

Management Plan for Antarctic Specially Protected Area No. 133

HARMONY POINT, NELSON ISLAND, SOUTH SHETLAND ISLANDS

Introduction

This Area was originally designated as Site of Special Scientific Interest No. 14 under Antarctic ATCM Recommendation XIII-8 (1985), after a proposal by Argentina, because the Area is an excellent example of the maritime Antarctic communities of birds and land ecosystems present in the South Shetland Islands, making it possible to carry out long-term research programs without damage or harmful interference.

In 1997, the Management Plan was adapted to the requirements of Annex V of the Protocol on Environmental Protection to the Antarctic Treaty, and approved through Measure 3 (1997). This version consists of the revision to the Management Plan approved pursuant to Measure 2 (2005), and it is the second revision since entry into force of Annex V.

The original goals for designating this Area are still relevant, and are specified on point 2. The anthropic disturbance could jeopardize the long term studies carried out there, especially during the breeding season.

1. Description of values to be protected

The values to be protected in the Area still relate to the composition and biological diversity of the site.

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. In the Area, there is also a large giant petrel colony (*Macronectes giganteus*), a species which is highly sensitive to human disturbance, and a large colony of gentoo penguin (*Pygoscelis papua*).

The Area has profuse vegetation, developed on various types of soils, particularly characterized by the presence of vast moss carpets, as well as lichens and fungi. It is also possible to find two species of vascular plants in the Area. As vegetation is one of the factors responsible for soil formation, the protection of the Area ensures the development of research linked to the soils and the flora present in the Area.

2. Aims and objectives

- Preventing unnecessary human disturbance;
- Permitting the development of any scientific research provided it does not compromise the values for which the Area is being protected;

- Avoiding major changes in the structure and composition of the flora and fauna communities;
- Preventing or minimising the introduction to the Area of non-native plants, animals and microbes;
- Minimising the possibility of the introduction of pathogens which may cause disease in flora or fauna populations within the Area;

3. Management activities

The staff authorised to access the ASPA shall be specifically instructed on the conditions of the Management Plan.

Approach distances to fauna must be respected, except when the scientific projects may require otherwise and this is specified in the relevant permits.

Collection of samples will be limited to the minimum required for the authorised scientific research plans.

All signs and structures erected within the Area for scientific or management purposes will be properly secured and maintained in good condition.

Due to the vast moss carpets developed in the Area, and the presence of large seabird colonies adjacent to the areas where scientists and the support staff circulate, tracks towards research sites can be marked, preferably using those previously marked or used.

4. Period of designation

The Area is designated for an indefinite period.

5. Maps

Map 1, attached to this Management Plan as an Annex at the end of the document, shows the location of ASPA No. 133, Harmony Point (Nelson Island).

6. Description of the Area

6(i) Geographical coordinates and boundaries

The Area is located in the west coast of Nelson Island (62° 18'S; 59° 14'W), between the King George (25 de Mayo) Island, to the northeast, and the Robert Island, to the southwest, and includes Harmony Point and the Toe, the sector covered by ice and the adjacent marine area, as shown in Map 1.

6(ii) 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 heights 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*), 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 *C. maccormicki* skuas), 128 pairs of Dominican gulls (*Larus dominicanus*) and 746 pairs of giant petrels (*Macronectes giganteus*).

Other seabirds nesting in the Area are the Wilson's storm petrel (*Oceanites oceanicus*) and the black-bellied storm petrel (*Fregetta tropica*) which, together, represent around 1000 pairs, and the Antarctic tern (*Sterna vittata*), with an estimated population of between 100 and 150 individuals (57-76 nests).

Most bird colonies are distributed over the north-western and south coast of Harmony Point. Giant petrel colonies are located around Gurruchaga shelter.

There are usually three 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 sighted 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), mainly dominated by *Usnea fasciata* and by *Himantormia luburis*, including, although to a lesser degree, two vascular plant species (*Deschampsia antarctica* and *Colobanthus quitensis*) present in Antarctica, 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(iii) Access to the Area

The Area can be accessed by air or by sea. To access by sea, the landing site is located about 200 meters to the right of the shelter, at the bottom of the cove, over a protected gravel beach and with no significant presence of fauna.

