

Management Plan for Antarctic Specially Protected Area No. 133

HARMONY POINT, NELSON ISLAND, SOUTH SHETLAND ISLANDS

1. Description of Values to be Protected

This area (62° 18' S; 59° 14' W) was originally designated as Site of Special Scientific Interest (SSSI) No. 14 in ATCM Recommendation XIII-8 after a proposal by Argentina and Chile, because of its diverse bird community and extensive and varied terrestrial vegetation cover.

During the XXI Antarctic Treaty Consultative Meeting (Christchurch, 1997), a revised Management plan was adopted for the Area, following the format established by Annex V to the Madrid Protocol and according to Measure 3 (1997). During the XXV Antarctic Treaty Consultative Meeting (Warsaw, 2002) and once the Annex entered into force, the *Site of Special Scientific Interest* No. 14 became, by virtue of Measure 1 (2002), *Antarctic Specially Protected Area* No. 133.

The values to be protected in the Area are related to the composition and biological diversity of the site. The Area is an excellent example of the maritime Antarctic communities of birds and land ecosystems present in the South Shetland islands, allowing to carry out long term research programs without damage or harmful interference.

Ice free land supports large breeding colonies of 12 seabird species, among which we find one of the largest single colonies of chinstrap penguin (*Pygoscelis antarctica*) of Antarctica. The Area supports a large giant petrel colony (*Macronectes giganteus*) colony, a species which is highly sensitive to any kind of human disturbance and is decreasing in many sites in Antarctica. The seabird colonies are still important for scientific purposes. There is a copious vegetation that has grown over different types of soils and characterized by the presence of moss, lichens and fungi. To a lesser extent, it is possible to find two species of vascular plants. As vegetation is one of the factors responsible for soil formation, in protecting the Area one makes sure the development of future research linked to the soils and the flora present in the area are guaranteed.

2. Aims and Objectives

Management of ASPA No. 133 aims at:

- preserving the community of birds and the terrestrial ecosystem;
- preventing unnecessary human disturbance;
- permitting scientific research on birds and the terrestrial ecosystem without any interferences, in order to provide a baseline for the study of natural variability; and
- permitting the development of any other scientific research provided it does not compromise the values for which the Area is being protected.

3. Management Activities

The following management activities will be undertaken to protect the values of the area:

- the staff to be posted in Harmony Point will be specifically trained on the conditions of the Management plan;
- the circulation will only take place on vegetation-free areas and taking a wide berth from the fauna, except when the scientific projects specifically mention otherwise and provided the corresponding harmful interference permits have been issued;
- collection of samples will be limited to the minimum required for the authorized scientific research plans;
- visits shall be made as necessary to ensure management and maintenance measures are adequate; and
- all markers, signs and structures erected within the area for scientific or management purposes will be properly secured and maintained in good condition.

II: Measures

4. Period of Designation

Designated for an indefinite period.

5. Maps

Maps 1 and 3 are attached at the end of the present Management plan. Map 1 shows the location of Nelson Island in relation to the South Shetland islands and the Antarctic Peninsula. Map 2 shows the location ASPA No. 133 on Nelson Island. Map 3 shows the extent of the area, including Harmony Point and the Toe, while Map 4 shows the distribution of bird concentrations in Harmony Point.

6. Description of the Area

6(i) Geographical coordinates, boundary markers and natural features

GEOGRAPHICAL COORDINATES AND BOUNDARIES

This Area is located on the west coast of Nelson Island, between King George (25 de Mayo / Rey Jorge) Island to the Northeast and Robert Island to the Southwest (62° 18' S; 59° 14' W) and includes Harmony Point and the Toe, the adjacent ice and surrounding marine zone within the rectangle showed on maps 2 and 3.

NATURAL FEATURES

Geomorphologically, Harmony Point presents three well defined units: an andesitic plateau, coastal and shelf outcrops and ancient sea levels. The plateau reaches 40 meters above sea level and its area is covered by detritus resulting from the action of erosion agents on andesitic rocks, with a well-developed vegetation of mosses and lichens.

There are three successive raised paleobeaches, between the coast and the glacier. The paleobeaches are defined by pebble accumulations of variable height in some instances and the development of soil in others.

Lakes and streams with a limited flow appear on the undulations. Some isolated andesitic rocks and ancient nunataks can be seen outside the limits of the glacier, evidencing that the past extension of the glacier covered Harmony Point.

