

EUROPE / NORTH AMERICA

FRENCH AUSTRAL LANDS AND SEAS

FRANCE



Southern Rockhopper (*Eudyptes chrysocome*) on Crozet Island © IUCN / Wendy Strahm

WORLD HERITAGE NOMINATION – IUCN TECHNICAL EVALUATION

FRENCH AUSTRAL LANDS AND SEAS (FRANCE) – ID N° 1603

IUCN RECOMMENDATION TO WORLD HERITAGE COMMITTEE: To inscribe the property under natural criteria.

Key paragraphs of Operational Guidelines:

Paragraph 77: Nominated property meets World Heritage criteria.

Paragraph 78: Nominated property meets integrity, protection and management requirements.

1. DOCUMENTATION

a) Date nomination received by IUCN: March 2018

b) Additional information officially requested from and provided by the State Party: Following the IUCN World Heritage Panel a progress report was sent to the State Party on 20 December 2018. This letter advised on the status of the evaluation process and sought responses/clarifications on a number of matters related to tourism planning and management; alien invasive species status and management; status of King Penguin populations; and clarifications regarding the area of the nominated property. A formal response from the State Party to the issues raised in the progress report was received in February 2019.

c) Additional literature consulted: Various sources, including: Chapuis, J.-L. & Arnaud, B.G. (1995). Restauration d'îles de l'archipel de Kerguelen par éradication du lapin (*Oryctolagus cuniculus*) : méthode d'intervention appliquée à l'île Verte. *Rev. Ecol. (Terre Vie)*, 50:377-390; Chapuis, J.L., Frenot, Y. & Lebouvier, M. (2002). Une gamme d'îles de référence, un atout majeur pour l'évaluation de programmes de restauration dans l'archipel de Kerguelen. *Rev. Ecol. (Terre Vie, supplément)*, 9:121-130; Chapuis, J.L., Frenot, V. & Lebouvier, M. (2004). Recovery of native plant communities after eradication of rabbits from the subantarctic Kerguelen Islands, and influence of climate change. *Biological Conservation*, 117:167–179; Chapuis, J.L., Le Roux, V., Asseline, J., Lefèvre, L. & Kerleau, F. (2001). Eradication of rabbits (*Oryctolagus cuniculus*) by poisoning on three islands of the subantarctic Kerguelen 15 Archipelago. *Wildlife Research*, 28:323–331; Hureau, J.C. (2011). Marine Research on the Kerguelen Plateau: from early scientific expeditions to current surveys under the CCAMLR objectives. The Kerguelen Plateau: marine ecosystem and fisheries. 5-13; TAAF (2017). Amélioration des connaissances sur le rat noir à Kerguelen. In: Bilan d'activités 2016 de la réserve naturelle des Terres australes françaises. Terres australes et antarctiques françaises, 39; TAAF (2017). Etat des lieux initial flore/oiseaux/mammifères introduits : prérequis à l'élimination des rongeurs des îlots Colbeck, Kerguelen. In: Bilan d'activités 2016 de la réserve naturelle des Terres australes françaises. Terres australes et antarctiques françaises. 41; Tixier, P., Gasco, N., Duhamel, G. & Guinet, C. (2016). Depredation of Patagonian toothfish (*Dissostichus eleginoides*) by two sympatrically occurring killer whale (*Orcinus orca*) ecotypes: Insights on the behavior of

the rarely observed type D killer whales. *Marine Mammal Science*, 32(3):983-1003; Weimerskirch, H., Le Bouard, F., Ryan, P.G. & Bost, C.A. (2018). Massive decline of the world's largest king penguin colony at Ile aux Cochons, Crozet. *Antarctic Science*, 30(4):236-242.

d) Consultations: 7 desk reviews received. The mission met with the Prefect and Secretary-General of the French Austral and Antarctic Territories (TAAF), Reserve Director and Head of Environment for TAAF, Three District heads for each island cluster, licensed commercial fishing boat operators, Captain of the navy frigate patrolling the economic fishing zone, President and members of Scientific and Management Committees for reserve, Director of the French Polar Institute and over 100 scientists, military personnel and reserve staff working and living for up to a year in the nominated property and 11 tourists on ship. IUCN notes this evaluation involved an exceptional month long mission voyage, and wishes to record its thanks to the evaluators for their exceptional commitment to this mission, as well as the Captain and crew of the *Marion Dufresne* and all involved in the evaluation.

