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**BUREAU OF THE COMMITTEE  
FOR THE ACTIVITIES OF THE COUNCIL OF EUROPE  
IN THE FIELD OF BIOLOGICAL AND LANDSCAPE DIVERSITY**

**BU-DBP**

**Group of specialists - European Diploma**

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**Selvagens Islands Nature Reserve**

**Category A**

**RENEWAL**

*Expert report*  
*by Francis ROUX*  
*(France)*

## I. TERMS OF REFERENCE

The Selvagens Islands Nature Reserve (Portugal) was awarded the Council of Europe's European Diploma, Category A, in 1992. The Secretariat instructed me to carry out an on-the-spot appraisal to ascertain whether the conditions which led to the award of the Diploma were still valid and justified its renewal for a further period of five years.

The Committee of Ministers had attached a number of recommendations to the award:

1. supporting the Madeira Regional Government in all matters concerning the Selvagens Islands Nature Reserve in accordance with the provisions of Act no 15/86 of 21 May 1986.
2. continuing the logistic support of the navy in operating the reserve;
3. guaranteeing the operation of the Selvagens Island lighthouses;
4. keeping under surveillance oil tanker traffic in the Portuguese territorial waters of the Madeira archipelago and of the Selvagens Islands, especially with a view to monitoring the application of the regulations banning the discharge of oil residues into the sea;
5. providing the responsible department of the Madeira Nature Park with the necessary financial resources for maintaining and developing its activities, so that extra staff and appropriate technical and logistic means become available for improving the protection and management of the Selvagens Islands Reserve: recruitment of additional wardens, acquisition of a vessel with sufficient power to carry out effective surveillance of Little Selvagens;
6. supervising Little Selvagens by means of wardens stationed on the island during the summer months;
7. restoring the notice boards on Little Selvagens;
8. studying the regeneration of flora on Great Selvagens in plots of land inaccessible to rabbits;
9. controlling the development of *Nicotiana glauca* on certain sites;
10. rebuilding the drystone dykes of the plateau;
11. undertaking a study of the climate by the methodical recording of temperatures and rainfall (installation of a weather station);
12. giving consideration to the risks of the accidental introduction on Little Selvagens of undesirable species (mice, cockroaches); taking the necessary precautions to avert such risks;
13. continuing to monitor herring gulls and extending this to Little Selvagens.

The Committee of Ministers had invited the Government of Portugal to transmit the above recommendations to the authorities of the Madeira Region and to those responsible for the management of the Selvagens Islands Nature Reserve (Resolution (92) 18).

## II. THE APPRAISAL VISIT

I arrived in Madeira on 12 October and was due to leave the following day for the Selvagens Islands. Strong wind meant the boat was delayed 24 hours. Consequently I did not reach the site until 15 October. I travelled to the Selvagens Islands on navy patrol boat *Limpopo* and was accompanied by Mr Henrique Costa Neves, Director of the Madeira Nature Park (MNP), to whom I am grateful for the organisation of the visit, and Dr Francis Zino, Madeira correspondent for the International Council for Bird Preservation (ICBP)<sup>1</sup>. Also on board were four MNP wardens on their way to relieve their colleagues on duty on the archipelago (duty changes take place every three weeks) and a Portuguese national TV crew who were filming a report on the islands. The first day was spent visiting Little Selvagens. That night and the following day were spent on Great Selvagens. The patrol boat left on the evening of 16 October and reached Funchal the following morning.

That morning, accompanied by Mr Costa Neves, I had an appointment at the Regional Government and met Mr Manuel Jorge Bazenga Marques, Regional Secretary for Agriculture, Forestry and Fisheries, the department which oversees the MNP. This was followed by a meeting which he chaired attended by Captain Brito Subtil, officer in charge of the Madeira naval command, and Mr Alcino Ferreira, President of the la Sé district in Funchal whose administrative responsibility extends to the Selvagens Islands. The discussion focused primarily on guaranteeing the legal status of the islands (a status which provides Madeira with the full extent of its current economic exclusivity zone - cf IV.2 below) and the commitment of the authorities to maintain their support for the operation of the nature reserve. At the end of the meeting there was a brief press conference.

