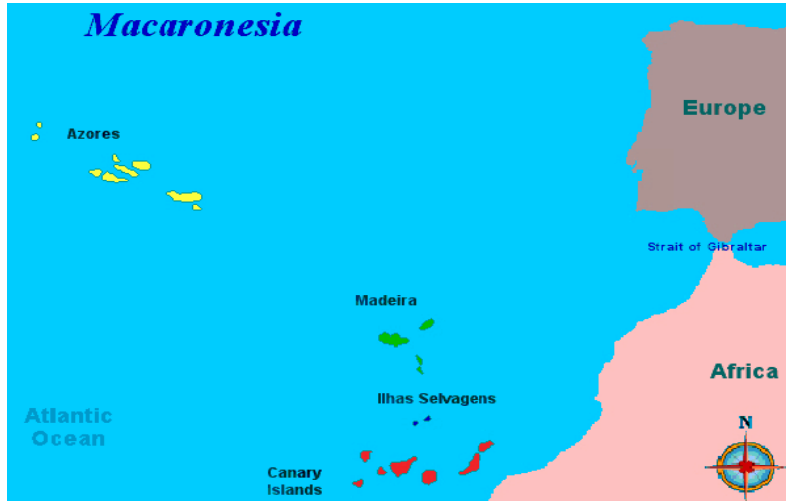


MACARONESIA



Current situation & main challenges

Socio-economic context

The biogeographic region of Macaronesia (from the Greek words for blessed or fortunate islands) is made up of Europe's volcanic islands in the Northeastern Atlantic Ocean: the 3 archipelagos of Azores (PT), Madeira (PT) and the Canaries (ES).

Except for the Canaries, all the other islands were uninhabited before the European colonizers arrived in the 15th century. Today, the region has 2.6 million inhabitants and a density of nearly 250 persons/km², on average. With a population of about 2 million people, the Canary Islands are the most populated European overseas entity. But it's Madeira that has the highest population density of Macaronesia - 323 inhabitants/km² - while the Azores stands with the lowest population density of 106 persons/km².

The region's economy is strongly specialized in the services sector, where tourism has a prominent role, particularly in the Canaries (11.5 million visitors a year; 31% of the Canarian economy)⁽¹⁶⁾ and in Madeira (nearly one million visitors/year; estimated global impact of 24% in GDP)⁽¹⁷⁾. In the Azores, despite the growing tourism, agriculture remains relevant, with great predominance of livestock and dairy production (annual production of over 500 million litres of milk)⁽¹⁸⁾, as well as fisheries that bring in revenues of about 28 million € / year⁽¹¹⁾.

The average GDP per capita in the region is 18,610 €; The Canaries stand with an annual income of 19,238€, in contrast to the Azores with 15,111€.

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 in 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 118,208 km², from which 95% are marine sites in the Azores that will soon be extended), 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:	1,910,764 km ²
Land area:	10,571 km ² (1%) ⁽¹⁾
Protected land area:	4,213 km ² (40%) ⁽²⁾
Total marine area:	1,900,193 km ² (99%) ⁽³⁾
Exclusive economic zone (EEZ):	1,824,702 km ² (96%) ⁽⁴⁾
Marine protected area (MPA and/or MMA):	113,995 km ² (6%) ⁽⁵⁾

Overseas Regions (Governance/Dependency): Azores (PT), Madeira (PT), Canary Islands (ES)

Socio-economic facts

Total population (2014):	2,609,854 ⁽⁶⁾
Population density (2014):	247 inhab/km ²
Average annual GDP (2014, prel. data):	48,569 million € ⁽⁷⁾
Main income sources:	Tourism, agriculture and fisheries ⁽⁷⁾

Biodiversity

Threatened ecosystems:

- Evergreen humid forest (Laurisilva)⁽⁸⁾
 - Azores: 2% of the original cover
 - Madeira: 20% of the original cover
 - Canaries: 18% of its potential distribution

Endemic species: 5,901⁽⁹⁾

Threatened species: 652⁽¹⁰⁾

Threatened endemic species: 589 (91%)⁽¹⁰⁾

Birds (16): Zino's petrel *Pterodroma madeira*, Bullfinch - *Pyrrhula azorica*; Arthropods (62): *Evergoderes cabrerai*, *Hogna ingens*; Mammals (5): *Crocidura canariensis*, *Nyctalus azoreum*; Molluscs (121): *Actinella obserata*; Fish (2): *Bodianus scrofa*, *Mycteroperca fusca*; Plants (376): *Azorina vidalii*; *Dracaena draco*; Reptiles (7): *Gallotia simonyi*; *Gallotia bravoana*

