Reinforcing existing biosecurity measures, particularly those related to visitors</li> <li>C. Periodical monitoring and assessment of biosecurity measures to prevent exotic species arrivals</li> <li>D. Maintaining artisanal and selective fishing gears</li> <li>E. Monitoring fauna and flora species</li> <li>F. Maintaining conditions for vegetation recovery</li> </ul>
Promoting, coordinating and supporting research improving knowledge of habitats and species	<ul style="list-style-type: none"> <li>A. Improving the scientific knowledge of the site</li> <li>B. Continuing the research programmes of habitats and species</li> <li>C. Implementing mechanisms to share information and enhance cooperation among scientists</li> </ul>
Improving the dissemination, knowledge and appreciation of the site	<ul style="list-style-type: none"> <li>A. Increasing support from public and Institutions for the conservation of the site</li> <li>B. Improving reception conditions and the information provided to visitors</li> <li>C. Continuing assuring international awards recognising the conservation value of the site and the efforts for its sustainable management</li> </ul>
Managing tourism activity as an added value with no colliding to conservation values of the site	<ul style="list-style-type: none"> <li>A. Continuing the increase of knowledge necessary to define strategies for the conservation of the site to cope with the recreational-touristic human pressure</li> <li>B. Assessing the need to improve mechanisms for controlling visitors and their activity</li> <li>C. Monitoring and periodic assessment of impact on habitats by human presence, particularly from visitors</li> <li>D. Promoting nature and scientific tourism</li> </ul>

<p>Improving the legal conditions for a more efficient management of the site</p>	<p>A. Continuing providing the site with an adequate legal framework                  B. Assessing the need of improving legal protection mechanisms for a wise use of the site</p>
<p>Managing the site in an effective and adequate way, according to the proposed guidelines</p>	<p>A. Monitoring the implementation of the Management Plan                  B. Maintaining the provision of financial means for the implementation of the activities formulated in the Management Plan</p>

Along with the Operational Objectives, each Strategic Objective has a long list of **actions** to be implemented for their fulfilment (which are not mentioned in this report). To a great extent they consist of the continuation of the ongoing activities for the protection and monitoring of habitats and species, but also formulates improvements and new measures and activities in different fields.

**5.2. Institutional responsibility**

Desertas Islands belonged to various private individuals over the years and became the property of the Portuguese State by means of a public deed drawn up in the 1<sup>st</sup> Notarial Registry Office of Funchal, on 30 December 1971. *Since 1990, with the creation of the* Special Protection Area of the Desertas Islands, the management and supervision are under the responsibility of the Regional Body responsible for the Environment and Nature Resources of the *Madeira Autonomous Region administration. At present it* is exercised through the service with competence in the area of intervention, the Instituto das Florestas e Conservação da Natureza IP-RAM. Without prejudice to the aforementioned, the supervision is also exercised by the entities with jurisdiction on the matter (Maritime Police, Republican Guard, Portuguese Navy, etc.).

**5.3. Capacities**

The management of the Protected Areas of Madeira is based on a network model, thus the staff is not assigned to only one Protected Area. Having said that, the Desertas Islands Nature Reserve is directly coordinated by a Biologist who manages the work of Nature Wardens on duty. This biologist is supervised by the head of nature conservation division. The Nature Wardens work in teams of three members each, who alternate every 15 days. In addition, and according to the work of research, monitoring or maintenance of equipment or areas that are carried out there, they are frequently joined by other IFCN staff.

Besides these, there are many researchers (mainly ornithologists, botanists, biologists and geologists), biology and geology students and volunteers, both nationals and foreigners, who seek out this Reserve, not only to do their work, but also to join the work teams of the managing entity.

**5.4. Budget**

The managing entity, Instituto das Florestas e Conservação da Natureza IP-RAM (IFCN), annual budget, including staff (n=334) costs, is of about 11.5 M€ and is based on two income sources: government allocation and own revenues. This amount covers the salaries of employees and expenses incurred in the management of all areas allocated to the IFCN, as well as programmes for the conservation of endangered species. In total, about 5% of IFCN's total budget is allocated each year to the management of the Desertas Islands Nature Reserve.

**5.5. Research and Monitoring Programmes**

There is an intensive scientific activity within Desertas Islands Reserve. The managers are personally very involved in them, contributing with their own publications to knowledge transfer to the field of decision making.