e) Field Visit: Wendy Strahm, Anjara Saloma, 30 October – 30 November 2018

f) Date of IUCN approval of this report: April 2019

2. SUMMARY OF NATURAL VALUES

The French Austral Lands and Seas (Terres et mers australes françaises), a serial property covering a vast 67,297,900 ha, is composed of a collection of extremely isolated volcanic islands of diverse size and history located in two biogeographic zones, situated between 37°-50°S. The Crozet Archipelago, consisting of five main islands, and the glaciated and highly dissected Kerguelen, which consists of the main island plus more than 60 small islands, are situated in the sub-Antarctic zone. The islands of Amsterdam and St Paul are in the cool-temperate zone. Table 1 details the three serial components of nominated property including terrestrial and marine areas.

	Terrestrial (ha)	Marine (ha)	Total (ha)
Crozet Archipelago	34,800	25,543,600	25,578,400
Ile de la Possession	~14,907		
Ile de l'Est	~12,580		
Ilôts des Apôtres	~259		
Ile aux Cochons	~6,682		
Ile des Pingouins	~335		
Kerguelen Islands	726,000	38,982,000	39,708,000
Amsterdam and St Paul Islands	6,000	2,004,500	2,010,500
Total (ha):	766,900	66,530,100	67,297,900

Table 1: The three serial components of the nominated property

The islands house many areas of stunning natural beauty including steep eroded cliffs with many geological features including the emblematic “Arch of Kerguelen”, dramatic glacial fjords and mountains, and volcanic calderas. The abrupt cliffs, on which huge colonies of albatrosses breed, the shores with impressive colonies of penguins and seals, large flocks of small petrels and prions congregating in white clouds over the sea, and the massive, pristine sphagnum bogs dotted with nests of the rarest albatross in the world are truly superlative and of global significance. In addition, the nominated property includes some islands on which people have never set foot, making them some of the last untouched wilderness of the planet.

Due to the extreme isolation of these islands, their position between the polar and subtropical convergence, and exceptionally low human impact, the sea is particularly rich in pelagic species, providing rich trophic resources for seabirds and mammals, which congregate in their thousands on the islands. The large size of the nominated property and wide bathymetric range allows ecological processes to continue naturally (not taking into account human-induced climate change). This has produced an important richness of marine species, including an endemic subspecies of dolphin in the region. While the flora, due to distance from any continent and climate, is depauperate, eight of the 36 species of higher plants native to the islands are endemic. At least four species of birds are endemic, plus three other species endemic at a regional level. Similarly, a number of invertebrates are endemic and present interesting adaptations to extreme wind conditions and the absence of predators: some species of moth and flies have lost all or most of their wings. For such isolated islands, these evolutionary adaptations to extreme conditions are outstanding examples at a global level.

The nominated property protects one of, if not the greatest global concentrations of seabirds with more than 50 million birds, including the largest population of King Penguins (*Aptenodytes patagonicus*, LC) and Yellow-nosed Albatrosses (*Thalassarche carteri*, EN) in the world. Threatened and endemic species include Eaton's Pintail (*Anas eatoni*, VU), MacGillivray's Prion

(*Pachyptila macgillivrayi*, EN) and the emblematic Amsterdam Albatross (*Diomedea amsterdamensis*, EN). Eight species of albatross, of which six are considered globally threatened, and six species of penguin, of which three are considered globally threatened, breed in the nominated property. In addition, the nominated property hosts the second largest population of Elephant Seal (*Mirounga leonine*, LC) and the third largest population of Antarctic Fur Seal (*Arctocephalus gazelle*, LC) in the world. In terms of biodiversity and conservation importance for threatened species, the nominated property is clearly of global significance.

One third of the nature reserve area (both marine and terrestrial) is highly protected (IUCN protected area Categories Ia and Ib), with some islands, such as the Apôtres and Ile des Pingouins of Crozet and the Ile de l'Ouest, Nuageuses and Leygues Islands of Kerguelen, essentially pristine. The remaining terrestrial portion of the nominated property falls under IUCN Category IV, and the remaining marine area under Category VI.

