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# *Fratercula arctica*, Atlantic Puffin

## Assessment by: BirdLife International


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# Taxonomy

| Kingdom | Phylum | Class | Order | Family |
|---|---|---|---|---|
| Animalia | Chordata | Aves | Charadriiformes | Alcidae |

**Taxon Name:** *Fratercula arctica* (Linnaeus, 1758)

**Regional Assessments:**

- Europe

**Common Name(s):**

- English: Atlantic Puffin, Puffin

**Taxonomic Source(s):**

Cramp, S. and Simmons, K.E.L. (eds). 1977-1994. *Handbook of the birds of Europe, the Middle East and Africa. The birds of the western Palearctic*. Oxford University Press, Oxford.

**Identification Information:**

26-36 cm, wingspan 47-63 cm. Mostly black upperparts from neck, across throat with white breast, flanks and belly (Nettleship *et al*. 2014). White/grey face with black band from forehead to nape. Large triangular bill, radially compressed, bluish grey at base with pale yellow cere and orange/yellow rictal rosette at gape. Orange-red eye ring with soft brown iris. Juvenile resembles adult but generally smaller. **Similar species** Horned Puffin *F. corniculata* is larger and with different bill and facial ornaments.

# Assessment Information

**Red List Category & Criteria:** Vulnerable A4abcde ver 3.1

**Year Published:** 2018

**Date Assessed:** August 7, 2018

**Justification:**

This species has experienced rapid declines across most of its European range. Population trends outside Europe are unknown. Extrapolated over three generation lengths and allowing for uncertainty, the population is thought to be declining at a rate sufficient to be listed as Vulnerable. Should population trends become less uncertain both within and outside its European range it may merit uplisting or downlisting.

**Previously Published Red List Assessments**

2017 – Vulnerable (VU)
http://dx.doi.org/10.2305/IUCN.UK.2017-3.RLTS.T22694927A117606911.en

2016 – Vulnerable (VU)
http://dx.doi.org/10.2305/IUCN.UK.2017-1.RLTS.T22694927A110638141.en

2016 – Vulnerable (VU)
http://dx.doi.org/10.2305/IUCN.UK.2016-3.RLTS.T22694927A93477427.en

2015 – Vulnerable (VU)
http://dx.doi.org/10.2305/IUCN.UK.2015-4.RLTS.T22694927A82593109.en

2012 – Least Concern (LC)
http://dx.doi.org/10.2305/IUCN.UK.2012-1.RLTS.T22694927A38908739.en

2009 – Least Concern (LC)

2008 – Least Concern (LC)

2004 – Least Concern (LC)

2000 – Lower Risk/least concern (LR/lc)

1994 – Lower Risk/least concern (LR/lc)

1988 – Lower Risk/least concern (LR/lc)