The Area holds breeding colonies of 12 species: 3,347 pairs of gentoo penguins (*Pygoscelis papua*), 89,685 pairs of chinstrap penguins (*Pygoscelis antarctica*), 746 pairs of Southern giant petrels (*Macronectes giganteus*), 479 pairs of cape petrel (*Daption capense*), 45 pairs of blue eyed shag (*Phalacrocorax atriceps*), 144 pairs of snowy sheathbill (*Chionis alba*), 71 pairs of skuas (61 pairs of Antarctic skuas (*Catharacta antarctica*) and 11 of Polar skuas), 128 pairs of Dominican gull (*Larus dominicanus*), and between 100 and 150 individuals of Antarctic terns (*Sterna vittata*).

Other seabirds nesting in the Area are the Wilson storm petrel (*Oceanites oceanicus*) and the black-bellied storm petrel (*Fregetta tropica*). Together they represent around 1,000 pairs. Map 4 shows the distribution of bird concentrations in Harmony Point.

There are usually 3 species of mammals in the Area: the Weddell seal (*Leptonychotes weddelli*), the elephant seal (*Mirounga leonina*) and the Antarctic fur seal (*Arctocephalus gazella*). Occasionally some individual crabeater seals (*Lobodon carcinophagus*) have also been seen. The number of mammals in the area varies. The maximum numbers of Antarctic fur seals, Weddell seals and elephant seals are 320, 550 and 100 respectively. The Weddell seals usually breed in the Area in high figures, reaching up to 60 females with their pups in a single season. Births of fur and elephant seals have also been recorded, although the numbers there are much lower.

There are some extensive areas covered by a very rich and diverse development of bryophytes and lichen-dominated plant communities (presently being classified), including, although to a lesser degree, two vascular plant species (*Deschampsia antarctica* and *Colobanthus quitensis*), especially in the areas less affected by recent anthropic perturbation or breeding activities. Moss turf subformations are located in wind protected and moist places, whilst lichen-dominated subformations occur in places with a high wind exposure. Five soil orders have been identified so far in the Area, according to the taxonomic system: Soil Taxonomy (1999): Histosols (Hydric Cryofibrists), Entisols (Lithic Criorthents), Spodosols (Oxiaquic Humicryods), Mollisols (Lithic Haplocryolls) and Inceptisols (Lithic Eutrocryepts e Histic Cryaquepts).

6(ii) Restricted zones within the Area

There are no prohibited zones within the Area, but access to bird breeding areas should be restricted during the breeding season (September to March). In order to avoid damage to the vegetation, access on foot should take place on sectors deprived of vegetal coverage.

6(iii) Location of structures within the Area

There is a small refuge used by the scientific teams, and a storage building (with approximate surfaces of 30 m² and 12 m², respectively). The installations are used only during spring and summer. There is a Chilean radio beacon for navigating at the westernmost tip of Harmony Point and an Argentine one at the Toe.

6(iv) Location of other Protected Areas within close proximity

- ASPA No. 112, Coppermine Peninsula, Robert Island, South Shetland islands lies about 30 km south west.
- ASPA No. 125, Fildes Peninsula, King George Island (25 de Mayo / Rey Jorge), South Shetland islands lies about 23km north-north-east
- ASPA No. 128, Western Shore of Admiralty Bay, King George Island (25 de Mayo / Rey Jorge), South Shetland islands lies about 45km east-north-east.
- ASPA No. 132, Potter Peninsula, King George Island (25 de Mayo / Rey Jorge), South Shetland islands lies about 30 km east-north-east.

7. Permit Conditions

Entry into the Area is prohibited except in accordance with a permit issued by appropriate national authorities.

Conditions for issuing a Permit to enter the Area are that:

- it is issued only for scientific purposes, in accordance with the objectives of the Management plan that cannot be served elsewhere;
- the actions permitted will not jeopardize the natural ecological system in the Area;
- any management activities (inspection, maintenance or revision) are in support of the objectives of the Management plan;
- the actions permitted are in accordance with this Management plan;
- the Permit, or authorized copy, is carried by the main scientist authorized to enter the Area; and
- a report be supplied to the appropriate National authority mentioned in the Permit.