3. COMPARISONS WITH OTHER AREAS

In addition to the excellent comparative information in the nomination, UN Environment-WCMC and IUCN investigated further the basis for application of the biodiversity criteria. In relation to criterion (ix), the nominated property does not overlap with any broad scale global conservation priority, however, it is found in three marine ecoregions which are not yet represented on the World Heritage List, and its (small) terrestrial area is found in a terrestrial ecoregion, which is currently only represented by one site. It is representative of the unique biodiversity found in Southern territories. In particular, the Crozet and Kerguelen Islands host one of the most diverse and abundant population of seabirds of the Southern Ocean, including globally important populations of penguins, albatross and petrels.

In terms of criterion (x), in addition to containing one of the highest concentrations and diversity of seabirds in the world, the site also has a very rich diversity of marine mammals, which includes significant populations of elephant seal and subantarctic fur seal. Compared to other existing sub-Antarctic sites, the nominated property shows a high level of bird and mammal diversity. The world's largest rookery of King Penguins is found within the nominated property. The The French Austral Lands and Seas also hosts several threatened species, including the Northern rockhopper penguin (*Eudyptes moseleyi*, EN), macaroni penguin (*Eudyptes chrysolophus*, VU) and various albatross species (including the only site where the Endangered Amsterdam Albatross breeds) and other seabirds (including 80% of the world population of Salvin's Prion (*Pachyptila salvini*, LC)). Finally, the nominated property comprises one Alliance for Zero Extinction (AZE) site and overlaps with as many as 17 International Bird Areas.

The nominated property is not found in a biogeographical unit which has been mentioned as a gap on the World Heritage List and does not overlap with any protected area considered to be amongst the most irreplaceable. However, in 1992, the IUCN Working Group on the Application of the World Heritage Convention to Islands in the Southern Ocean recommended to consider the Kerguelen and Crozet islands for inscription on the World Heritage List, and in 1992 a World Heritage Paper Series also identified the nominated site as having the potential to meet World Heritage criteria.

In terms of criterion (vii), whilst the comparative framework is not able to be quantitative, it is clear that the large size, pristine nature and remarkable congregations of wildlife of the nominated property make a compelling case.

In summary, IUCN has no doubt that the nominated property makes an extremely strong case to meet all three of the criteria under which it has been nominated.

4. INTEGRITY, PROTECTION AND MANAGEMENT

4.1. Protection

The entire property is legally well-protected, starting with the legal decree creating the national nature reserve in 2006 and its extension in 2016. Zoning is excellent with clear designation of a third of the nominated property designated under integral protection (IUCN Categories Ia and Ib) and strong protection of the remaining areas. The addition of reserve control over the entire Exclusive Economic Zone (EEZ) surrounding the reserve established in 2017 provides an effective buffer zone. The nominated property adheres to all international conventions supporting protection of its biodiversity: CITES (Convention on International Trade in Endangered Species of Flora and Fauna), CMS (Convention on Migratory Species), CCAMLR (Convention on the Conservation of Antarctic Marine Living Resources), ACP (Agreement on the Conservation of Albatrosses and Petrels), IWC (International Whaling Commission) and Ramsar Convention (of which the original nature reserve designated in 2006 is a Ramsar site). A specific French Action Plan for the conservation of the Amsterdam Albatross was launched in 2010 with 20 concrete activities aimed at protecting this species. The entire property is State-owned.

IUCN considers that the protection status of the nominated property meets the requirements of the Operational Guidelines.

4.2 Boundaries

The islands, covering a land area of about 770,000 ha, plus 1,570,000 ha of maritime territory, were designated as a national nature reserve in 2006 and are managed by the TAAF (French Austral and Antarctic Territories). The addition of larger marine areas around the islands in 2016 increased the size of

the reserve to 67,297,900 ha, placing it among the ten largest marine protected areas in the world.

In addition, a prefectural designation of March 2017 provided additional protection to the entire EEZ surrounding the reserves, acting as a de facto buffer zone covering 98,211,900 ha. While this buffer zone was not explicitly included as part of the nomination, all of the EEZ that does not fall within the reserve still has protected status and should be considered as the de facto buffer zone for the nominated property, as it effectively enhances protection of the three serial components. To the southeast of Kerguelen the French EEZ borders with the Australian EEZ surrounding Heard Island, a World Heritage property under strict protection. Fishing within these EEZ are covered by the CCAMLR (Convention on the Conservation of Antarctic Marine Living Resources), with a quota adjusted each year to ensure sustainability.