# Geographic Range

### Range Description:

The Atlantic Puffin can be found throughout the North Atlantic Ocean, from north-west Greenland (**to Denmark**) to the coastline of Newfoundland (**Canada**) and Maine (**USA**) in the west, and from north-west **Russia** down to the Canary Islands, **Spain** (in winter) in the east (del Hoyo *et al*. 1996). The population in **Iceland** and **Norway**, which together account for 80% of the European population, decreased markedly since the early 2000s (BirdLife International 2015). In much of Iceland breeding has generally failed every year since 2003, but in the north, at least, it has been borderline sustainable (G. A. Gudmundsson *in litt*. 2015, E. Hansen *in litt.* 2016, A. Petersen *in litt.* 2016). The largest Norwegian colony, Røst, has experienced sharp declines from almost 1.5 million breeding pairs in 1979 to only 289,000 pairs in 2015, and has produced virtually no chicks in the last 9 years (T. Anker-Nilssen *in litt*. 2015, Anker-Nilssen *et al.* 2016). Most other Norwegian colonies are much smaller, including that at Runde, which has also declined; however most colonies remain unmonitored (A. O. Folkestad *in litt*. 2015, T. Anker-Nilssen *in litt*. 2015, 2016). Numbers on the southern coast of the Barents Sea have increased such that declines in the total population in Norway are estimated at approximately 33% since the early 1980s (Fauchald *et al.* 2015). Populations in the Faroe Islands (Denmark) and Greenland are also reported to be decreasing (BirdLife International 2015).
The population size was estimated to be increasing in the U.K. during 1969-2000, and populations in the North Sea are probably currently stable or increasing after a decline in the 2000s due to two very low overwinter survivals of adults (Harris and Wanless 2011, Harris *et al.* 2013). A reduction in the recruitment of juveniles into the breeding population is thought to be the most likely factor involved in a sharp decrease in the number of puffins at the Fair Isle (U.K.) breeding colony; from approximately 20,200 individuals in 1986 to 10,700 individuals in 2012 (Miles *et al*. 2015). Adult survival probability remained similar across the 27 years of the study, whilst breeding success, the number of feeding visits by adults to chicks and the size of available prey fish all decreased. Trends from North America are uncertain, with the population at Great Island, Witless Bay showing increases between 1979 and 1994, but it has potentially stabilised or is in decline now (Wilhelm *et al.* 2015). A restoration project off the coast of Maine has also had some success (D. Wege *in litt.* 2002, see http://projectpuffin.audubon.org/).

### Country Occurrence:

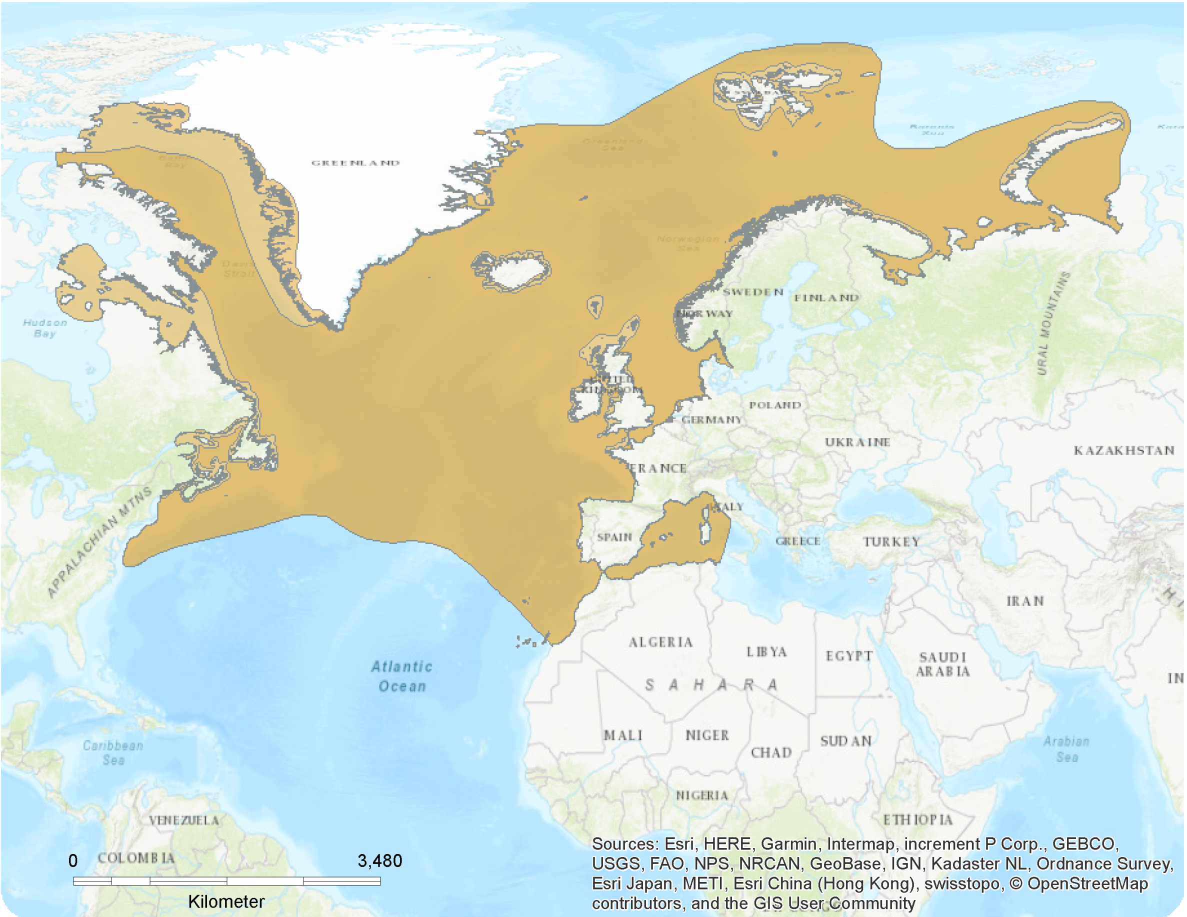
**Native:** Algeria; Belgium; Canada; Denmark; Faroe Islands; France; Germany; Gibraltar; Greenland; Iceland; Ireland; Italy; Morocco; Netherlands; Norway; Portugal; Russian Federation (Central Asian Russia - Vagrant, European Russia); Saint Pierre and Miquelon; Spain; Svalbard and Jan Mayen; Sweden; Tunisia; United Kingdom; United States

