

BEST

VOLUNTARY SCHEME
FOR BIODIVERSITY AND
ECOSYSTEM SERVICES
IN TERRITORIES OF
EUROPEAN OVERSEAS



MACARONESIA



Current situation & main challenges

Socio-economic context

The biogeographic region of Macaronesia (from the Greek words for blessed or fortunate islands) is formed by three archipelagoes on the Eastern North Atlantic, extending from the Azores, in the north-west extreme, south to the Canary Islands, near the African coast.

In Macaronesia, the islands (except Canary Islands) were uninhabited before the European colonizers arrived in the 15th century. Today the region has a high population density (200 inhabitants/km², on average). With a population of about 2 million people, the Canary Islands are the most populated European overseas entity. They share with Madeira a population density of almost 300 persons/km², standing among the highest densities in the EU. The lowest population density in Macaronesia is found in the Azores, with less than 60 persons/km².

The region's economy is strongly specialized in the services sector, where tourism has a prominent role, particularly in Madeira (nearly one million visitors in 2012) and the Canary Islands (more than 12 million visitors a year). In the Azores, agriculture remains relevant, with great predominance of livestock and dairy production, as well as fisheries that bring in revenues of about 38 million € each year ⁽¹¹⁾.

The average GDP per capita in the region is 17,6781€; Madeira archipelago stands with an annual income of 19,569€ (also above the national/Portuguese average), in contrast to the Azores with 14,600€.

Legal and political context

In terms of Global Agreements, Portugal and Spain have concluded or ratified the main Treaties and Conventions on Nature and Biodiversity Conservation, such as CBD, CITES, Bern Convention, Bonn Convention and Ramsar Convention. Other policy instruments of direct importance for biodiversity of the region are the EC Birds and Habitats directives and the Natura 2000 network, the Man and Biosphere programme and the network REDBIOS.

Besides an extensive network of protected areas designated under local frameworks (a total of 11,263,506 ha, from which 97% are marine sites in the Azores), Natura 2000 sites for the Macaronesia cover more than a third of the total land area in this region. Macaronesia also accounts for 123 IBA, 11 Biosphere Reserves, 14 Ramsar sites and 8 OSPAR areas.

Facts & figures

Geography

Total area:	1,932,266 km ²
Land area:	10,608 km ² (1%) ⁽¹⁾
Protected land area:	6,290 km ² (59%) ⁽²⁾
Total marine area:	1,921,658 km ² (99%) ⁽³⁾
Exclusive economic zone (EEZ):	1,846,152 km ² (96%) ⁽⁴⁾
Marine protected area (MPA and/or MMA):	132,006 km ² (7%) ⁽⁵⁾

Overseas Regions (Governance/Dependency):	Azores (PT), Madeira (PT), Canary Islands (ES)
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Socio-economic facts

Total population:	2,597,212 (2011) ⁽⁶⁾
Population density:	245/km ²
Average annual GDP:	16,227 million € ⁽⁷⁾
Main income sources:	Agriculture and Tourism

Biodiversity

Threatened ecosystems*:	
Evergreen humid forest (Laurisilva)	(Azores: 2% of the original cover; Madeira: 20%) ⁽⁸⁾

Endemic species**:	5,901 ⁽⁹⁾
<i>Pterodroma madeira</i> ; <i>Columba trocaz</i> ; <i>Pyrrhula azorica</i> ; <i>Hydrobates monteroi</i> ; <i>Regulus regulus sancta mariae</i> ; <i>Buteo buteo rothschildi</i> ; <i>Fringilla teydea</i> ; <i>Columba bollii</i> ; <i>Columba junoniae</i> ; <i>Myosotis azorica</i> ; <i>Azorina vidalii</i> ; <i>Picconia azorica</i> ; <i>Juniperus brevifolia</i> ; <i>Canarina canariensis</i> ; <i>Dracaena draco</i> ; <i>Pinus canariensis</i> ; <i>Phoenix canariensis</i> ; <i>Viola Cheiranthifolia</i> ; <i>Geranium madeirense</i> ; <i>Echium candicans</i> ; <i>Isoplexis scaptrum</i> ; <i>Monachus monachus</i> ; <i>Crocidura russula</i> ; <i>Gallotia simonyi</i> ; <i>Tarentola bischoffi</i> ; <i>Pieris brassicae wollastoni</i> ; <i>Hipparchia azorina</i> ; <i>Munidopsis polymorpha</i>	