The nominated property thus includes all elements necessary to express its Outstanding Universal Value, and its large size (being the largest marine protected area yet to be nominated for World Heritage) ensures the complete representation of the features and processes that convey the nominated property's significance.

IUCN considers that the boundaries of the nominated property meet the requirements of the Operational Guidelines.

4.3 Management

The nominated property has an excellent management plan, with the first produced for 2011-2015 and extended until 2016. The results were rigorously evaluated by the reserve staff, the Scientific Committee and the other services of the TAAF, and contributed to the development of a second management plan, which was approved after public consultation in 2018 for a ten-year period of 2018-2027. The long-term objectives as well as operational objectives and planned activities are detailed and sound. The nominated property was recognized as one of the first additions to the IUCN Green List for Protected Areas in 2018, which is a reflection of the quality of its governance, design, effective management and conservation results.

Both the terrestrial and marine areas are zoned, with a third of the area completely off-limits for any human visit without special prefectural permission. For example, apart from Ile de la Possession (which has the base), no one is allowed to visit the islands in the Crozet Archipelago. The last visits to Ile aux Cochons were undertaken in 1974 and 1982, although a new expedition is being planned to study why the King Penguin colony on this island has declined, a population reduction observed by satellite imagery. Similarly, parts of the marine protected area are completely off-limits to fishing.

Governance is excellent, with a strong management authority guided by a consultative committee,

composed of 22 members (representatives of civil and military administrations, scientists and people with good experience of the area, and representatives from the fishing industry as well as the Prefect of la Réunion. This committee advises on the functioning, management and application of measures laid out by the law in order to ensure the conservation, protection and improvement of the reserve. This is supplemented by a scientific committee who advise on species management, ethical questions and which scientific studies should be allowed within the reserve. The main stakeholders in the reserve are scientists and fishing operators. Conflicts can arise with decisions on fishing as well as decisions on what scientific studies are required/allowed for the positive functioning of the reserve. The fishing quota is decided upon by the management authority in collaboration with the National Museum of Natural History in Paris, which has historically managed the fisheries in the region. Final authority lies with the Prefect of the TAAF who takes responsibility for the implementation of all agreed decisions.

The TAAF is a large and growing organisation responsible for all aspects outlined in the management plan. TAAF personnel number (in equivalent full-time positions) 75 staff for the headquarters at St Pierre in La Réunion and an office in Paris, including 17 military personnel, which assure the management and administration (finances and logistics) of the reserve. In the reserve itself, 89 TAAF staff are deployed of which 11 are based on the fishing boats to control the fisheries. In addition, there are about 23 staff employed by the nature reserve (RNN) with appropriate qualifications in ecology or biology, and a number possessing doctorates. Specialists include botanists, biologists (birds and marine mammals, invasive species). One fulltime biosecurity officer is employed with plans to hire a second, as prevention of alien species introduction is considered a priority. The reserve is well-staffed with a relatively young and motivated team, and appears well-equipped to face the challenges of conserving the nominated property, as it exists now, and improving it in the near future.

The TAAF as a whole appears to have a very healthy and sustainable budget, amounting to around €26 million/year, with about €10million raised from operating the *Marion Dufresne*, which supplies the military/scientific bases, and €10million from fishing rights. About 15% of its total budget comes from the State (Ministry of Overseas Territories and Ministry of Ecology) for managing the nature reserve and for protecting the TAAF environment. The TAAF can also receive funds from the European Commission (tapping into funds reserved for developing overseas territories, not available to mainland Europe) as well as private sector partnerships and individual donors. A substantial amount of funding is also raised by its philately service. While State funding has fluctuated in the past, the TAAF is not fully dependent on this and the reserve appears to be adequately funded with good long-term prospects and a strong dynamic to continue fund-raising for activities outlined in the Management Plan.

IUCN considers that the management of the nominated property meets the requirements of the Operational Guidelines.

4.4 Community

There are no indigenous communities or permanent residents on these islands.