**Vagrant:** Austria; Bermuda; Croatia; Finland; Hungary; Malta; Montenegro; Poland; Serbia

**Present - origin uncertain:** Estonia; Latvia; Lithuania; Monaco; Western Sahara

# Distribution Map

*Fratercula arctica*

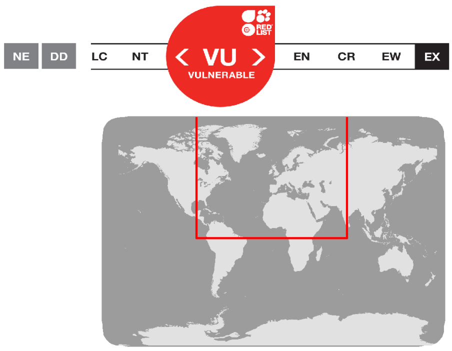



Range

- Extant (breeding)
- Extant (non-breeding)

Compiled by:

BirdLife International and Handbook of the Birds of the World (2016)




The boundaries and names shown and the designations used on this map do not imply any official endorsement, acceptance or opinion by IUCN.

# Population

The European population is estimated to be 4,770,000-5,780,000 pairs, which equates to 9,550,000-11,600,000 mature individuals (BirdLife International 2015). The global population size is estimated at 12–14 million mature individuals (Harris and Wanless 2011; Berglund and Hentati-Sundberg 2014).

### Trend Justification

The population size in Europe is estimated and projected to decrease by 50-79% during 2000-2065 (three generations) (BirdLife International 2015). Europe holds >90% of the global population, so the projected declines in Europe are globally significant. The overall trend of the West Atlantic population is unknown (Berglund and Hentati-Sundberg 2014), and it is very tentatively suspected that overall declines may fall in the range 30-49% over three generations. Populations are suspected to be declining rapidly through the combined impact of predation by invasive species, pollution, food shortages caused by the depletion of fisheries and adult mortality in fishing nets.

**Current Population Trend:** Decreasing

# Habitat and Ecology (see Appendix for additional information)

The species is exclusively marine, found on rocky coasts and offshore islands (Nettleship *et al*. 2014). It nests on grassy maritime slopes, sea cliffs and rocky slopes. During the winter it is wide-ranging, found in offshore and pelagic habitats.