Threatened species***:	489 ⁽¹⁰⁾
<i>Pterodroma madeira</i> ; <i>Pterodroma deserta</i> ; <i>Pyrrhula azorica</i> ; <i>Azorina vidalii</i> ; <i>Asparagus plocamoides</i> ; <i>Dracaena draco</i> ; <i>Chlamydotis undulata</i> ; <i>Monachus monachus</i> ; <i>Pipistrellus maderensis</i> ; <i>Nyctalus azoreum</i> ; <i>Plecotus teneriffae</i> ; <i>Crocidura canariensis</i> ; <i>Gallotia simonyi</i> ; <i>Gallotia bravoana</i> ; <i>Bodianus scrofa</i>	

Current conservation status

Threats and pressures on biodiversity

The main influences on biodiversity in the Macaronesian region are: i) habitat destruction fostered by human population growth (exacerbated by tourism), agriculture and forestry; ii) fisheries and iii) alien species.

Mountainous landscapes, originated by the volcanic origin of the islands, and high population density lead to the colonization of all the available plains to the detriment of wooded areas; the natural forests were severely eroded with the arrival of the first human settlers in the XVth century. Recently, tourist infrastructure has spilled over into the coastal areas. Added to these pressures are threats from several invasive species and repeated fires, which disrupt the equilibrium of the ecosystems.

Current investments

In the Macaronesia region, there is an important cooperation between the Canaries and the Madeira and Azores islands supported by EU programs. Some examples of initiatives funded by EC Interreg, are the following projects: i) Bionatura: management and Conservation of Macaronesian Biodiversity which main objective was the production of a priority species list and a list of the most important exotic species in Macaronesia; ii) MACETUS: creation of a Macaronesian Network for the study of cetaceans; iii) Atlantico: a database of the Macaronesian Biodiversity that improves access to biodiversity information for decision-making; iv) BASEMAC: an ex-situ conservation project for the threatened endemic species of Madeira, Azores and Canary Islands; v) OGAMP: planning and Management of Marine Protected Areas to promote the Integrated Coastal Zone Plans for those marine and coastal areas included in Natura 2000 network; Reia-Mac: network of Environmental Education and Information Centres in Madeira, Azores and the Canary islands.

Besides specific conservation projects, there has been a significant effort in each of the archipelagos to establish a network of protected areas, as well as on designating Natura 2000 sites.

Critical areas for action / Investment niches

- Development of a RED LIST for the fauna and flora in each archipelago, integrating IUCN's recommended criteria;
- Development of a List of the most dangerous Invasive Alien Species and eradication/control programmes⁽¹²⁾;
- Enhancement of coordinated research on local ecosystems and endemic species, as well as on invasive species⁽¹³⁾;
- Improvement of ecological restoration of natural habitats;
- Control of the frequent movement of native species among Canarian islands to prevent genetic erosion⁽¹⁴⁾;
- Ensure long-term viability of the Biodiversity Databank, the SEGA programme for the monitoring of Canarian protected species, and conservation/recovery plans⁽¹⁵⁾.

Important conservation activities

[Expansion of the range of the white-tailed laurel pigeon \(*Columba junoniae*\) by re-introducing it to the island of Gran Canaria](#)

Budget: 1,401,870€ (2013-2017)

Activities: Development of management and action plans; Conservation actions; monitoring the impact of the project actions; Public awareness and dissemination of results.

Results (expected): Captive breeding and release on Gran Canaria of 15-30 white-tailed laurel pigeons per year; The creation of a viable population (75-100 pairs) of white tailed laurel pigeons on Gran Canaria; Restoration of 1,049 ha. of potential white-tailed laurel pigeon habitat in the area of Monteverde; and Raised awareness amongst local people of the laurel forests.

[Conservation of the monk seal \(*Monachus monachus*\) and its habitat](#): a project started in 1988 and has been extended through several strategies for the conservation of the species and recently by a new LIFE project.

Budget: 1,143,364 € (2014-2018)

Activities: *In situ* protection; monitoring and studying of the monk seal; environmental education.

Results: Creation of a Nature Reserve, specifically to protect the monk seal; Recovery of the only surviving Macaronesian population of the monk seal, a critically endangered species with an overall declining trend (presently, the Nature Reserve shelters 30-35 adults, from a low point of 6-8 individuals in 1980).

[Priolo Environmental Centre](#): a partnership between SPEA (a Portuguese NGO dedicated to the study and conservation of birds) and the Azores government, with support from the Life program, dedicated to the study and conservation of *Pyrrhula murina*, an endemic bullfinch. Conservation projects involving this species have been running since 2003.