7(i) Access to and movements within the Area

- Any access to the Area will be possible with a permit delivered by an appropriate National authority, and it will only be issued for activities in agreement with the present Management plan.
- Access to Harmony Point area will preferably take place from the sea. The appropriate landing site is almost in front of the shelter, at the end of the cove, on a well protected sand beach with no significant presence of fauna. Access to the navigation beacon located in the west most tip of Harmony Point is only permitted by boat, with landings taking place at the south of the beacon. No access points are specified for the Toe although access is limited to inflatable boats.
- Small aircraft are allowed to land on the glacier, and helicopters are entitled to land but they must not overfly the area, especially the bird breeding areas. Approach for landing is to take place over the sea, and the landing spot is to be close to the shelter. Map 3 shows the flight path. Operation of aircraft over the ASPA shall follow, as a minimum standard, the provisions contained in Resolution 2 (2004), "Guidelines for the operation of aircraft over bird colonies". As a general rule, no aircraft is allowed to fly over the ASPA below 610 m (2000 ft), except for accessing the area as specified above and in cases of emergency.
- Tourism and any other recreational activities are not allowed. Movements within the area are to take place on pre-established routes, particularly during the breeding season. Vehicles are prohibited in the area.

7(ii) Activities which are or may be conducted within the Area including restrictions on time and place

- Scientific research which cannot be conducted elsewhere and which will not jeopardize the ecosystem of the Area.
- Essential management activities, including monitoring.

II: Measures

7(iii) Installation, modification or removal of structures

- No additional structures are to be erected in the Area, or scientific equipment installed, except for essential scientific or management activities, and with a proper Permit.
- Any scientific equipment to be installed in the Area, as well as any research artifact, shall be approved in a Permit and clearly labeled, indicating the country, name of principal investigator and year of installation. All such items should be made of materials that pose minimal risk of contamination of the Area or risk of disturbing the vegetation or the fauna.
- No research traces are to remain once the permit has expired. If a specific project cannot be finished within the timeframe specified in the permit, an extension of the validity of the permit shall be requested, authorizing those elements to remain there.

7(iv) Location of field camps

- If it is necessary to install tents they will have to be located in the immediate vicinity of the existing shelter. No other locations shall be used for this purpose, in order to restrict the human impact.
- Such an exclusion is not valid for installing tents with scientific instruments or materials, or those that are used as an observation base.

7(v) Restriction on material and organisms which may be brought into the Area

- No living animals or plant material shall be deliberately introduced into the Area.
- No herbicides or pesticides shall be brought into the Area. Any other chemicals, which shall be introduced with the corresponding permit, shall be removed from the Area at or before the conclusion of the activity for which the permit was granted. The purpose and type of chemicals shall be documented as well as possible for other scientists to be informed.
- Fuel, food and other material are not to be stored in the Area, unless required for essential purposes connected with the activity for which the Permit has been granted, provided it is stored inside the shelter or close to it.

7(vi) Taking or harmful interference with native flora and fauna

- All forms of taking or harmful interference are prohibited, except in accordance with a Permit. Where an activity involves taking or harmful interference, it should be carried out in accordance with the *SCAR Code of Conduct for Use of Animals for Scientific Purposes in Antarctica*, as a minimum standard.
- Information on taking and harmful interference will be duly exchanged through the Antarctic Treaty Information Exchange System and its record shall, as a minimum standard, be lodged with the *Antarctic Master Directory* or, in Argentina, at the National Antarctic Data center (*Centro de Datos Nacionales Antárticos*).
- Scientists who take samples of any kind will provide evidence that they are familiar with prior taking of samples in order to minimize the risk of a potential duplication.

7(vii) Collection or removal of anything not brought into the area by the permit holder

- Any material of the Area may be collected and/or removed from the Area only according to a permit. Removal of dead biological specimens for scientific purposes must not exceed levels that deteriorate the nutritional base of local scavengers and with the sole purpose of performing pathological analyses.

7(viii) Disposal of waste

- All non-physiological waste shall be removed from the Area. Wastewater and liquid domestic waste may be dumped into the sea, in accordance with Article 5 of Annex III of the Madrid Protocol.
- Waste generated as a consequence of research activities carried out in the Area may be temporarily stored next to the shelter awaiting removal. Such waste must be stowed away according to Annex III of the Madrid Protocol, labeled as trash and secured against accidental loss.

7(ix) Measures that may be necessary to ensure that the aims and objectives of the management plan continue to be met

- Permits may be granted to enter the area to carry out biological monitoring and site inspection activities, including the collection of plant material and animals for scientific purposes, to erect or maintain notice boards and any other management measures.