Excellent scientist experts in monks seals internationally renowned, like Henrique Costa-Neves and Rosa Pires contribute since decades to the conservation of this endangered species.

Research projects and monitoring programmes are regularly carried out in Desertas Islands for a better understanding of the species and habitats, by the managing entity staff or/and by different research entities (regional, national and international). Between 2014 and 2018 the following projects have been made:

1. **LIFE06NAT/P/000184 “SOS Freira do Bugio-Urgent measures for the recovery of Bugio's petrel *Pterodroma feae* and its habitat”**. This 5 year project started in 2006 and was coordinated by Desertas Islands managing entity in partnership with SPEA (*Birdlife International* in Portugal).  
[http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&nproj\\_id=3161](http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&nproj_id=3161)  
As a result of that, an ongoing monitoring programme of the Bugio's petrel breeding population is being implemented.
2. **LIFE12NAT/PT/000195 “LIFE RECOVER NATURA-Recovery of the species and land habitats of the Natura 2000 sites Ponta de São Lourenço and Desertas Islands”**. This 5 year project started in 2013 and is coordinated by Desertas Islands managing entity in partnership with SPEA (BirdLife-Portugal).  
[http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&nproj\\_id=4741&docType=pdf](http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&nproj_id=4741&docType=pdf)
3. **LIFE13NAT/ES/000974 “LIFE Madeira Monk Seal-Mediterranean monk seal conservation in Madeira and development of a conservation status surveillance system”**. This 5 year project started in 2014 and is coordinated by "Fundación CBD para la Conservación de la Biodiversidad y su Habitat" in partnership with Desertas Islands managing entity.  
[http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&nproj\\_id=4961](http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&nproj_id=4961)
4. **The Desertas Wolf Spider *Hogna ingens* - A strategy for its conservation 2016-2022**. This 6 year conservation plan started in 2016 and is coordinated by International Union for the Conservation of Nature (IUCN-SSC Spider and Scorpion Specialist Group) in collaboration with Desertas Islands managing entity, Finnish Museum of Natural History and Bristol Zoological Society. <https://portals.iucn.org/library/sites/library/files/documents/2016-097.pdf>
5. **2gether-Threatened specialized interactions endemic to a biodiversity hotspot**. This 3 year project started in 2016 and is coordinated by University of Lisbon in partnership with other institutions, including Desertas Islands managing entity.  
<http://ce3c.ciencias.ulisboa.pt/research/projects/ver.php?id=63>
6. **OCEANWEBS–Trophic links in open oceans: combining spatial data, dietary information and biomarkers top predators to unveil structure and functioning of subtropical pelagic ecosystems**. This 3 year project started in 2016 and is coordinated by University of Lisbon in partnership with other institutions, including Desertas Islands managing entity.  
<http://ce3c.ciencias.ulisboa.pt/research/projects/ver.php?id=90>
7. **MISTIC SEAS I**. This 2 year project started in 2015 with the main goal to design a common methodology for the monitoring of marine biodiversity in the Macaronesia region, focusing on

the populations of marine cetaceans, turtles and seabirds and establishing a common roadmap to improve coordination in implementing the Marine Strategy Framework Directive for the sub region of Macaronesia, by Spain (Canary Islands) and Portugal (Azores and Madeira).

<http://mistic-seas.madeira.gov.pt/en/content/institutions>

The *Sociedade Portuguesa para o Estudo das Aves* (Portuguese Society for Bird Study) is also very active in scientific research dealing with birds and their habitats.

Monitoring activity has been a priority since the early times of the Nature Reserve and the revised Management Plan includes an important number of parameters to follow up. It is worth to mention PEPC | M@rBis 2011 Campaign, organised by the Task Group for Maritime Affairs (EMAM), in the scope of the Continental Shelf Extension and Marine Biodiversity Information System (M@rBis) Projects, with a wide range of researchers and students from different universities, associated laboratories and research centers participating. The Campaign main goal was to inventory marine species in Madeira selected areas, including Desertas Islands. The work involves sampling and inventory in the intertidal and subtidal zones (up to 30m deep). Data for habitats characterisation were also collected during the dives. All data are introduced in a coherent and organised system of information on marine biodiversity (M@rBis).