The last person I met was Dr Manuel José Biscoito, Director of the *Museu Municipal do Funchal*, who as such is a member of the MNP scientific board. He was kind enough to entertain me on the evening of 18 October.

I would like to express my sincere gratitude to Mr Costa Neves for his organisation of the visit and for his valuable company, and also his assistants and the wardens who looked after us on the islands.

I must also thank Dr Francis Zino and his wife for their warm hospitality and their kindness. Dr Zino is highly informed on nature study and conservation in the Madeira archipelago and devotes much of his time to this on a voluntary basis. I was most fortunate to have his assistance.

## III. RECAPITULATION OF THE ECO-GEOGRAPHICAL FEATURES OF THE SITE

The Selvagens Islands as they are referred to on the majority of charts, or Selvagens in Portuguese, are situated in the sub-tropical zone of the north-east Atlantic, 30°N by 16°W, 160 nautical miles south of Madeira, 85 n. miles north of Tenerife (Canary Isles) and 300 n. miles from the African coast on almost the same latitude as Agadir.

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<sup>1</sup> Now called Bird Life International.



The islands, of volcanic origin, consist of two distinct groups 10 miles from each other:

- Great Selvagens, or *Selvagem Grande* (285 ha), at an average altitude of 100m, surrounded on all sides by sheer cliffs;
- Little Selvagens, or *Selvagem Pequena* or *Pitao*, depending on the charts, (30 ha), low and flat, covered with calcareous sand with the exception of a 45-metre high basalt pinnacle; the Ilheu de Fora (literally "High Seas Islet"), displaying the same features but lower (18m) and covering a smaller area (8 ha).

Each island group is surrounded by reefs (cf appended maps). The archipelago is uninhabited. Wardens have been on Great Selvagens since 1974 and on Little Selvagens since 1993.

The archipelago is of considerable scientific importance:

- botanical interest: Little Selvagens and the Ilheu de Fora have conserved all their original flora including several endemic Macaronesian plants. As such they are perhaps unique in the Atlantic;
- zoological interest: these are the only European islands which are a breeding ground for five species of Procellariidae (petrels and shearwaters). The colonies number between 50,000 and 60,000 pairs including the largest colony of Cory's shearwater (*Puffinus diomedea borealis*) in the Atlantic and virtually all the European population of the frigate or white-faced storm petrel (*Pelagodroma marina hypoleuca*). The nature reserve plays a vital role in flora and birdlife conservation.

#### IV. PRESENT STATE OF THE SITE - COMPLIANCE WITH THE SECRETARIAT'S RECOMMENDATIONS

##### 1. Land tenure and legal status

The autonomous region of Madeira owns the islands, acquired by the Portuguese Government in 1971. The Madeira family which owned them prior to that date leased them for the annual exploitation of mesembryanthemums (for soap), orchids (for dye), limpets, rabbits and especially Cory's shearwater ("*cagarras*"), the young of which were slaughtered for their flesh, down and stomach oil. On average, some 20,000 birds were culled every autumn. This centuries-old practice was maintained until 1967. Since then there has been no economic activity in the archipelago except line fishing for tuna and bonito, the only kind of fishing allowed. Upon acquisition, the islands and surrounding maritime zone were designated a reserve, and this status was confirmed in March 1978 by regional decree, which placed a ban on all activities likely to impair the native fauna and flora and the geological and archaeological assets. Public access is prohibited except for the purposes of scientific study and with the specific authorisation of the MNP; ships are allowed to anchor only at specific points and for a maximum of 48 hours. Visitors are not allowed to stay on land overnight.

These provisions apply to the whole archipelago, but until the award of the European Diploma, they were enforced only on Great Selvagens. Since 1993 and the stationing of wardens on Little Selvagens (cf IV.4 below), they have also been enforced on the other islands.