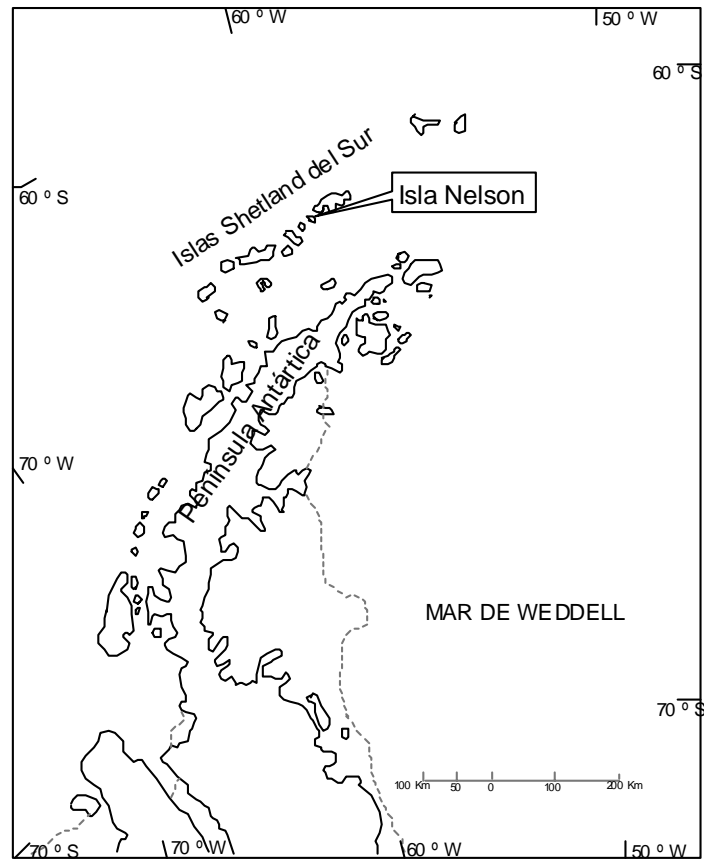
- All scientific structures and instrumentation, including research markers, installed in the Area must be authorized in a permit and clearly identified by country, name of principal researcher and year of installation. Research markers and structures must be removed at or before the expiry of the Permit.
- If specific scientific projects cannot be concluded within the permitted time, applications must be made for an extension to leave the items in situ. When it is necessary for scientific purposes, signs can be installed at the locations where experiments are being carried out.

7(x) Requirements for reports

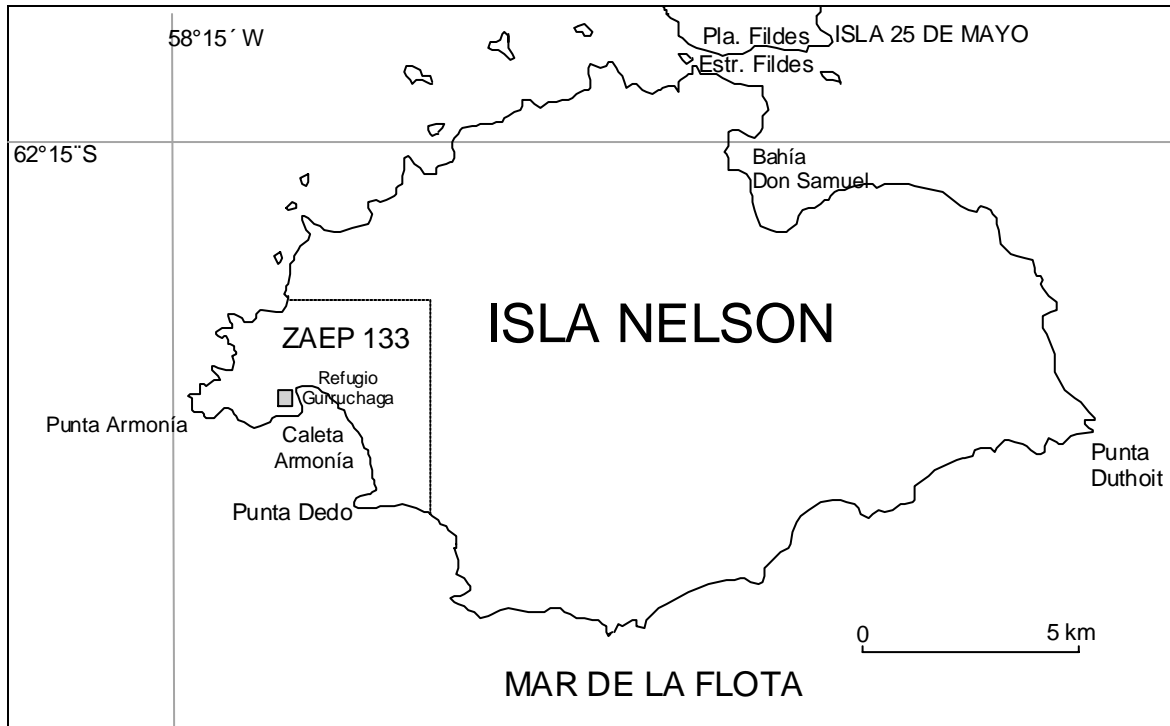
The principal permit holder for each permit issued shall submit a report of activities conducted in the Area once the activity has been finalized. Such report shall use the form submitted together with the permit, and then sent to the authority that issued the Permit. The records of ASPA permits and post-visit reports will be exchanged with the other Consultative Parties, as part of the Information exchange system, as specified in Article 1 of Annex V. Such reports should be stored and made accessible to all interested Parties, SCAR, CCAMLR, and COMNAP, to provide the necessary information on human activities within the Area needed for a proper management to be carried out.