4.5 Threats

The islands are uninhabited after several brief historical attempts at colonisation. Today there exist three small scientific/military bases: one on the Ile de la Possession at Crozet, the second and largest on the main island of Kerguelen, and a third small base on Amsterdam. Less than 350 people visit the islands annually, with around 170 military personnel/scientists/nature reserve rangers living on these bases and some scattered cabins year-round. Great effort is being made to reduce the impact of the three bases on the landscape and environment, the results of which is evident. However, the bases are small and their impact slight when compared with the size of the uninhabited area.

A maximum of 50 tourists land on the islands for just a few days. Day trips by visiting ships' crew (around 125 people/year) are also occasionally made. Considerable effort is being made to reduce the size (which is already small) and environmental impact of the bases on the reserve, as well as improve biosecurity aspects for everyone landing on the nominated property. IUCN sought, and received further reassurances regarding the approach to tourism in the nominated property, which are noted in the supplementary information submitted by the State Party.

Past damage caused by whale, penguin and seal hunting in the 19th and up to the beginning of the 20th century, as well as lobster fishing around Amsterdam, is now largely restored. Amsterdam also suffered from a number of fires which decimated the belt of the only tree species on the island (*Phyllica arborea*), reducing it to a small patch of 5 ha. However, tree replantation projects are restoring parts of this forest and in time should be remediated, particularly if the ambitious project to eradicate Norwegian rats, mice and cats from the island succeed (see below).

While there are still some islands in the nominated property that have remained free of alien invasive species, a number of invasives have been introduced to large areas of the nominated property. Principal invasive species include black and Norwegian rats, mice, rabbits and cats, and to a lesser extent reindeer on parts of Kerguelen. Trout on Kerguelen have also been introduced, with unknown impact on the ecosystem. Some invertebrate introductions have had negative impact on native invertebrates, particularly those that have evolved into wingless forms due to absence of predation. A number of introduced plants, such as dandelions and a few grasses, have become invasive. Introduced pathogens, such as avian cholera, are suspected to be the cause of the decline of some populations, such as the Yellow-nosed Albatross.

The nominated property has made impressive progress in reducing the impact of alien species, including the total eradication of cows, sheep, mouflon and chickens from the islands where they were introduced. Operations to eradicate or control rats, rabbits and cats have been successfully undertaken on a number of islands, with the biggest success being the eradication of black rats and rabbits from Ile Saint-Paul in 1997 (although unfortunately mice were not eradicated). A very ambitious plan to eradicate Norway rats, cats and mice from Amsterdam is in preparation. These efforts are highly creditable and need to be sustained and expanded in the future management of the nominated property.

The massive abundance of marine mammals and seabirds in the nominated property is largely due to geography, as the Crozet Archipelago (along with relatively nearby Marion and Prince Edward Islands) and Kerguelen Islands are situated on two of the largest marine plateaus in the Indian Ocean. Hence, there are rich fisheries in the zones surrounding the islands, based on two highly profitable species: the Patagonian Toothfish (*Dissostichus eleginoides*) and lobster (*Jasus polensis*). The commercial fisheries operating in both the reserve, as well as the rest of the EEZ, and are strictly controlled. There are seven long-line toothfish fishing boats and one lobster fishing boat operating under a strict quota with a reserve observer working on each fishing boat, who records the catch, ensures that the fishing boats are causing no harm to seabirds and marine mammals, and undertakes scientific studies. While commercial fishing within part of the protected area might seem, at first review, incompatible with conservation goals, the impact of this carefully controlled fishery aimed at one species has been demonstrated to be sustainable. The toothfish fishery received Marine Stewardship Council (MSC) certification for Kerguelen in 2013 and Crozet in 2017. Substantial fees received from the commercial fishing boats provide a notable percentage of the operational budget for the reserve.

The prefectural order placing the entire EEZ under protection (which includes that already inside the reserve plus the rest of the 200km area surrounding the islands) provides an effective buffer zone to the nominated property, and is adequately patrolled using satellite technology, two naval vessels, two patrol ships, the “Astrolabe” which services the Antarctic base, as well as the legal fishing ships. There has been no illegal fishing in the area for many years thanks to this system, with the last incident occurring in Crozet in 2013. In addition, the Australian EEZ surrounding Heard Island borders on the EEZ surrounding Kerguelen, and the TAAF collaborates with Australia to effectively protect the whole of the Kerguelen-Heard plateau.