## **2. International legal status and sea rights**

A possible change to the international legal status of the Selvagens Islands has recently been mooted and has given rise to considerable debate. The islands could be declassified and no longer considered islands but simply rocks because they are uninhabited and unexploited. If this were to occur, their exclusive economic zone (EEZ) would be transferred to Spain. The EEZ of the Canary Isles, closer to the Selvagens Islands than is Madeira, would extend to the north of the archipelago and Madeira would lose 20% of its EEZ. Portugal would retain sovereignty over these "Selvagens Rocks" but since the territorial waters would be reduced to 12 nautical miles, the archipelago would basically become a Portuguese enclave in a Spanish zone.

The only reason for such a declassification is economic. The party which would stand to gain from it of course is not unconnected with the claim. The advantage of transferring part of the Madeira EEZ to the Canary Isles would be all the more fortuitous for Spain since Morocco has just cut the fishing quotas for Spanish fleets by 40%.

At the same time, and to push the point, there have been repeated overflights by Spanish military aircraft, hedgehopping and helicopter manoeuvres, violating both international law and the reserve's regulations. These exercises have been reported in both the regional and national press and protests have been lodged with the Canary Isles authorities.

In the face of this, the Madeira Regional Government is asserting the justness of its case: it makes the point that exploitation of the Selvagens Islands ceased solely in order to make them a nature reserve 25 years ago. Since that time they have been inhabited by wardens. Since the islands are the property of the autonomous region, the latter could have chosen to develop activities (tourism, fishing etc), but has refrained from doing so in order to preserve the flora and fauna. A declassification would penalise the cause of nature conservation in Europe.

On the practical level, such a measure would have negative consequences on the operation of the reserve: supervision would be more difficult and more random as a result of the proximity of fishing boats to the shore. How would it be possible to monitor the territorial waters effectively without a vessel in situ, or prevent the poaching of seabirds? There would undoubtedly be no end of disputes.

The Portuguese Government must support the Madeira Regional Government on this matter, in accordance with the provisions of Act no. 15/86 of 21 May 1986 and the first recommendation made by the Secretariat when awarding the European Diploma (cf I.1).

## **3. Logistic support from the navy, maintenance of lighthouses, surveillance of oil tanker traffic**

The Portuguese Navy provides transport for relieving the wardens every three weeks, bringing drinking water, food and supplies, and for access to the islands by scientific teams and official visitors. This is a role assigned to the patrol boat which is tasked with surveillance of the EEZ. At the meeting on 17 October at the Regional Government, the OIC of the naval command said that the navy would reinforce its activity and would of course maintain its logistic support to the Selvagens Islands nature reserve. A second patrol boat is now based at Madeira.



Another of the Secretariat's recommendations referred to the maintenance of the lighthouses. There is a tower lighthouse on Great Selvagens and a beacon on Little Selvagens. Both are automatic and operate by means of solar panels. Maintenance is carried out by technicians transported by the navy.

The navy is also required to enforce compliance with anti-pollution regulations in the waters of Madeira and the Selvagens Islands. It is difficult to know what they can actually do in practice since the problem is world-wide. Chronic pollution of the Selvagens Islands caused by hydrocarbon waste has not subsided; oil particles are washed in with every tide. The northern coasts, exposed to the prevailing winds, are the most polluted. From my observations, the problem is no better nor worse now than it was in 1963 when I made my first visit there.

#### 4. Supervision and management of Little Selvagens

The stationing of wardens on Little Selvagens proved necessary because the island could not be supervised effectively from Great Selvagens. The primary function is to prevent those aboard fishing boats and pleasure craft from disembarking since this can seriously impair the flora and fauna, particularly the colony of frigate petrels which breeds in the burrows below the sand.

At present, two wardens patrol Little Selvagens from May to November. They live in a 14m<sup>2</sup> cabin made of wooden panels that can be dismantled. An awning held up by two poles provides shade in front of the door. It is kitted out with two beds, a gas stove, wall shelves, a refrigerator, a VHF radio set, and a garden table and chairs. It is dismantled at the end of the campaign, which coincides with the departure of the last young Cory's shearwaters at the beginning of November. There is no need for supervision during the winter months since the state of the sea generally makes the island inaccessible.