[https://docs.wixstatic.com/ugd/f3d47f\\_3e90989d73b74b53b44c8101125f222b.pdf](https://docs.wixstatic.com/ugd/f3d47f_3e90989d73b74b53b44c8101125f222b.pdf)

#### **5.6. Relationship between the Reserve Administration and other stakeholders**

During the second day of the appraisal visit a meeting took place with the main stakeholders related to Desertas islands Reserve, with 18 representatives from tourism, fishing, scientific research, administrations responsible for land management, Maritime Police, Republican Guard and Municipalities. (See detailed list in "Introduction" section).

The relationship among the different sectors and with the nature conservation authorities was perceived by the undersigned expert as very fluent and correct. It reveals that the contacts are frequent and polite and that the different parties respect each other.

The main issues raised during the conversation were the following:

#### **Tourism.**

- It is identified as an important activity, particularly the ornithological tourism. Being aware that the resource is quite fragile, the sector would appreciate, to get more support for the development of their activity.
- The companies carrying people for a visit to Desertas make emphasis on the educational mission of their work, because they are not only the vehicle for transferring certain specific information, they also teach their clients about nature conservation, respectful behavior with plants and animals, good practices with wastes, etc.
- The contribution of these enterprises to the awareness raising, education and training on environmental matters was recognised and acknowledged by all attendants

#### **Fishing.**

- Desertas Islands are very important as Reserve for stock fishing, particularly for some species like limpets (*Patella* spp.). The importance of the species is more qualitative from the social point of view than quantitative: some years they reach 150TM. There is a permanent dialogue between fishermen and the Administration for the conservation of this resource.

- The local fishing gadget called "covo" is producing non-natural mortality to young monk seals. It is a man-made gear fed with fishes or squids. The young seals are attracted by this "easy food" and sometimes they enter the trap and get drowned. The fishermen are aware of the problem and to some extent they recognise that this device can be replaced by other fishing gears less harmful. The ongoing conversations with the nature conservation authorities will, hopefully, provide good results. A change of design of "covos" avoiding seal entrance or their replacement with other fishing gears are being tested and will probably be shortly adopted by the local fishermen.
- The attendants raise the need to improve the inspections of fishing activity to avoid impact on natural resources and specifically on young monk seals. On one hand this would require a better coordination among the different administrative bodies (police, competent authorities in nature conservation, justice, etc.) to complete the infraction procedures, that quite often expire without sanctions. On the other hand, some mechanisms rewarding fishermen using sustainable fishing devices should be introduced.

### **5.7. Public services including waste management**

Garbage produced in the island is periodically collected by the Administration responsible for the management and dropped in authorised rubbish dumps.

### **5.8. Use of renewable energy systems**

The facilities in Doca and other areas of the islands are provided with clean energy systems, basically solar panels and batteries, periodically maintained.

## **6. USES AND SOCIO-ECONOMIC ACTIVITIES**

### **6.1. Exploitation of natural resources**

Desertas Islands Nature Reserve is owned by the Portuguese State, so that it is a public property and it is not subject to exploitation of any kind. It is devoted exclusively to the conservation of its rich geodiversity, biodiversity and ecosystem services.

### **6.2. Tourism and leisure activities**

Tourism is a major activity in Madeira archipelago and Desertas Islands raise a huge interest. Up to now, tourism activity is being regulated by the nature conservation administration. Its Management Plan foresees for Doca area in Deserta Grande a maximum 250 persons per day, with a maximum per month of 2.500. Usually visitors come from Funchal or Porto Santo in touristic ships of local tourism companies. The area has been equipped with some paths around the house, informative panels and well-marked borders to avoid deterioration of soils and vegetation outside the paths. In 2018 the total number of tourists was of about 3.000. Including visitors arrived in private boats the total was 3.474. All of them must obtain a previous permission to get to Desertas by any means.

### **6.3. Education and awareness raising**

The visit to Doca encompass an interesting educational experience for visitors, since professional Guides (trained and authorised by the nature conservation authorities) and Nature Wardens provide the visitors with instructions of good practices to go through the Islands and talks to fully respect the fauna and flora of the area and to avoid garbage dumping. The small and well-equipped Visitor Center has informative panels and materials for tourists to get acquainted to the management practices made in the Reserve and the characteristics and situation of the endangered and endemic species inhabiting the site. In the pathways they can see some endemic plants, like the crucifer *Sinapidendron sempervivifolium*, exclusive from Deserta. Visitors have often the chance to see some rare seabird species, monk seals and some cetaceans during the sea journey, making these trips very attractive.