Threatened non-endemic species: 63⁽¹⁰⁾

Birds (10): *Chlamydotis undulata*; Arthropods (1): *Ischnura hastata*; Crustaceans (1): *Palinurus elephas*; Mammals (6): Sperm whale - *Physeter macrocephalus*, monk seal - *Monachus monachus*; Molluscs (0); Fish (39): *Squatina squatina*, *Raja undulata*; Plants (2): *Pteris incompleta*; *Prunus hixa*; Reptiles (4): *Caretta caretta*, *Chelonia mydas*

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; iii) alien species; iv) forest fires.

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 since the arrival of the first European 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

One BEST project has been funded in the Macaronesian region so far: "Changes in submersed vegetation: assessing loss in ecosystem services from frondose to depauperate systems dominated by opportunistic vegetation".

In the region, there is an important cooperation among the Canaries, Madeira and the Azores islands supported by EU programs. Although biodiversity and nature conservation are not specifically targeted by these programs, there are some examples of approved projects in this area⁽¹⁴⁾: i) GESMAR: Environmental management in coastal and marine areas; ii) SOST-MAC: Cooperation and synergies in sustainable actions in PAs of Macaronesia; iii) DEMIURGO: Databanks on population genetic information and meta-analysis of Macaronesian flora; iv) MACETUS: creation of a Macaronesian Network for the study of cetaceans; v) Atlantico: a database of the Macaronesian Biodiversity that improves access to biodiversity information for decision-making; vi) 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; etc. Interreg V-A España-Portugal MAC (Madeira-Azores-Canarias) 2014-2020 is currently operational, with a budget of 130 million € (85% financed by the ERDF).

Besides conservation projects targeting specific species or ecosystems, 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, in accordance to the EU's directives.

Critical areas for action / Investment niches

- Enhancement of coordinated research on local ecosystems and endemic species (incl. data on distribution & status), as well as on invasive species⁽¹³⁾;
- Comprehensive mapping of marine habitat and species distribution;
- Development of a Red List for the fauna and flora in each archipelago, integrating IUCN's recommended criteria;
- Listing the most dangerous IAS and development of eradication/control programmes⁽¹²⁾;
- Improvement of ecological restoration of natural habitats;
- Extension of Canarian Recovery Plans to all threatened species;
- Creation of micro-reserves in areas of severely fragmented habitats in Madeira island;
- Development of an online biodiversity databank in Madeira (similar to the existing ones for the Azores and Canary Islands);
- Ensure long-term viability of the Biodiversity Databank, the SEGA programme for the monitoring of Canarian protected species, and conservation/recovery plans⁽¹⁵⁾.

Important (ongoing) conservation activities

Monk seal conservation in Madeira and development of a conservation status surveillance system: efforts for the conservation of the only surviving Macaronesian population of the monk seal, a CR species, started in 1988 and has been extended through several strategies. Currently, a new LIFE project, coordinated by Fundación CBD, aims to resolve known threats to the monk seal, addressing the conflict between its habitat needs and human activities in coastal areas of Madeira.

Budget: 1,143,364 € (2014-2018)

Activities: locating, defining, and protecting the caves that are of interest to the monk seal; boarding fishing and maritime-tourism boats to reduce threats; via satellite monitoring.

Results: 1) From previous projects: creation of a Nature Reserve, specifically to protect the monk seal, which shelters 30-40 adults, 5-7% of the global population, from a low point of 6-8 individuals in 1980s); 2) Expected: an official Monk Seal Regional Conservation Plan in Madeira; increased capacity of the Nature Park of Madeira to intervene along the coastline to tackle threats or emergency situations; surveillance systems, indicators and baseline values for monitoring of the monk seal and its habitat; reduced threats and disturbances from fishermen, tourism operators, tourists and local inhabitants.