The management of fisheries in the French EEZ (not allowing trawling and instituting strict regulations on long-line fishing) has had a very positive effect of virtually eliminating the previously very high seabird mortality, although its impact on marine mammals is more difficult to quantify. Efforts to reduce depredation

behaviours among killer whales (*Orcinus orca*, DD) and sperm whales (*Physeter microcephalus*, VU) are being undertaken although not yet demonstrated, and remain a threat for marine mammals.

Climate change impacts both marine and terrestrial species. Temperature variation may impact reproductive success of birds and marine mammals (i.e. need to go further for feeding), and is one hypothesis for a recent reported steep decline of the King Penguin population on Ile aux Cochons, as well as the Northern Rockhopper Penguin on Amsterdam. The State Party has provided further information on these issues in its supplementary information. Change in ocean acidity is also predicted to impact marine life. For terrestrial species, changes in temperature and humidity may favour introduced species over native. These issues are all essential for attention in the monitoring of the nominated property, and strategies will need to be devised, to the extent possible, as impacts become clear. Information on impacts due to climate change should also be shared as part of the tracking the effectiveness of international efforts to tackle global climate change, since ultimately the threats to the nominated property require ambitious implementation of global targets to tackle this issue.

In conclusion, IUCN considers that the integrity, protection and management of the nominated property meet the requirements of the Operational Guidelines.

5. ADDITIONAL COMMENTS

5.1 Justification of serial approach

When IUCN evaluates a serial World Heritage nomination it asks the following three questions:

a) What is the justification for the serial approach?

Despite being situated in two different biogeographic regions (Crozet and Kerguelen in the Subantarctic and Amsterdam-Saint Paul in the cool-temperate region), the biodiversity and ecological attributes of these three components are very similar (an exceptional concentration of marine diversity including seabirds and marine mammals). The serial approach is the only way to express the Outstanding Universal Value of this area, given the large expanse of deep ocean separating these unique “specks of land” and their surrounding seas. Each component contributes in a substantial, scientific, readily defined and discernible way, which can be easily understood and communicated.

b) Are the separate component parts of the nominated property functionally linked in relation to the requirements of the Operational Guidelines?

The three components are functionally linked in their conservation goals, within the same region and State Party, and fall under the same management authority. There is a solid mechanism for ensuring the coordinated management of the separate component parts. The nominated property relates to the Heard and McDonald Islands, which form part of the Kerguelen plateau and share a number of biodiversity

attributes, but are inscribed on a different basis and managed under a separate regime to the nominated property.

c) Is there an effective overall management framework for all the component parts of the nominated property?

Yes as the management plan covers all of the component parts under the same authority.

5.2 Associated cultural values

There are some significant historical values of the nominated property, such as the remnants of the whaling, sealing and lobster-fishing communities that are disappearing rapidly, due to the extreme weather conditions. The TAAF are undertaking archaeological and cultural studies on how best to preserve this history, including options to preserve evidence ex situ.

6. APPLICATION OF CRITERIA

The nomination of the **French Austral Lands and Seas** has been nominated under natural criteria (vii), (ix) and (x).

Criterion (vii): Superlative natural phenomena or natural beauty or aesthetic importance

The French Austral Lands and Seas, with their pristine natural heritage, are one of the last wilderness areas on the planet. They feature a unique concentration of marine birds and mammals in the sub-Antarctic region, with enormous colonies where an abundance of species, sounds, colours and scents blend harmoniously. A few examples are the world's largest colony of King Penguins on Île aux Cochons in Crozet Archipelago, the world's biggest colony of Yellow-nosed Albatross on the sheer cliffs of Entrecasteaux on Amsterdam Island, and the second largest population of Elephant Seals in the world on Courbet Peninsula in Kerguelen. Grandiose volcanic landscapes teeming with life reinforce the exceptional character of the nominated property. These territories stimulate the imagination and are a source of inspiration to anyone.

IUCN considers that the nominated property meets this criterion.

Criterion (ix): Ecosystems/communities and ecological/biological processes

The French Austral Lands and Seas lie at the convergence of three ocean fronts and have large continental shelves. This makes them extremely productive areas in the midst of a relatively poor ocean, allowing the development of a rich and diverse food web.