#### **6.4. Car traffic and public access**

Desertas islands can be reached only by boat, either relating to tourism or to fishing activity. Most visitors arrive by means of tourism ships making the visit to Doca in Deserta Grande. If authorised, some private vessels can also get there. They must respect the rules to avoid accidental releases of small fauna.

#### **6.5. Hunting/fishing**

Hunting and spear fishing is forbidden on the Desertas islands

#### **6.6. Human occupation**

The only human occupation in the islands are the existing buildings linked to the managerial activity under the responsibility of the nature conservation authorities. Apart from the wooden building and store existing in Doca, there is a "support house" in the Castanheira Valley, re-built in 1996 and refurbished in 2011, from an old house of the Funchal Captaincy during the Second World War. It is being used to support the management and research works in the Deserta Grande island.

In Bugio Island a small wooden building was built in the plateau as support to the conservation and research works with the Desertas petrel (*Pterodroma deserta*) which, therefore, is occupied only during very specific dates throughout the year.

In Ilhéu Chão a small stone building was rebuilt in the plateau as support to the conservation and research works within the scope of the project LIFE Recover Natura which is occupied regularly throughout the year.

North to Ilhéu Chão and South to Bugio islands there are uninhabited beacons for navigation, which are currently under the responsibility of the Directorate of Beacons. They are equipped with solar panels as source of energy.

#### **6.7. Cultural heritage**

The human presence in Desertas has traditionally been linked to farming attempts. Some remaining of these activities still persist in good conservation situation: several stone walls, a water tank and a threshing floor.

One access to the top of the Deserta Grande island and four lookout posts were built by the Funchal Captaincy during the Second World War. The posts were re-used by the whaling industry and later occasionally by managers for the observation of seabirds and monk seals.

### **7. CONNECTIVITY OF THE AREA**

#### **7.1. Ecological connectivity with other areas**

Wild marine species (seabirds and monk seal among others), migratory birds, etc., share the Desertas habitats with other Atlantic archipelagos, like Selvagens (placed approximately 300 km south to Desertas), Cape Verde, Canary Islands and Açores, having many species in common or closely related.

#### **7.2. Other forms of recognition awarded**

Desertas Islands were firstly protected as Special Protection Area in 1990 and in 1995 the site was re-classified under the national legislation as Nature Reserve, covering the terrestrial zone and the surrounding marine area, up to the isobaths 100 m deep. In 1992, it was designated as Biogenetic Reserve by the Council of Europe. It was integrated in Natura 2000 Network as a Special Conservation Area (SAC) in 2009, with the same boundaries as the Nature Reserve and as Special Protection Area (SPA). The surface area of the latter was expanded in 2014 (see section III-2). Classified as an "Important Bird and Biodiversity Area" (IBA) by BirdLife International.

## 8. IMPLEMENTATION OF CONDITIONS AND RECOMMENDATIONS

When the European Diploma was awarded, Resolution CM/ResDip(2014)1 established two conditions and seven recommendations. **According to the information collected during the appraisal visit**, the undersigned expert could draw the following conclusions:

**Assessment of CONDITION 1** - *The Portuguese Government continues to take the necessary steps to preserve the current islands status for the Desertas Islands and to unequivocally support the Regional Government of Madeira in all matters concerning the nature reserve.*

During the meeting with stakeholders the representatives of the Maritime Police and the Republican Guard, both State Governmental institutions, with responsibilities in the surveillance of the Reserve, participated actively with very relevant comments on the need to coordinate among the different actors the whole inspection procedure. Furthermore, the Portuguese Navy cooperates regularly with the management body, for example, helping with the transport of turnover Nature Wardens on duty, both at Desertas and at Selvagens Islands, and also cooperating with educational activity with children.

The condition 1 has, therefore, been fulfilled and will no longer be necessary.

For the ongoing renewal **this condition should be dropped.**

**Assessment of CONDITION 2** - *The responsible authority updates the management plan of the Desertas Nature Reserve by the end of 2016:*

- a. *taking into consideration the enlargement of the strictly protected area;*
- b. *improving conservation efforts in terms of personnel, logistics and budget necessary for the proper management of the Desertas Nature Reserve*

The Management Plan has been revised, and as regards point b) a specific **Action** "*Maintain the provision of human, logistic and budgetary means for site management according to the Plan*" has been formulated under the Strategic Objective "*Managing the site in an effective and adequate way, according to the proposed guidelines*" and the Operational Objective "*Maintaining the provision of financial means for the implementation of the activities formulated in the Management Plan*".