The species is a pursuit-diver, catching most of its prey within 30 m of the water surface but capable of diving to 60 m (Piatt and Nettleship 1985, Burger and Simpson 1986). They prey on 'forage' species, including juvenile pelagic fishes, such as herring *Clupea harengus*, juvenile and adult capelin *Mallotus villosus*, and sandeel *Ammodytes* spp. (Barrett *et al*. 1987). At times, they also prey on juvenile demersal fishes, such as gadids; planktonic crustaceans; and polychaete worms (Harris and Hislop 1978, Barrett *et al.* 1987, Martin 1989, Rodway and Montevecchi 1996, Harris *et al.* 2015). In the southern and eastern parts of its range, sandeels usually form the majority of the prey fed to chicks (Corkhill 1973, Hislop and Harris 1985, Harris and Wanless 1986, Martin 1989, Harris and Riddiford 1989). However, there are exceptions, such as at Skomer Island in 1969 when sprat made up the majority of the diet fed to chicks (Corkhill 1973), and in the Lofoten islands, where first-year herring are often the commonest food of chicks (Anker-Nilssen and Aarvak 2006).

When feeding chicks, birds generally forage within 10 km of their colony, but may range as far as 50 to 100 km or more (Harris 1984, Anker-Nilssen and Lorentsen 1990, Rodway and Montevecchi 1996). A boat transect run on one day in 1970 found that 85% of all birds seen were concentrated within just 3 km of the colony (BirdLife International 2000), but other studies have found peaks in the density of foraging birds at up to 40 km distance from the colony (Webb *et al.* 1985, Stone *et al.* 1992, Stone *et al.* 1993, BirdLife International 2000). Similarly, surveys and GPS tracking at the Isle of May, Scotland, suggest that birds forage close to the breeding colony, but also at other sites up to 40 km away (Wanless *et al.* 1990, BirdLife International 2000, Harris *et al.* 2012). Various studies (Pearson 1968, Corkhill 1973, Bradstreet and Brown 1985, BirdLife International 2000), based on different breeding colonies, have estimated the theoretical maximum foraging radius at anywhere from 32 km (Corkhill 1973) to 200 km (Bradstreet and Brown 1985).