Project "Terras do Priolo" in the island of S. Miguel, Azores: a partnership between SPEA (a Portuguese representative of BirdLife International) and the Azores government, with support from the Life program, dedicated to conservation of *Pyrrhula murina*, an endemic bullfinch, and its remaining natural habitat, the Natura 2000 SPA Pico da Vara/Ribeira do Guilherme 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 & 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, 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; development of methodologies and strategies for growing natives and controlling IAS.

Ecological restoration of Garajonay National Park (La Gomera, Canary Is.) and its surroundings, after the great fire of 2012:

Budget: 1,511,494 € (2014-2018)

Activities: i) ecological restoration of burned forest habitats of Macaronesian laurels and recovery of populations of threatened plant species affected by the fire in the Garajonay NP and its surroundings; ii) to draft strategies to prevent and tackle forest fires more effectively and to restore the targeted habitats; iii) introduce measures to reduce the incidence of fires and facilitate the extinguishing fires should they occur.

Results (expected): i) strategy to prevent and tackle wild fires in the Canary Islands; ii) a strategy to support natural regeneration of affected laurel forest habitats; iii) long-term restoration of the affected priority habitats; iv) long-term recovery of the affected populations of endangered species.

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/cmayer/espaciosnaturales/categorias/index.html>

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

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

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

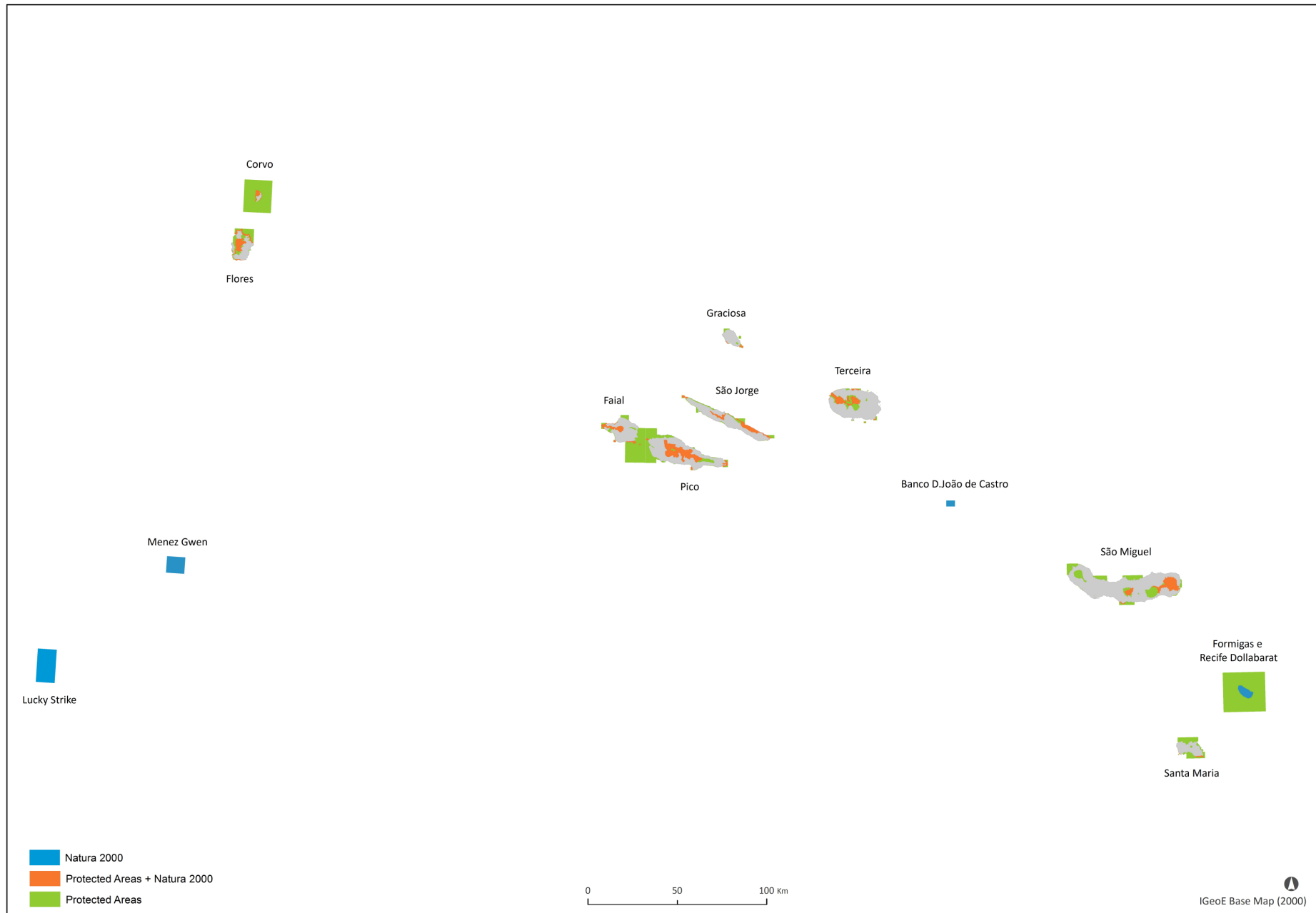
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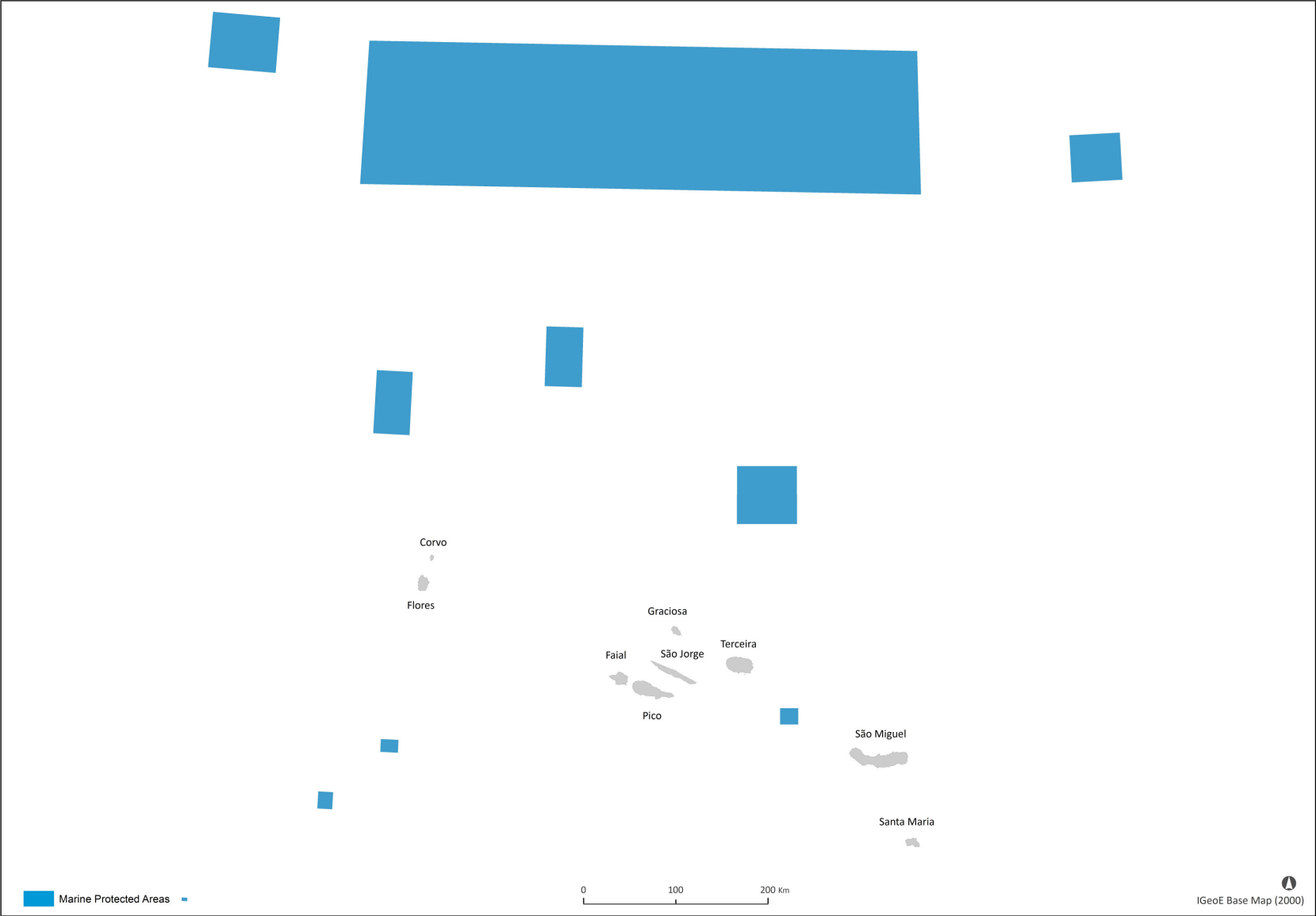
FRCT