The **condition 2** has, therefore, been **fulfilled** and will no longer be necessary.

For the ongoing renewal **this condition should be dropped.**

**Assessment of RECOMMENDATION 1** - *Take all the necessary precautions to ensure that no species of plants and animals are introduced to the Reserve;*

There is a strict ruling for this purpose applying to all boats anchoring in the site and which has, so far, been very effective. Nevertheless, efforts to avoid introductions must be maintained at any time.

**The recommendation 1** has, therefore, been **fulfilled**.

For the ongoing renewal **this recommendation should be slightly reformulated.**

1) **RECOMMENDATION 2** - *Improve the existing monitoring system for the fauna and flora populations of the Desertas*

Monitoring systems for fauna and flora have been improved and mainstreamed in the revision of the Management Plan. All relevant species are under follow up and its continuity throughout the time is guaranteed.

**The recommendation 2** has, therefore, been **fulfilled** and will no longer be necessary.

For the ongoing renewal **this recommendation should be dropped.**

**RECOMMENDATION 3** - *Analyse and publish studies carried out on the flora and fauna on Bugio, following the total eradication of alien species.*

Data of inventories have been collected but they have not yet been analysed, basically due to work overload.

**The recommendation 3** has, therefore, **not been fulfilled.**

For the ongoing renewal **this recommendation should be maintained** in the same terms, mainstreaming also the experience from the other two islands.

**RECOMMENDATION 4** - *Increase the efforts to combat soil erosion on the plateau surface of Bugio*

No specific works have been implemented for that purpose, although the eradication of goats has produced an immediate effect of vegetation recovery, making unnecessary (for the moment) specific measures against soil erosion. However, a specific surveillance of this process should be maintained, and actions should be taken, if deemed necessary.

**The recommendation 4** has, therefore, **been partially fulfilled.**

For the ongoing renewal **this recommendation should be reformulated.**

**RECOMMENDATION 5** - *Eradicate the goat population from Deserta Grande or at least to keep the population very low and subject to strict monitoring scheme.*

The goat population has been reduced to a great extent in Deserta Grande, but this measure raises a great contest by some animal protection groups, which consider goat culling as animal cruelty. Irrespective of this point of view, it is evident that wild domestic ungulates cause a huge damage to natural extremely valuable and rare plant species and ecosystems, that should be avoided.

**The recommendation 5** has, therefore, **been fulfilled.**

For the ongoing renewal **this recommendation should be maintained, although slightly reformulated.**

2) **RECOMMENDATION 6** - *Promote the training of nature guides to accompany tourists in this area*

The management body has implemented training activities for Guides working in the tourism companies of the area. For the time being it seems to be enough, since private guides are not too many and the existing are committed with training new staff, with satisfactory results.

**The recommendation 6** has, therefore, **been fulfilled.**

For the ongoing renewal **this recommendation should be slightly reformulated.**

3) **RECOMMENDATION 7**- *Investigate if the increasing colony of yellow-legged gull (Larus michahellis atlantis) on Ilhéu Chão is having a negative impact on the breeding populations on Deserta Grande and Bugio.*

Seabirds are being regularly monitored and from the existing data the population of yellow-legged gulls is slightly decreasing by natural causes. According to the results of breeding success of the remaining marine seabirds there are no evidence of significant negative impact on their breeding populations.

**The recommendation 7 has, therefore, been fulfilled.**

For the ongoing renewal **this recommendation should be reformulated.**

### **Final Appraisal**

The undersigned expert **recommends the renewal of the European Diploma for Protected Areas to Desertas Islands Nature Reserve for 10 years, since the area is of exceptional European interest and it is managed in an exemplary way.**

As stated above, the two conditions formulated at the time the European Diploma was awarded are considered to be no longer necessary and should be dropped for the ongoing renewal, but a new one should be introduced. Moreover, 6 out of the former 7 recommendations are proposed to be maintained or reformulated.

For the renewal of the European Diploma to Desertas Islands Nature Reserve the following condition and recommendations are proposed:

**CONDITION:** Eliminate avoidable causes of non-natural mortality of Mediterranean monk seals. To this end, revise the design and construction of the local fishing gear, the so-called "covos", to include mechanisms which prevent the capture of young seals and their subsequent death by drowning. Alternatively, replace the fishing equipment which causes these accidents with safer and more sustainable systems which do not interfere with the population of marine mammals in general, and of the monk seal in particular.