Electricity for the guard post is provided by solar panels placed on the ground. Radio links, which are essential for the men's safety and tasks, depend on the apparatus working correctly. The wardens also have an inflatable dinghy equipped with a 15hp outboard motor. Using this, they can reach the Ilheu de Fora, draw alongside the patrol boat or other boats in the vicinity, but it does not enable them to reach Great Selvagens.

The island has no freshwater. There is virtually no rainfall from April to October and the reefs render access impossible in rough seas. It is therefore imperative to have a large supply of drinking water: 600 litres are stored in 30 litre bottles, which is more than enough to last two men one month. It would be possible to produce fresh water from sea water by a desalination process using solar energy. The simpler systems used on boats today can produce 40 litres per day. This equipment should be considered.

On such a small island where the flora and fauna are vulnerable, a permanent human presence causes harm simply from walking about. The wardens can therefore only walk on a purpose-made 50cm wide path leading from the landing point to the guard post and from there to the north beach where the domestic tasks are carried out (washing, washing up and laundry using sea water). Apart from this path, the wardens carry out their patrols around the island by using the beaches and the rocky paths without setting foot on the inland ground. From the top of the basalt pinnacle, where the beacon is located, I could see that the ground cover, despite being parched at that time of year, had not been walked upon.

There are no mice nor cockroaches on Little Selvagens or Ilheu de Fora. This partially explains why the flora and fauna is so well preserved. Precautions are taken to ensure this state of affairs remains and to avoid the accidental introduction of these animals.

Lastly, the wardens have carried out major cleaning work. They have burned the solid waste washed up by the sea which had accumulated along certain parts of the shore in considerable amounts. The items which could not be burned (glass, metal, etc) have little by little been taken back to Madeira on board the patrol boat. The same has been done on Ilheu de Fora.

Among the other positive effects of the stationing of wardens on Little Selvagens has been the reconstitution of a colony of Cory's shearwater: there are now 180 pairs whereas there were only a handful before. Fishermen regularly used to take the birds sitting on their eggs and the chicks.

## 5. Great Selvagens: current situation

### a. *The guard post*

The entire management of the reserve relies on the presence of wardens without whom the shearwater colonies would continue to be pillaged. In order to maintain wardens on Great Selvagens on a permanent basis they have to be provided with satisfactory living conditions. They have to maintain their own accommodation which they themselves have built. Having seen it built and enlarged over twenty years, I can confirm the constant improvement to the accommodation and quality of maintenance. Everything is clean, neat and freshly painted. There is scrupulous management of waste. Combustible items are burnt in situ, others are sent back to Madeira on each duty relief boat. Nothing is brought onto the island which cannot be recycled. Drinks have to be in glass bottles. In this connection, the guard post, located at the only possible landing point, cannot be faulted, which was not always the case in the past. It is important for the impression the reserve makes on visitors.

During westerly storms in winter, the sea can come in as far as the living quarters. A breakwater in front of the lodgings had partially rectified this problem. Now, in addition, metal sheets are fixed on the outside of the windows, preventing their being knocked in by the waves in a storm.

A cistern located in front of the guard post collects rainwater falling from the roof and slopes. The wardens have enlarged it so that it can now hold 65,000 litres.

The electric supply has been renovated and a new set of solar panels installed. As on Little Selvagens, there is an inflatable dinghy with a 15hp outboard motor for the wardens to get round the island. This equipment is also new.

Work planned for the future includes:

- repair of the plateau cistern (this has been scheduled for several years);
- installation of two weather stations (one on Great Selvagens, the other on Little Selvagens);
- installation of a portable telephone. Marconi is to see to this this year. This will enable the wardens to communicate directly with their families.



b. *Introduced species*

— Rabbits — these animals, which belong to a domestic strain and were introduced on Grand Selvagens a very long time ago, have had a considerable impact on the original flora. For the purposes of studying how plants can regenerate if they are inaccessible to rabbits, two 100m<sup>2</sup> plots of enclosed land have been established on the plateau (cf recommendation no. 8). The fence is a 70cm-high double-layer plastic mesh fixed into the ground. A herbaceous ground covering of annual plants has become established among the clusters of perennials (*Suaeda*) which grow here and there in the enclosures. But the fence is not sturdy enough: mice gnaw away at the mesh and the rabbits manage to get in. A metal mesh, the solution which immediately springs to mind, would however quickly begin to rust and be worn away in the sea climate. Perhaps the answer would be to use a stainless steel mesh.