The navigation beacon located in the westernmost tip of Harmony Point is accessed by landing south of the beacon. Both the navigation beacon and the Toe are only accessed by sea.

Access by air is only permitted when there are no means for access by sea. To avoid interfering with the bird breeding settlements near the shelter, especially the giant petrel, access by air is permitted for small aircrafts landing over the Nelson Island glacier. During landing manoeuvres, the aircrafts may not fly over the ice-free zone of the Area, in order to avoid causing any disturbance to bird colonies. Where absolutely necessary, helicopters may be permitted to land in ice-free areas. In this regards, the provisions of the "Guidelines for operation of aircrafts over bird colonies" (Resolution 2, 2004) shall be observed as a minimum standard, except in cases of emergency or for air safety purposes.

6(iv) Location of structures within and adjacent to the Area

There are permanent year-round structures within the Area.

Shelters: The "Gurruchaga" shelter (ARG, c. 30 m²) is used to provide accommodation to the research teams visiting the Area. There is also a storage building of 12 m². These facilities are only used during spring and summer, and have a maximum capacity of 3 people (See section 7 (ix) Disposal of wastes).

Beacons: There is a Chilean navigation radio beacon at the westernmost tip of Harmony Point, and an Argentine one at the Toe.

Signposts: A sign indicating where the protected Area starts on the sand beach in front of the shelter. Another sign inside the shelter displays the shelter name and owner.

6 (v) 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 / 25 de Mayo Island, South Shetland Islands lies about 23 km north-north east.
- ASPA No. 150, Ardley Island, King George / 25 de Mayo Island, South Shetland Islands lies about 19 km north east.
- ASPA No. 128, Western Shore of Admiralty Bay, King George Island (25 de Mayo), South Shetland Islands lies about 45 km east-northeast.
- ASPA No. 132, Potter Peninsula, King George / 25 de Mayo Island, South Shetland Islands lies about 30 km east-north east.
- ASPA No. 171, Narebski Point (south-eastern coast of Barton Peninsula, 25 de Mayo/King George Island, about 25 km northeast of Harmony Point.

6(vi) Restricted zones within the Area

There are no restricted zones within the protected Area.

7. Permit conditions

7(i) General conditions

Access to the Area is prohibited except in accordance with a Permit issued by appropriate national authorities.

Conditions for the issuance of a Permit to access the Area:

- The activity serves a scientific, ASPA management or outreach purpose, in accordance with the objectives of the Management Plan, which cannot be served elsewhere; and any management activity (inspection, maintenance or review), is in support of the objectives of this Management Plan;
- the Permit is carried by staff authorised to access the Area;
- a post-visit report is supplied to the appropriate national authority mentioned in the Permit upon completion of the activity, within the terms established by national authorities issuing the Permit.
- Neither tourism nor any other recreational activities are permitted.

7(ii) Access to, and movement within or over, the Area

All movement within the ASPA shall be exclusively on foot.

7(iii) Activities which may be conducted in the Area

- Scientific research which cannot be conducted elsewhere and which will not jeopardise the natural ecosystem of the Area;
- Essential management activities;
- Activities contributing to raise awareness of scientific activities, under National Antarctic Programs.

7(iv) Installation, modification or removal of structures

No new structures are to be erected within the Area, or scientific equipment installed, except for compelling scientific or management reasons and subject to the relevant Permit.

Any scientific equipment to be installed in the Area, as well as any research marker, shall be approved by a Permit and be clearly labelled, indicating the country, name of principal investigator and year of installation. All such materials should be of such nature as to pose minimal risks of contamination to the Area, or the risk of interfering with the fauna or damaging the vegetation.

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, such circumstance shall be informed in the post-visit report, and an extension of the validity of the Permit authorising any materials to remain in the Area shall be requested.