**RECOMMENDATION 1.-** Maintain all necessary precautions to ensure that no plant and/or animal species is introduced into the Reserve.

**RECOMMENDATION 2 -** Analyse and publish studies carried out on the flora and fauna, following the total eradication of alien species, including recent available data for the three islands.

**RECOMMENDATION 3 –** Monitor soil erosion on the plateau surface of Bugio and, if deemed necessary, implement restoration measures.

**RECOMMENDATION 4 -** Keep the goat population at a very low level and under a strict monitoring scheme to ensure the regeneration of natural vegetation and the success of propagation programmes of threatened or extinct plant species. While 25 years of field experience has led to positive results, continue to explore and test alternative methods for a selective and progressive reduction of the goat population while avoiding animal suffering.

**RECOMMENDATION 5 –** Ensure a high level of training of the guides who accompany tourists in the Reserve.

**RECOMMENDATION 6 –** Pursue the monitoring of the yellow-legged gull breeding population and their possible interferences with seabird colonies, in order to ensure early detection of possible negative changes.

**RECOMMENDATION 7 -** Monitor the implementation of the management plan against conservation objectives and initiate its revision by 2024.



## ACKNOWLEDGEMENTS

The undersigned expert wishes to thank first of all to Mr. Paulo Oliveira, Vowel of the Directive Board of Instituto das Florestas e Conservação da Natureza IP-RAM, Regional Government of Madeira, the perfect organization of the visit and for his valuable company. Mrs Dilia Menezes, Head of Division, responsible for the protected areas of Madeira, also from the IFCN, came along and both accompanied me during the whole stay in Madeira, and also to visit the northern sector of the island with its laurel forests. They supplied me with very important information during and after the visit with complementary data, along with Mrs. Carolina Jardim.

Special thanks to the Nature Wardens, Mr. Manuel Jesus and Mr. Sandro Correia, who wisely managed the boat with expert hands during the trip to the Desertas Islands, and to the three Nature Wardens on-duty at the moment, Mr. Ricardo Rodrigues, Mr. Sérgio Pereira and Mr. Lourenço Alves. Their devotion for their difficult service and their passion for the Reserve and its inhabitants really touched me so much.

The Regional Secretary of the Environment and Natural Resources, Mrs Susana Prada, came to the harbour before leaving to the islands to welcome me and to put all their resources at my disposal. I consider this as a sign of deep commitment with the standards of the European Diploma of the Council of Europe, and I really appreciate that.

Finally an unforgettable visit to Madeira Botanic Garden, the perfect complement, just before leaving the islands was possible thanks to the organization of the management authorities. Mrs. Paula Marília Figueira was my exclusive guide and she showed me so many treasures of the Macaronesian flora that I will never forget neither her warmth, wisdom and sense of humour nor the wonders of this venerable scientific institution, managed with passion and deep knowledge.

Finally, many thanks to the Secretariat of the Group of Specialists on the European Diploma of the Council of Europe, for the arrangements that made possible this successful travel and mission.

Granada, 22<sup>nd</sup> May 2019

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## ANNEX I - PROGRAMME OF THE VISIT



### ON THE SPOT EXPERT APPRAISAL OF THE DESERTAS NATURE RESERVE (PORTUGAL) *10-11 April 2019*

### DRAFT PROGRAMME OF THE VISIT

#### *Wednesday 10<sup>th</sup> April*

All day trip to Desertas Islands accompanied by the relevant IFCN staff (member of the directive board, Head of Department and Head of Division for nature conservation and manager of the reserve);

#### *Thursday 11<sup>th</sup> April*

- 10:00 – 12:00** Meeting with representatives of
- (1) municipal and regional authorities
  - (2) stakeholders who have an interest in the regional park, such as for example: nature conservation NGOs, landowners NGOs or associations (hunters, foresters, farmers, fishermen, etc.)
  - (3) and representatives of the scientific community carrying out research programmes in the regional park”\*
- 14:30 – 16:00** If necessary the meeting continues
- 16:00 – 17:00** Meeting with nature reserve authorities
- 17:00 – 17:30** Farewell meeting with Secretaria Regional do Ambiente e Recursos Naturais (the higher political responsible for environment in Madeira)