**Systems:** Terrestrial, Marine

## Threats (see Appendix for additional information)

This species is highly susceptible to the impacts of climate change, such as increased sea surface temperature (SST) and associated shifts in prey (e.g. Herring, Sandeel) distribution, abundance and quality (Durant *et al.* 2003, Sandvik *et al.* 2005). Breeding failures are usually assumed to be due to food shortages (e.g. Martin 1989, Anker-Nilssen and Aarvak 2006, Harris and Wanless 2011, Anker-Nilssen *et al.* 2016), as changing temperatures can cause mismatches between plankton blooms, prey abundance peaks and Puffin breeding seasons, leading to poor chick growth, shortened nesting periods and lower fledging success (Durant *et al.* 2006). Sandvik *et al.* (2005) demonstrated decreased survival in North Atlantic seabirds (including the puffin) with increasing SST. There are several recorded examples of food stock collapse and its detrimental consequences for Puffins; The Sandeel population collapse near Shetland in 1985-1990 led to successive years of breeding failures (Mitchell *et al.* 2004), and another Sandeel crash in South and West Iceland and the Faroes in 2003-2005 led to food scarcity and collapse of Puffin populations with some colonies having 0% breeding success (Hansen and Sigurdsson *in litt.* 2016). Extreme weather and storms can cause mass mortality of seabirds, with large wrecks recorded following severe winter storms at sea, and represents a potentially growing threat due to the predicted increase in the frequency of extreme weather events (Melillo *et al.* 2014). In Pop Witless Bay, extreme cold and wet weather in 2011 caused the death of thousands of chicks across Witless Bay Reserve (Wilhelm *et al.* 2015). A severe wreck in March 2016 also delayed breeding on Isle of May (Newell 2016). The 2002 Norway wreck could have caused the death of as many as 100,000 birds, diagnosed as prolonged exposure to adverse feeding conditions at sea (but may also have been caused by disease or climatic factors affecting prey abundance) (Anker-Nilssen *et al.* 2013). A large wreck occurred in March 2013 along the coast of Scotland/northeastern UK, also coinciding with periods of extreme weather (3,055 and 1,364 birds collected on Scottish and English coast, respectively), where the majority died of starvation, likely due to difficulty feeding at sea (Harris and Elkins 2013). Productivity fell to 0.46 in the Farne islands in 2015 due to flooding caused by two major storms that destroyed nests with chicks (Wildlife review 2015). More such examples have been recorded throughout the species' range. The threat of climate change to food stocks is exacerbated by the unsustainable harvesting of prey species by commercial fisheries, causing further reductions in food availability and subsequent low breeding success (Breton and Diamond 2014). Major fisheries have been noted as contributing to the collapse of key prey fish species since the 1960s and been linked to reproductive failure at colonies such as Røst, Norway (reduced recruitment due to food shortage in breeding season is considered the most likely cause of decline during 1986-2012) (Tasker *et al.* 2000, Anker-Nilssen *et al.* 2003, Miles *et al.* 2015). In addition to overharvesting of prey stocks, commercial fisheries are a cause of direct mortality. The Atlantic Puffin's foraging strategy (diving) makes the species susceptible to being caught in gillnets and other fishing gear, but bycatch has not been recorded in significantly large numbers (Tasker *et al.* 2000, Rogan and Mackey 2007) and likely has a "trivial effect" on Puffin populations (Harris and Wanless 2011). At the breeding colonies, the species is vulnerable to invasive predators. American Mink *Neovison vison* is known to take puffins from burrows, and the escape of mink from fur farms in Iceland in the early 1930s drove many colonies to extinction in the following decades (Harris and Wanless 2011). Mink are still causing low rates of chick survival in parts of the range, including Hornøya, Norway (Barrett 2015). Rats *Rattus* spp. depredate eggs and chicks and have been linked to drastic colony declines and local extinctions in Sweden (Harris and Wanless 2011), on the Faroe Islands (Stempniewicz and Jensen 2007), Lundy Island (Lock 2006), Shiant Islands (Lockley 1953), and Ailsa Craig and Puffin

Islands (Mitchell *et al.* 2004) (see also TemaNord 2010). Recolonisation and population recovery can be seen after rat eradication (Lock 2006). Hunting of puffins, mostly for human consumption, is allowed on the Faeroe Islands and Iceland (Thorup *et al.* 2014), yet uncontrolled harvesting in nesting grounds may lead to local declines. Adult birds are taken during the nesting season, thus causing reduced reproductive success and significant adult mortality, in addition to the general effects of disturbance. 10,000 individuals were recorded to be taken annually in the Nólsoy colony (Faeroes) and 150,000 in Iceland. This is suspected to limit recovery of populations and may exceed recruitment rate on Iceland, while the Nólsoy population is considered stable only due to migration (Stempniewicz and Jensen 2007). The species is particularly vulnerable to disturbance when nesting, and human intrusion associated with other recreational activities (tourism, walks) may also impact the species. Nest desertions have been recorded (Nettleship *et al.* 2014), and at one study site a 40% decrease in breeding success was seen in a frequently visited area compared to the control site (Rodway *et al.* 1996). The species is also vulnerable to oil spills and other forms of marine pollution. Past oil spills have had severe impacts on affected puffin populations; the wreck of the Torrey Canyon in 1967 was linked to decline in puffin numbers at Sept-Iles (Brittany) and the wreck of the oil tanker Amoco Cadiz (1978) badly affected moulting puffins in the region, killing 1,391 confirmed puffins which coincided with a 44% reduction in the Sept-Iles population. The number of Puffins killed is likely an underestimate, as many will not be recovered or identified on beaches after wrecks (Harris and Wanless 2011). Oiled puffins are often unable to fly, accentuating the effects of reduced food supplies and extreme weather preventing feeding. However, other oil spills seem to have had less effect on Puffin populations; the Tricolor spill in 2003 (Netherlands) was not found to have been a major cause of a local puffin wreck (35% of birds were oiled, most after death) (Camphuysen 2003). Nonetheless, the greatest impact of oil spills is likely to be on long-term condition of adults and ecosystem degradation, imposing a further risk to the Atlantic Puffin's food resources. Various incidences of other marine pollutants have been recorded in the species; in 1970 21% of carcasses found in Scotland, and 22% of those shot off the coast of Norway contained elastic threads and other plastic particles (nylon thread, plastic beads etc). Given that the same proportion of pollutants were measured in healthy and deceased Puffins on Isle of May, pollution is regarded unlikely to be the primary cause of death, but may still pose a risk by accumulating over time and accentuating other threats for individuals already compromised by low food availability, adverse climatic conditions or hunting. The highest proportion of pollutants were found in first year birds, which may be explained by higher mortality among young birds with higher loads and only the less polluted birds reaching adulthood (Harris and Wanless 2011).