7(v) Location of field camps

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The Gurruchaga shelter will usually be available for the Parties using the Area. The use of the shelter for scientific purposes, by staff other than Argentine Antarctic Program staff shall be arranged in advance with such Program. If it is necessary to install tents they will have to be located in the immediate vicinity of the shelter. No other locations shall be used for this purpose, in order to restrict the human impact.

Such exclusion is not valid for installing tents with scientific instruments or materials, or those that are used as an observation base, which shall be removed upon conclusion of the activity.

7(vi) Restrictions on materials and organisms that may be brought into the Area

No living animals or plant material shall be deliberately introduced into the Area.

All reasonable precautions against the unintentional introduction of alien species to the Area shall be adopted. It should be taken into account that alien species are most frequently and effectively introduced by humans. Clothes (pockets, boots, velcro fasteners on garments) and personal equipment (bags, backpacks, camera bags, tripods), as well as scientific instruments and work tools may carry insect larvae, seeds or propagules. For more information, refer to the “Non-Native Species Manual – CEP 2011”

No herbicides or pesticides shall be brought into the Area. Any other chemical, which shall be introduced under the relevant Permit, shall be removed of the Area upon conclusion of the activity. The purpose and type of chemicals shall be documented in as much detail as possible for other scientists’ future information.

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. Any fuel used at the Gurruchaga shelter shall be handled pursuant to procedures established by the Argentine Antarctic Program involved in the activity.

7(vii) Taking of, 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, as established by Art. 10.1 of Annex V to the Madrid Protocol.

Scientists taking samples of any kind in the Area will ensure that they are familiar with samples previously taken, in order to minimise the risk of a potential duplication. For that purpose, they must refer to the Antarctic Treaty Electronic Information Exchange System (available at <http://www.ats.aq/s/ie.htm>) and/or contact the relevant National Antarctic Programs.

7(viii) Collection or removal of materials not brought into the Area by the Permit holder

Material may be collected or removed from the Area only in accordance with 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 (ix) 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 to the Madrid Protocol.

Waste generated as a consequence of research activities carried out in the Area may be temporarily stored next to the Gurruchaga shelter awaiting removal. Such waste must be disposed of pursuant to Annex III to the Madrid Protocol, labelled as trash and duly sealed to prevent accidental leaks.

7(x) Measures that may be necessary to continue to meet the aims of the Management Plan

Access Permits to the Area may be granted in order to conduct biological monitoring and site inspection activities, including the collection of plant material and animal samples for scientific purposes, the erection or maintenance of signposts, and any other management measures. All structures and markers installed in the Area must be authorised by a Permit and clearly identified by country, name of principal researcher and year of installation. Research markers and structures must be removed on or before the expiry of the Permit. If specific projects cannot be concluded within the permitted time, an application must be made for an extension to leave the items in the Area.

7(xi) Requirements for reports

Parties granting permits to access ASPA 133 should ensure that the principal holder for each permit issued submits to the appropriate authority a report describing the activities undertaken. Such reports must be submitted as soon as possible, within the terms established by the relevant competent authorities. The reports must include the information outlined in the Visit Report form, in accordance with Resolution 2 (2011).

Parties granting permits to Access ASPA 133 should maintain a record of such activities and, in the Annual Exchange of Information, should provide summary descriptions of the activities conducted by persons subject to their jurisdiction. Wherever possible, Parties should deposit originals or copies of such original reports in an archive, to be used both for review of the Management Plan and in organising the scientific use of the Area.

8. Supporting documentation.

Non-Native Species Manual. Resolution 6 (2011) – ATCM XXXIV – CEP XIV, Buenos Aires (available at http://www.ats.aq/documents/atcm34/ww/atcm34_ww004_e.pdf)

Guidelines for the Operation of Aircrafts. Resolution 2 (2004) – ATCM XXVII - CEP VII, Cape Town (available at http://www.ats.aq/documents/recatt/Att224_e.pdf)

SCAR Code of Conduct for the Use of Animals for Scientific Purposes (available at http://www.scar.org/treaty/atcmxxxiv/ATCM34_ip053_e.pdf)