II: Measures

Map 1: Location of Nelson Island in relation to the South Shetland Islands and the Antarctic Peninsula.

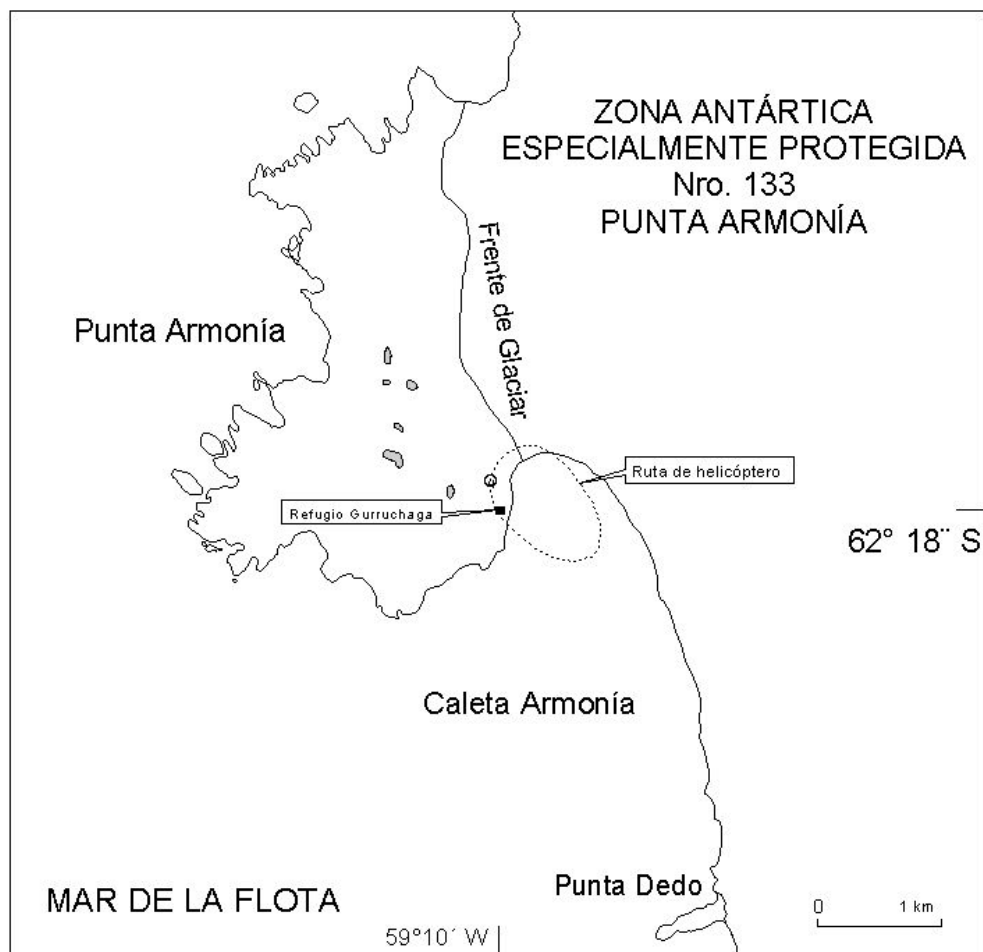


Map 2: Location of ASP A No. 133 on Nelson Island.



II: Measures

Map 3: Details of ASPA 133, including Harmony Point and the Toe.



Map 4: Bird concentrations in Harmony Point.