Budget: € 3.363.260 (2013-2018)

Activities: a) Planning actions for the recovery and management of the bullfinch's habitat; production of native plants; control of predators; evaluation of new threats; improvement of the visitation area and monitoring of its impact.

Results: 1) From previous projects: Enlargement of the SPA "Pico da Vara/Ribeira do Guilherme"; the species went from "CR" to "EN" in the IUCN's Red List. 2) Expected: Recovery of 102.4 ha of habitat, 6.3 ha of landslide areas, of 4 ha of water line areas and of 6.3 ha of landslide areas; Creation of 9.6 km of access rails for visitor use; The planting of 200 000 plant specimens from more than 25 native species grown in nurseries; Methodologies and strategies for growing natives and controlling IAS.

Useful links

http://ec.europa.eu/environment/nature/biodiversity/best/index_en.htm

<http://www.biodiversidadcanarias.es/atlantis/common/index.jsf>

<http://www.gobiernodecanarias.org/cmavot/espacios/naturales/categorias/index.html>

<http://www.pnm.pt/>

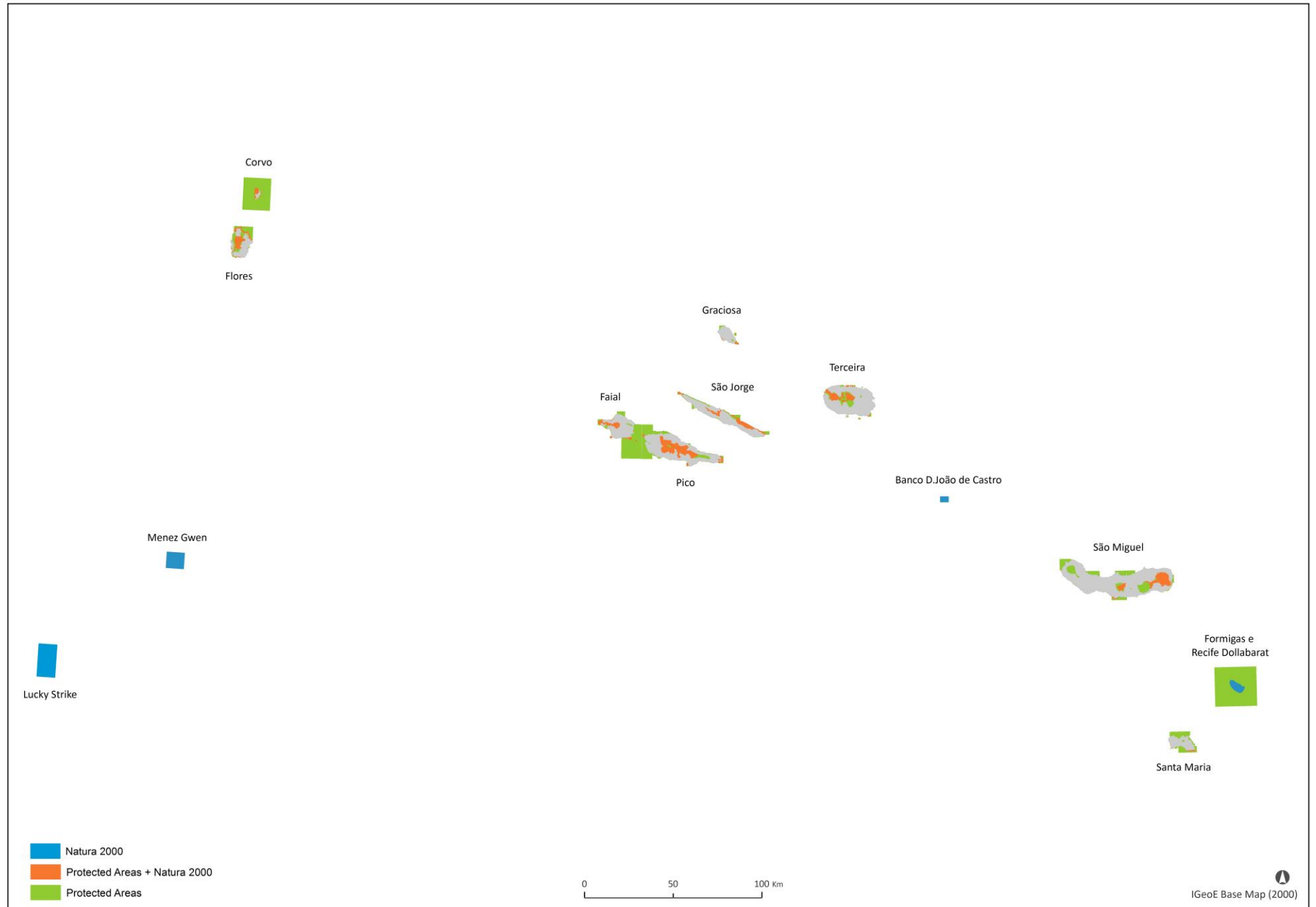
<http://www.atlantis.angra.uac.pt/atlantis/common/index.jsf>