Increasing numbers of offshore windfarms could result in displacement, but the risk of collision is considered very low (Bradbury *et al.* 2014). However, a study into puffin vision suggests they may be vulnerable to collision with man-made objects related to underwater wind farms (Martin and Wanless 2015).

## Conservation Actions (see Appendix for additional information)

**Conservation and Research Actions Underway**

The species is listed under the African Eurasian Waterbird Agreement. It is included in the Action Plan for Seabirds in Western-Nordic Areas (TemaNord 2010). There are 76 marine Important Bird Areas identified across the European region. Within the EU there are 40 Special Protection Areas which list this species as occurring within its boundaries.

**Conservation and Research Actions Proposed**

Further identify important sites for this species, particularly in offshore regions and designation as marine protected areas. Increase knowledge of the species's ecological requirements in winter (Harris *et al.* 2015). Develop monitoring schemes to understand population trends (Nettleship *et al*. 2014). Identify the risks of different activities on seabirds, and locations sensitive to seabirds. Continue eradication of invasive predators from breeding colonies. Manage fisheries to ensure long-term sustainability of key stocks (e.g. sandeels). Establish observer schemes for bycatch and prepare National/Regional plans of action on seabird bycatch. Continue Arctic Monitoring and Assessment Programme (AMAP) monitoring of seabird contaminants; include new contaminants and secure communication between seabird and contaminants research. Develop a system to monitor and predict impacts of offshore oil developments on important areas for the species, in particular, key wintering sites (Nettleship *et al*. 2014). Increase the level of understanding among the public of introducing hunting restrictions. Develop codes-of-conduct for more organised activities (e.g. tourism). Ensure that appropriate protection (national laws and international agreements) applies to new areas and times in cases of changes in seabird migration routes and times.

# Credits

| | |
|---|---|
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## Disclaimer

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## External Resources

For Images and External Links to Additional Information, please see the Red List website.

# Appendix

## Habitats

(http://www.iucnredlist.org/technical-documents/classification-schemes)

| Habitat | Season | Suitability | Major Importance? |
|---|---|---|---|
| 4. Grassland -> 4.2. Grassland - Subarctic | Breeding | Suitable | Yes |
| 4. Grassland -> 4.4. Grassland - Temperate | Breeding | Suitable | Yes |
| 9. Marine Neritic -> 9.1. Marine Neritic - Pelagic | Breeding | Suitable | Yes |
| 9. Marine Neritic -> 9.1. Marine Neritic - Pelagic | Non-breeding | Suitable | Yes |
| 10. Marine Oceanic -> 10.1. Marine Oceanic - Epipelagic (0-200m) | Breeding | Suitable | No |
| 10. Marine Oceanic -> 10.1. Marine Oceanic - Epipelagic (0-200m) | Non-breeding | Suitable | No |
| 13. Marine Coastal/Supratidal -> 13.1. Marine Coastal/Supratidal - Sea Cliffs and Rocky Offshore Islands | Breeding | Suitable | No |