The nominated property is vast and includes one of the largest marine protected areas in the world. Because of this, it features a high representation of the biodiversity of the Southern Ocean and the ecological processes that occur in it. It protects all the key areas to support the life cycles of species in the territory, thus ensuring the maintenance of high concentrations of

marine birds and mammals. The importance of these primary productive areas and their role in the regulation of the carbon cycle make an essential contribution to the health of oceans.

These remote islands, which lie thousands of kilometres away from any continent and are protected from the impact of human activities, are true showcases of biological evolution and therefore unique models to monitor global changes.

IUCN considers that the nominated property meets this criterion.

Criterion (x): Biodiversity and threatened species

The French Austral Lands and Seas are an exceptional site for the conservation of the world's birds. They are home to over 50 million birds of up to 47 species. Close to half of the global population of 16 of these species breeds on these islands. For example, they feature the largest population of King Penguin and Yellow-nosed Albatross in the world, as well as eight endemic species such as the Amsterdam Albatross, a flagship species and one of the world's rarest birds.

They also host large populations of Pinnipeds, including the second largest colony of Southern Elephant Seals and the third largest colony of sub-Antarctic Fur Seals in the world, and also cetaceans such as Commerson's Dolphin, an endemic subspecies occurring in Kerguelen.

The species richness and diversity of the French Austral Lands and Seas, which is unique in the Southern Ocean, gives the nominated property an Outstanding Universal Value.

IUCN considers that the nominated property meets this criterion.

7. RECOMMENDATIONS

IUCN recommends that the World Heritage Committee adopts the following draft decision:

1. Having examined Documents WHC/19/43.COM/8B and WHC/19/43.COM/INF.8B2;
2. Inscribes **French Austral Lands and Seas (France)** on the World Heritage List under natural criteria (vii), (ix) and (x);
3. Adopts the following Statement of Outstanding Universal Value:

Brief synthesis

Located between the 37th and 50th parallels south, the French Austral Lands and Seas comprise the largest of the rare emerged lands of the southern Indian Ocean, including Crozet Archipelago, the Kerguelen Islands and Saint-Paul and Amsterdam Islands. Because of their oceanographic and geomorphological features, their waters are extremely productive and form the basis of a rich and diverse food web. This

'oasis' in the middle of the Southern Sea supports one of the world's highest concentrations and diversities of marine birds and mammals. The grandiose volcanic landscapes that harbour this wild and abundant nature give this site its exceptional character.

Because of its huge size – more than 672 000 km² –, this site contains a high representation of the biodiversity of the Southern Ocean and protects the ecological processes that are essential for these species to thrive. For this reason, the territory plays a key role in the health of oceans worldwide, particularly in the regulation of the carbon cycle.

As a result of their great distance from centres of human activities, the French Austral Lands and Seas are very well preserved showcases of biological evolution and therefore unique areas for scientific research, particularly for long-term monitoring of populations of marine birds and mammals and for the study of the effects of global change. Aware of this exceptional heritage, the authority of the French Austral Lands and Seas, through the nature reserve and with the commitment of the scientific community, has adopted a proven and recognized management system to ensure its preservation for future generations.

Criteria

Criterion (vii)

The French Austral Lands and Seas, with their pristine natural heritage, are one of the last wilderness areas on the planet. They feature a unique concentration of marine birds and mammals in the sub-Antarctic region, with enormous colonies where an abundance of species, sounds, colours and scents blend harmoniously. A few examples are the world's largest colony of King Penguins on Île aux Cochons in Crozet Archipelago, the world's biggest colony of Yellow-nosed Albatross on the sheer cliffs of Entrecasteaux on Amsterdam Island, and the second largest population of Elephant Seals in the world on Courbet Peninsula in Kerguelen. Grandiose volcanic landscapes teeming with life reinforce the exceptional character of the property. These territories stimulate the imagination and are a source of inspiration to anyone.

Criterion (ix)

The French Austral Lands and Seas lie at the convergence of three ocean fronts and have large continental shelves. This makes them extremely productive areas in the midst of a relatively poor ocean, allowing the development of a rich and diverse food web.