<http://www.azores.gov.pt/Gra/srnnatureza/menus/secundario/%C3%81reas+Protegidas/>

<http://www.azores.gov.pt/Gra/srnnatureza/conteudos/livres/Listagem+%C3%A1reas+Rede+Natura+2000.htm>



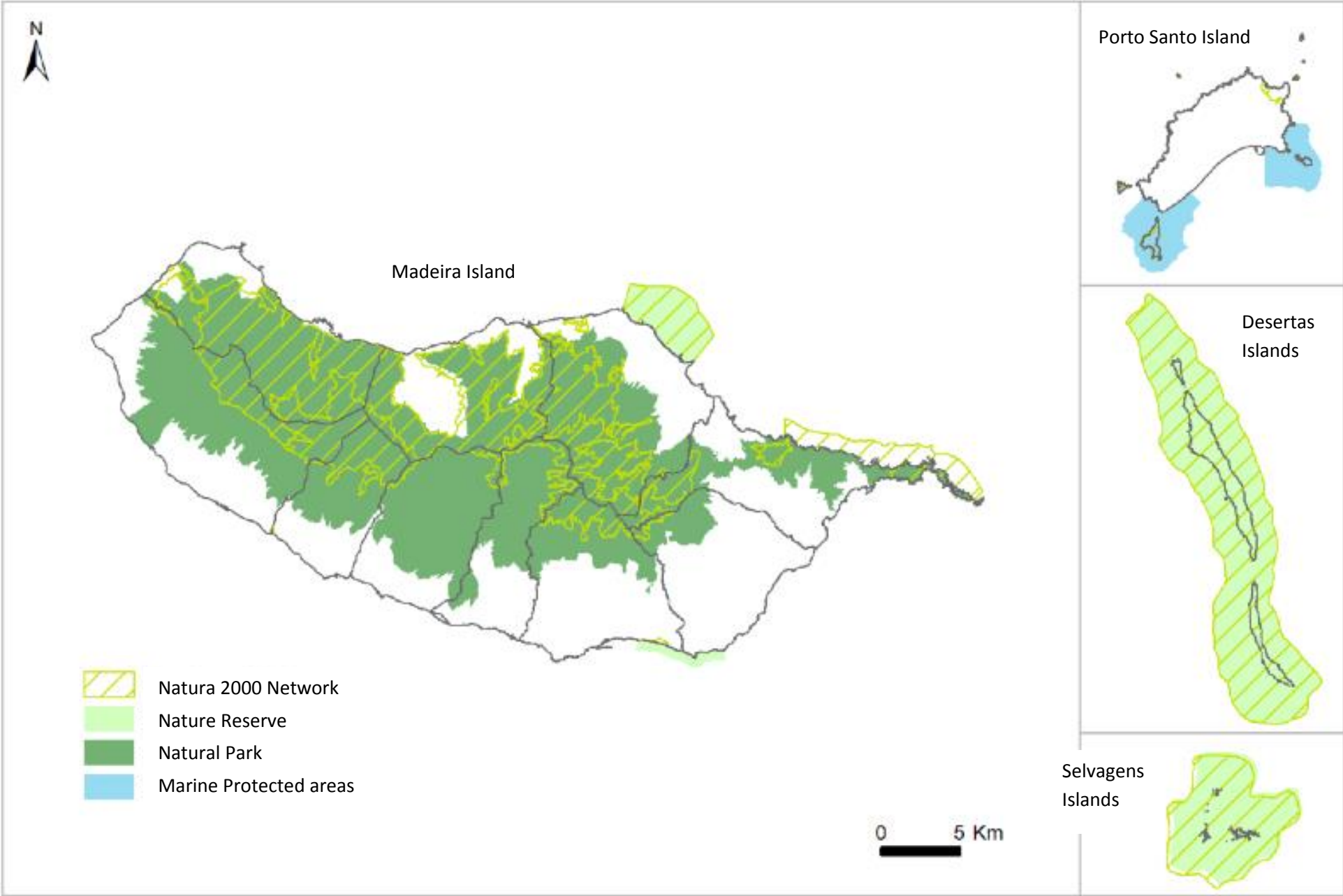
Azores: Protected areas and Natura 2000 sites