## Threats

(http://www.iucnredlist.org/technical-documents/classification-schemes)

| Threat | Timing | Scope | Severity | Impact Score |
|---|---|---|---|---|
| 11. Climate change & severe weather -> 11.3. Temperature extremes | Ongoing | Majority (50-90%) | Slow, significant declines | Medium impact: 6 |
| | Stresses: | 1. Ecosystem stresses -> 1.3. Indirect ecosystem effects<br>2. Species Stresses -> 2.1. Species mortality<br>2. Species Stresses -> 2.3. Indirect species effects -> 2.3.7. Reduced reproductive success | | |
| 11. Climate change & severe weather -> 11.4. Storms & flooding | Ongoing | Minority (50%) | Rapid declines | Medium impact: 6 |
| | Stresses: | 1. Ecosystem stresses -> 1.3. Indirect ecosystem effects<br>2. Species Stresses -> 2.1. Species mortality<br>2. Species Stresses -> 2.2. Species disturbance | | |
| 3. Energy production & mining -> 3.3. Renewable energy | Ongoing | Minority (50%) | Causing/could cause fluctuations | Low impact: 5 |
| | Stresses: | 1. Ecosystem stresses -> 1.2. Ecosystem degradation<br>1. Ecosystem stresses -> 1.3. Indirect ecosystem effects | | |
| 5. Biological resource use -> 5.1. Hunting & trapping terrestrial animals -> 5.1.1. Intentional use (species is the target) | Ongoing | Minority (50%) | Slow, significant declines | Low impact: 5 |
| | Stresses: | 2. Species Stresses -> 2.1. Species mortality<br>2. Species Stresses -> 2.2. Species disturbance<br>2. Species Stresses -> 2.3. Indirect species effects -> 2.3.7. Reduced reproductive success | | |

| | | | | |
|---|---|---|---|---|
| 5. Biological resource use -> 5.4. Fishing & harvesting aquatic resources -> 5.4.4. Unintentional effects: (large scale) [harvest] | Ongoing | Unknown | Rapid declines | Unknown |
| | Stresses: | 2. Species Stresses -> 2.1. Species mortality<br>2. Species Stresses -> 2.3. Indirect species effects -> 2.3.7. Reduced reproductive success | | |
| 6. Human intrusions & disturbance -> 6.1. Recreational activities | Ongoing | Minority (50%) | Negligible declines | Low impact: 4 |
| | Stresses: | 2. Species Stresses -> 2.2. Species disturbance<br>2. Species Stresses -> 2.3. Indirect species effects -> 2.3.7. Reduced reproductive success | | |
| 8. Invasive and other problematic species, genes & diseases -> 8.1. Invasive non-native/alien species/diseases -> 8.1.2. Named species (Neovison vison) | Ongoing | Majority (50-90%) | Slow, significant declines | Medium impact: 6 |
| | Stresses: | 1. Ecosystem stresses -> 1.2. Ecosystem degradation<br>2. Species Stresses -> 2.1. Species mortality<br>2. Species Stresses -> 2.3. Indirect species effects -> 2.3.7. Reduced reproductive success | | |
| 8. Invasive and other problematic species, genes & diseases -> 8.1. Invasive non-native/alien species/diseases -> 8.1.2. Named species (Unspecified Rattus) | Ongoing | Majority (50-90%) | Slow, significant declines | Medium impact: 6 |
| | Stresses: | 2. Species Stresses -> 2.1. Species mortality<br>2. Species Stresses -> 2.2. Species disturbance<br>2. Species Stresses -> 2.3. Indirect species effects -> 2.3.7. Reduced reproductive success | | |
| 9. Pollution -> 9.2. Industrial & military effluents -> 9.2.1. Oil spills | Ongoing | Minority (50%) | Slow, significant declines | Low impact: 5 |
| | Stresses: | 1. Ecosystem stresses -> 1.2. Ecosystem degradation<br>2. Species Stresses -> 2.1. Species mortality<br>2. Species Stresses -> 2.3. Indirect species effects -> 2.3.7. Reduced reproductive success | | |
| 9. Pollution -> 9.4. Garbage & solid waste | Ongoing | Minority (50%) | Unknown | Unknown |
| | Stresses: | 2. Species Stresses -> 2.3. Indirect species effects -> 2.3.7. Reduced reproductive success | | |