FUNDO REGIONAL DE CIÊNCIA E TECNOLOGIA

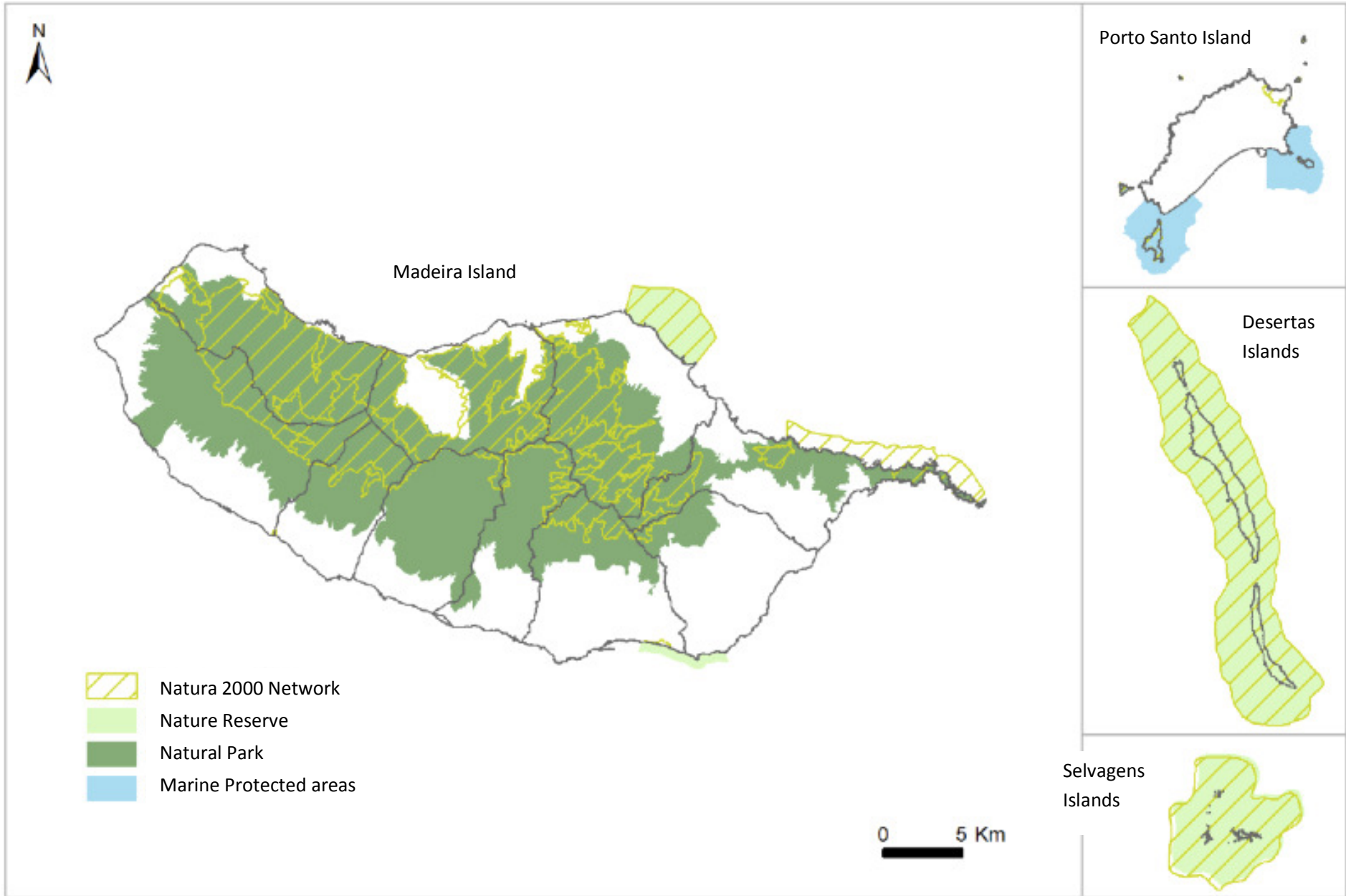
Azores: Protected areas and Natura 2000 sites