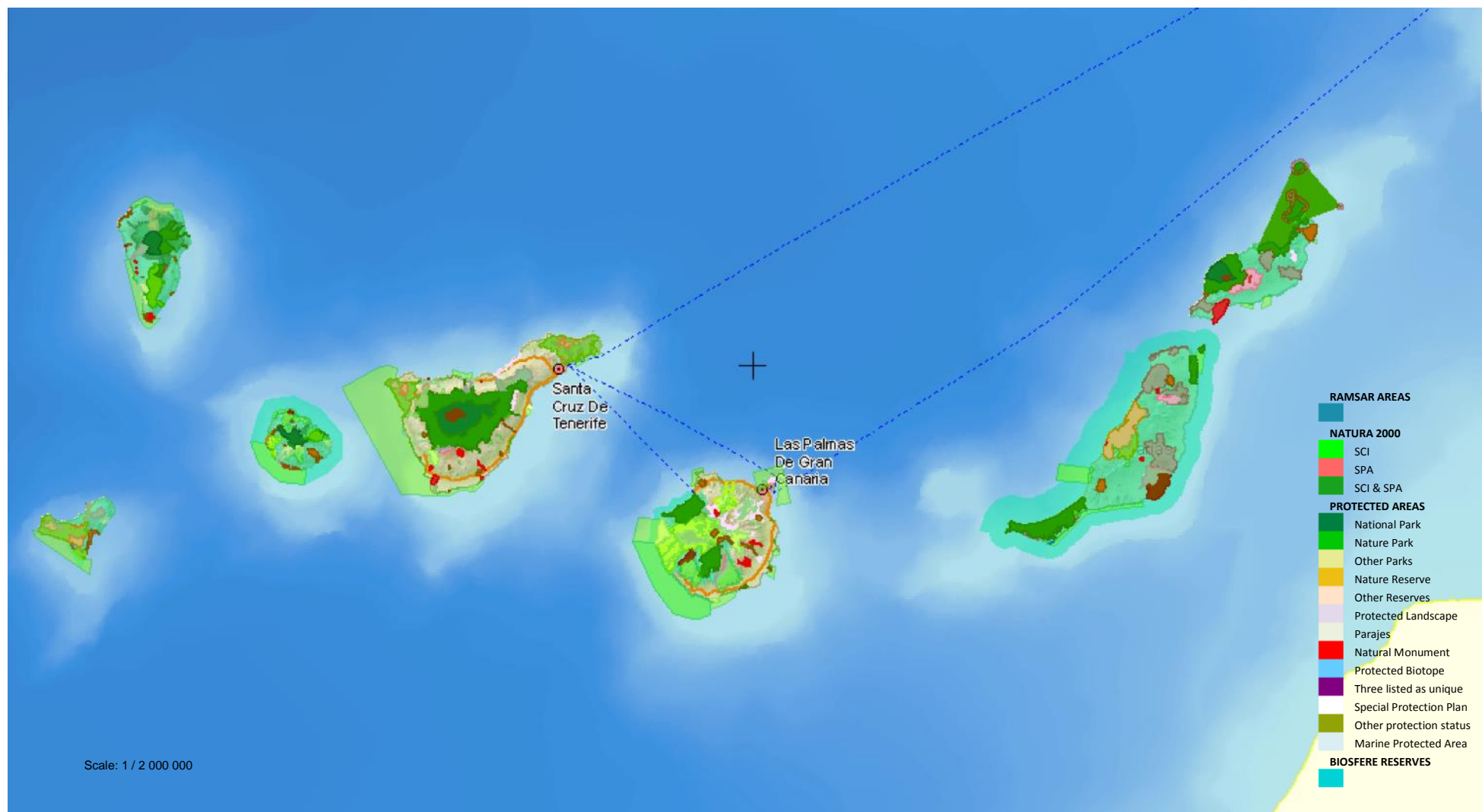
Azores: Marine Protected Areas



Madeira - Protected areas and Natura 2000 sites



Canary Islands: Areas under protection status



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