# Conservation Actions in Place

**([http://www.iucnredlist.org/technical-documents/classification-schemes](http://www.iucnredlist.org/technical-documents/classification-schemes))**

| **Conservation Actions in Place** |
|---|
| In-Place Research, Monitoring and Planning |
| Action Recovery plan: Yes |
| Systematic monitoring scheme: No |
| In-Place Land/Water Protection and Management |
| Conservation sites identified: Yes, over entire range |
| Occur in at least one PA: Yes |

| Conservation Actions in Place |
| --- |
| Invasive species control or prevention: Yes |
| In-Place Species Management |
| Successfully reintroduced or introduced beningly: Yes |
| Subject to ex-situ conservation: No |
| In-Place Education |
| Subject to recent education and awareness programmes: Yes |
| Included in international legislation: Yes |
| Subject to any international management/trade controls: No |

## Conservation Actions Needed
**(http://www.iucnredlist.org/technical-documents/classification-schemes)**

| Conservation Actions Needed |
| --- |
| 1. Land/water protection -> 1.1. Site/area protection |
| 1. Land/water protection -> 1.2. Resource & habitat protection |
| 2. Land/water management -> 2.1. Site/area management |
| 2. Land/water management -> 2.2. Invasive/problematic species control |
| 4. Education & awareness -> 4.3. Awareness & communications |
| 5. Law & policy -> 5.2. Policies and regulations |
| 5. Law & policy -> 5.4. Compliance and enforcement -> 5.4.4. Scale unspecified |

## Research Needed
**(http://www.iucnredlist.org/technical-documents/classification-schemes)**

| Research Needed |
| --- |
| 1. Research -> 1.2. Population size, distribution & trends |
| 1. Research -> 1.3. Life history & ecology |
| 1. Research -> 1.5. Threats |
| 3. Monitoring -> 3.1. Population trends |

## Additional Data Fields

| Distribution |
| --- |
| Continuing decline in area of occupancy (AOO): Unknown |

| |
|---|
| **Distribution** |
| Extreme fluctuations in area of occupancy (AOO): No |
| Estimated extent of occurrence (EOO) ($km^2$): 20800000 |
| Continuing decline in extent of occurrence (EOO): Unknown |
| Extreme fluctuations in extent of occurrence (EOO): No |
| Continuing decline in number of locations: Unknown |
| Extreme fluctuations in the number of locations: No |
| **Population** |
| Number of mature individuals: 12000000-14000000 |
| Continuing decline of mature individuals: Yes |
| Extreme fluctuations: No |
| Population severely fragmented: No |
| Continuing decline in subpopulations: Unknown |
| Extreme fluctuations in subpopulations: No |
| All individuals in one subpopulation: No |
| **Habitats and Ecology** |
| Continuing decline in area, extent and/or quality of habitat: Unknown |
| Generation Length (years): 21.6 |
| Movement patterns: Full Migrant |
| Congregatory: Congregatory (and dispersive) |

## The IUCN Red List Partnership

The IUCN Red List of Threatened Species™ is produced and managed by the IUCN Global Species Programme, the IUCN Species Survival Commission (SSC) and The IUCN Red List Partnership.

The IUCN Red List Partners are: Arizona State University; BirdLife International; Botanic Gardens Conservation International; Conservation International; NatureServe; Royal Botanic Gardens, Kew; Sapienza University of Rome; Texas A&M University; and Zoological Society of London.