But what is the next stage after it has been proved that a herbaceous ground cover will become established if protected from rodents, which is what the experiment is likely to show? While it would not be impossible to eradicate the rabbits on an island of just 300 ha, getting rid of the mice would pose many problems.

— *Nicotiana glauca* and proliferation of mice

There is a need to halt the spread of the tobacco plant (*Nicotiana glauca*), introduced on Grand Selvagens in the last century. Rabbits have a natural limiting effect on the spread of the tobacco plants by nibbling the young shoots and bark. But mice (*Mus musculus*) have been primarily responsible in 1996 for the decline of the tobacco plants. They have multiplied to such an extent that from the summer onwards, having no other food source, they began attacking the tobacco plants. The bark, stems and leaves have been nibbled as high as 3 metres off the ground. Accordingly, the problem posed by the tobacco plants has found an unexpected solution.

This proliferation which has been unprecedented in the 33 years that I have been visiting the island has also had a disastrous effect on the pelagic bird populations: the chicks of the small petrels (frigate petrels, Madeiran or band-rumped storm-petrels) which nest underground have been devoured by mice. For these species, the 1996 generation will to all intents and purposes be limited to the fraction of the population hatched on Little Selvagens and Ilheu de Fora where there are no mice.

On Grand Selvagens, mice-control is carried out by placing poison near the guard post, but this cannot be extended to the whole island.

Consequently, the number of rabbits, thus deprived of food, has fallen sharply. The ecology of island populations still holds a few surprises in store.

## V. RESEARCH

The archipelago is still the site of considerable research, primarily on the biology of the bird populations. The MNP staff and Portuguese, French and British researchers study colony sizes and trends, distribution and breeding habits. This research has focused on Cory's shearwater, little shearwater (*Puffinus assimilis*), Bulwer's petrel (*Bulweria bulwerii*) and the frigate petrel (*Pelagodroma marina*). The first complete study of the breeding habits of this last species, a particularly difficult undertaking, was carried out in 1996 by a student of the Science Faculty at Lisbon University.



Also for the first time, the feeding movements of the Grand Selvagens Cory's shearwater have been monitored by satellite telemetry (Argos system, CNES, Toulouse). This programme, still in its initial phase, is being run jointly by Dr Francis Zino in Madeira and researchers from the Paris national natural history museum (J.L. Mougin, Chr. Jouanin). It is being funded by the Singer-Polignac Foundation and the Council of Europe's Life Programme, with the participation of the MNP and the Funchal Municipal Museum.

Lastly, a student from Madeira at the University of Sheffield in the UK is carrying out research into the elimination of *Nicotiana* by mycorrhiza.

## VI. CONCLUSIONS AND RECOMMENDATIONS

The Selvagens Islands Nature Reserve has over the last five years justified the award of the European Diploma, Category A. The Madeira Nature Park which supervises and manages the park has successfully implemented the majority of the action recommended by the Secretariat.

The most apparent of these is undoubtedly the stationing of wardens on Little Selvagens and the Ilheu de Fora which necessitates not only dedicated and skilled staff but also meticulous organisational and logistic co-ordination. To this end, the MNP has been given the unconditional support of the Madeira Regional Government to finance staff recruitment and operational costs, and the assistance of the Navy, essential for transport and provision of supplies. There is no indication that these two key factors are under any threat.

The rumours surrounding a possible declassification of the Selvagens Islands, which might lose their status of islands and become merely "rocks" in the eyes of international law, have however strengthened the determination of the regional authorities to continue and improve their support of the nature reserve.