The property is vast and includes one of the largest marine protected areas in the world. Because of this, it features a high representation of the biodiversity of the Southern Ocean and the ecological processes that occur in it. It protects all the key areas to support the life cycles of species in the territory, thus ensuring the maintenance of high concentrations of marine birds and mammals. The importance of these primary productive areas and their role in the regulation of the

carbon cycle make an essential contribution to the health of oceans.

These remote islands, which lie thousands of kilometres away from any continent and are protected from the impact of human activities, are true showcases of biological evolution and therefore unique models to monitor global changes.

Criterion (x)

The French Austral Lands and Seas are an exceptional site for the conservation of the world's birds. They are home to over 50 million birds of up to 47 species. Close to half of the global population of 16 of these species breeds on these islands. For example, they feature the largest population of King Penguin and Yellow-nosed Albatross in the world, as well as eight endemic species such as the Amsterdam Albatross, a flagship species and one of the world's rarest birds.

They also host large populations of Pinnipeds, including the second largest colony of Southern Elephant Seals and the third largest colony of sub-Antarctic Fur Seals in the world, and also cetaceans such as Commerson's Dolphin, an endemic subspecies occurring in Kerguelen.

The species richness and diversity of the French Austral Lands and Seas, which is unique in the Southern Ocean, gives the property an Outstanding Universal Value.

Integrity

The ecosystems of the French Austral Lands and Seas, which are uninhabited and thus protected from the direct impact of human activities, feature large populations of native species in quasi-intact habitats, as well as complex and undisturbed ecological processes. The site is huge – it is one of the largest marine protected areas in the world with over 672 000 km² – and covers all the functional areas that are essential for species' life cycles, thus ensuring the maintenance of their richness and diversity in the long term. The integrity of the property is ensured by a high ecological connectivity and a common management system. The National Nature Reserve of the French Austral Lands and Seas, which is in charge of protecting the site, implements effective actions to address threats such as alien species, fisheries and global change, but also restoration activities such as the planting of *Phyllica arborea* (on Amsterdam Island) and the dismantling of old structures. No development of human activities has been planned in the medium term.

Protection and management requirements

The property adheres to all international conventions supporting protection of its biodiversity: CITES (Convention on International Trade in Endangered Species of Flora and Fauna), CMS (Convention on Migratory Species), CCAMLR (Convention on the Conservation of Antarctic Marine Living Resources), ACP (Agreement on the Conservation of Albatrosses and Petrels), IWC (International Whaling Commission)

and Ramsar (of which the original nature reserve designated in 2006 is a Ramsar site).

The French Austral Lands and Seas were designated as a national nature reserve in 2006 and enlarged in 2016 to cover more than 672 000 km². They have the highest level of protection that exists under French regulations. Since March 2017, the regulatory framework and the governance of the nature reserve also apply to the entire EEZ (exclusive economic zone), that is, over 1.66 million km². Human activities are strictly prohibited in almost a third of the site and regulated in the rest of the area through obligatory impact assessment and the agreement of the site manager. In addition, all the species of marine birds and mammals are strictly protected by French law and international conventions.

The TAAF Authority, which manages the nature reserve along with its management and scientific boards, implements a proven and recognized management system based on a ten-year management plan setting out the objectives. The threats are effectively managed, notably by measures to regulate introduced species and limiting the environmental impacts of fisheries. The management model can be adapted to global change thanks to the close relationship between science and management,

achieved through historic partnerships with scientific laboratories, namely the French “Institut Polaire Paul Emile Victor” (IPEV).

4. Commends the State Party on its effective management of tourism activities related to the property and requests the State Party to continue careful monitoring of visitor numbers, tourism operations and access to ensure there is no increase in use that would jeopardize the fragile ecosystems and habitats of the property

5. Further requests the State Party to continue programmes to control the impacts of alien invasive species on the property and to ensure strict biosecurity measures are in place to mitigate the potential of further introductions, or the spread, of alien invasive species.

6. Also requests the State Party to maintain, and strengthen if necessary, the measures which are in place to strictly regulate commercial fishing within the Exclusive Economic Zone (EEZ) which have resulted in no illegal fishing incidents being reported since 2013, and to sustain the resourcing levels needed to underpin these measures.

Map 1: Location of the nominated property