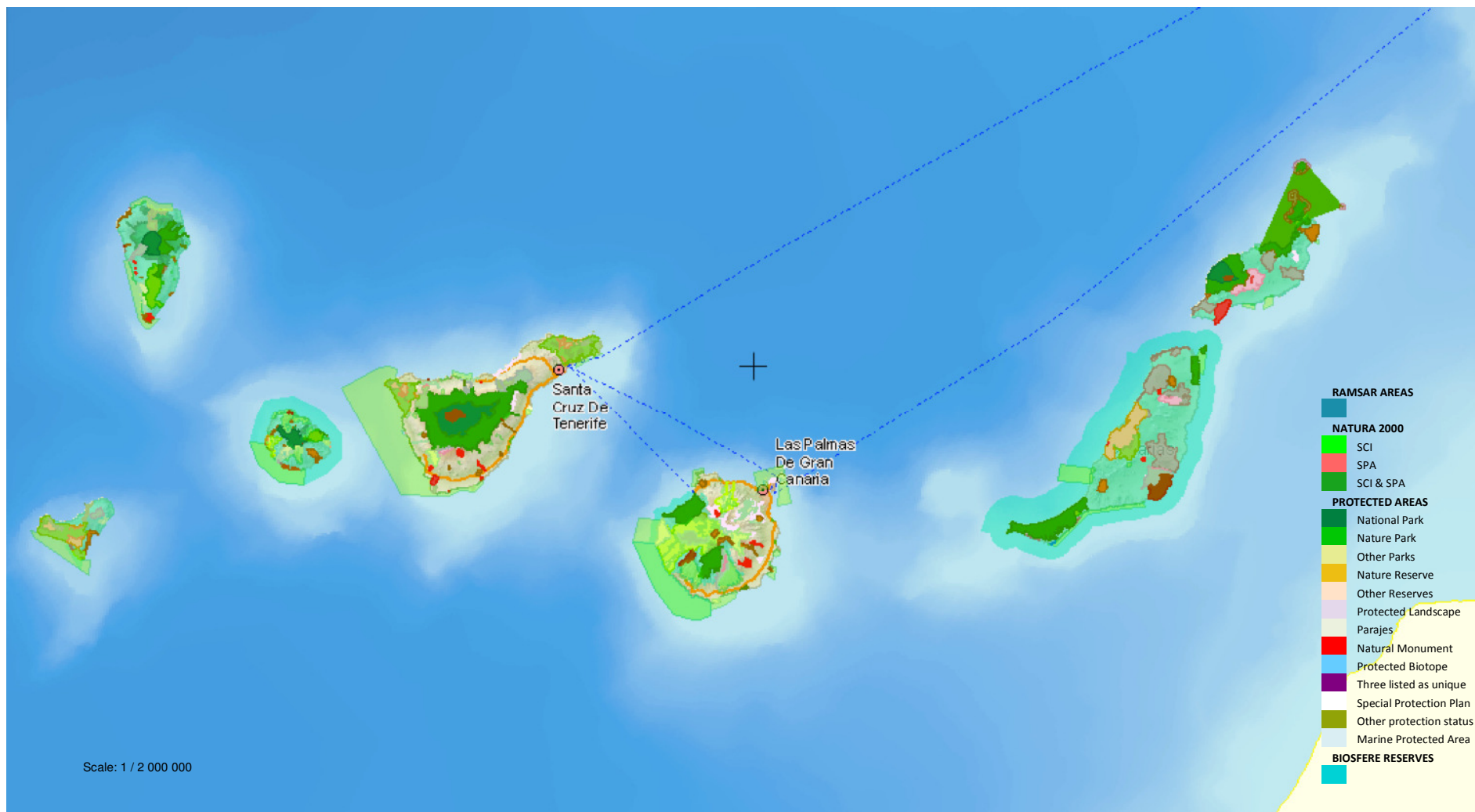
Azores: Marine Protected Areas



Madeira - Protected areas and Natura 2000 sites



Canary Islands: Areas under protection status



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