Accordingly, I believe that the renewal of the European Diploma in Category A is totally deserved. It should nevertheless be accompanied by a recommendation to the Portuguese Government that it ensures the Selvagens current status of islands and that it lends its full support to the Madeira Regional Government in all matters concerning the nature reserve, in accordance with the provisions of Act no. 15/86 of 21 May 1986.

## APPENDIX I

**COUNCIL OF EUROPE  
COMMITTEE OF MINISTERS**

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RESOLUTION (92) 18

**CONCERNING THE AWARD OF THE EUROPEAN DIPLOMA  
TO THE SALVAGE ISLANDS NATURE RESERVE****(Portugal)**

*(Adopted by the Committee of Ministers on 18 May 1992  
at the 476th meeting of the Ministers' Deputies)*

The Committee of Ministers, under the terms of Article 15.a of the Statute of the Council of Europe,

Having regard to Resolution (65) 6 instituting the European Diploma;

Having regard to the proposals made by the Steering Committee for the Conservation and Management of the Environment and Natural Habitats (CDPE);

Having noted the agreement of the Government of Portugal;

After deliberation,

Solemnly awards the European Diploma, Category A, to the Salvage Islands Nature Reserve in accordance with the regulations for the European Diploma (Resolution (91) 16);

Places the aforesaid reserve under the patronage of the Council of Europe until 18 May 1997;

Attaches the following recommendations to the award:

1. support the Madeira Regional Government in all matters concerning the Salvage Islands Nature Reserve in accordance with the provisions of Act No. 15/86 of 21 May 1986;
2. continue the logistic support of the navy in operating the reserve;
3. guarantee the operation of the Salvage Island lighthouses;
4. keep under surveillance oil tanker traffic in the Portuguese territorial waters of the Madeira archipelago and of the Salvage Islands, especially with a view to monitoring the application of the regulations banning the discharge of oil residues into the sea;
5. provide the responsible department of the Madeira Nature Park with the necessary financial resources for maintaining and developing its activities, so that extra staff and appropriate technical and logistic means become available for improving the protection and management of the Salvage Islands Reserve: recruitment of additional wardens, acquisition of a vessel with sufficient power to carry out effective surveillance of Little Salvage and installation of a winch and provision of a boathouse;
6. supervise Little Salvage by means of wardens stationed on the island during the summer months;



7. restore the notice boards on Little Salvage;
8. study the regeneration of flora on Great Salvage in plots of land inaccessible to rabbits;
9. control the development of *Nicotiana glauca* on certain sites;
10. rebuild the drystone dykes of the plateau;
11. undertake a study of the climate by the methodical recording of temperatures and rainfall (installation of a weather station);
12. give consideration to the risks of the accidental introduction on Little Salvage of undesirable species (*Nicotiana glauca*, mice and cockroaches); take the necessary precautions to avert such risks;
13. continue to monitor herring gulls and extend this to Little Salvage;

Invites the Government of Portugal to transmit the text of this resolution to the authorities of the Madeira Region and to the authorities responsible for the management of the Salvage Islands Nature Reserve.

**APPENDIX II**

**DRAFT RESOLUTION (97) ...**

**CONCERNING THE RENEWAL OF THE EUROPEAN DIPLOMA  
AWARDED TO THE SELVAGENS ISLANDS NATURE RESERVE  
(Portugal)**

The Committee of Ministers, under the terms of Article 15.a. of the Statute of the Council of Europe,

Having regard to Resolution (65) 6 instituting the European Diploma;

Having regard to Resolution (92) 18 awarding the European Diploma to the Selvagens Islands Nature Reserve;

Having regard to the proposals of the Bureau of the Committee for the activities of the Council of Europe in the field of biological and landscape diversity,

Renews the European Diploma awarded to the Selvagens Islands Nature Reserve until ... 2002;

Attaches to the renewal the following recommendation:

that the Portuguese Government take the necessary steps to preserve the current status of the Selvagens Archipelago and support the Madeira Regional Government in all matters concerning the nature reserve, in accordance with the provisions of Act No. 15/86 of 21 May 1986.