

The IUCN Red List of Threatened Species™ ISSN 2307-8235 (online) IUCN 2020: T22694313A183584708 Scope(s): Global Language: English

# Larus audouinii, Audouin's Gull

Assessment by: BirdLife International



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### Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Aves	Charadriiformes	Laridae

Scientific Name: Larus audouinii Payraudeau, 1826

### **Regional Assessments:**

• Europe

### Common Name(s):

- English: Audouin's Gull, Audouin's Gull
- French: Goéland d'Audouin

### Taxonomic Source(s):

del Hoyo, J., Collar, N.J., Christie, D.A., Elliott, A. and Fishpool, L.D.C. 2014. *HBW and BirdLife International Illustrated Checklist of the Birds of the World. Volume 1: Non-passerines*. Lynx Edicions BirdLife International, Barcelona, Spain and Cambridge, UK.

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.

AERC TAC. 2003. AERC TAC Checklist of bird taxa occurring in Western Palearctic region, 15th Draft. Available at: #http://www.aerc.eu/DOCS/Bird\_taxa\_of\_the\_WP15.xls#.

### **Identification Information:**

48-52 cm. An elegant medium sized gull with pale grey upperparts. Adult has distinctive dark reddish bill with pale tip at close range, unlike any of the larger gulls. Rump, underwing, flanks, sides of breast, and hind-neck are washed with pale grey, contrasting in good conditions with the whiter head. In flight there is a slight contrast between pale grey upperwing and white trailing edge to the secondaries and strong contrast with black area of the primaries . Winter adult has brownish freckling on nape and sides of head. Legs are dark greyish or greenish and the iris dark. Sexes are similar. **Similar spp.** Herring Gull *L. argentatus*, Lesser Black-backed Gull *Larus fuscus* (especially juveniles) and Yellow-legged Gull *Larus michahellis* are all superficially similar. *L. audouinii* has a more elegant appearance with a long, sloping forehead and a blank facial expression. Legs, bill and iris dark at all ages. Paler grey upperparts than Yellow-legged Gulls; in flight the wings are slimmer and more pointed and tail appears short narrow. Only one mirror in wingtip compared to usual two in Herring Gull, also has a piercing *me-ow* alarm call. **Hints** Scavenges less than other gulls often seen patrolling the sea with steady flight gliding for longer periods than other similar gulls. Will attend fishing boats.

### **Assessment Information**

Red List Category & Criteria:	Vulnerable A4b <u>ver 3.1</u>		
Year Published:	2020		
Date Assessed:	August 30, 2020		

#### Justification:

Audouin's Gull is undergoing a rapid population reduction following the collapse of the largest breeding colony after several years of very low reproductive output. A reduction in food from fisheries discards coupled with high colony predation is thought to have driven the declines. Despite some of these birds relocating and forming new colonies, overall a rapid decline is believed to have started around 2010. Prior to this populations were increasing, and current population size is estimated to be only around 15% lower than that three generations previously. It is unclear whether the present rate of reduction will persist over the next three generations. As such, the species is assessed as Vulnerable, under criterion A4b.

#### **Previously Published Red List Assessments**

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2018 – Least Concern (LC)
https://dx.doi.org/10.2305/IUCN.UK.2018-2.RLTS.T22694313A132541241.en
2017 – Least Concern (LC)
https://dx.doi.org/10.2305/IUCN.UK.2017-1.RLTS.T22694313A110634317.en
2016 – Least Concern (LC)
https://dx.doi.org/10.2305/IUCN.UK.2016-3.RLTS.T22694313A86717047.en
2015 – Least Concern (LC)
https://dx.doi.org/10.2305/IUCN.UK.2015-4.RLTS.T22694313A83914506.en
2012 – Near Threatened (NT)
https://dx.doi.org/10.2305/IUCN.UK.2012-1.RLTS.T22694313A38058354.en
2010 – Near Threatened (NT)
2008 – Near Threatened (NT)
2006 – Near Threatened (NT)
2004 – Near Threatened (NT)
2000 – Unknown (LR/NT)
1994 – Unknown (LR/CD)
1988 – Threatened (T)
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# **Geographic Range**

#### **Range Description:**

This species breeds from the Atlantic coast of Morocco to the south west, north to Portugal and east patchily through the Mediterranean to Cyprus and Turkey, including the Balearic Islands, Corsica and Sardinia. All data are for pairs; **Spain** (12,131 in 2017 after a rapid reduction from 21,264 pairs in 2006), mainly the Chafarinas Islands and the Ebro Delta, but the largest colony at the latter crashed from 15,396 pairs in 2006 to 1,355 pairs in 2019 (Genovart *et al.* 2018; J. M. Arcos *in litt.* 2020): previously this colony held around two-thirds of the global population [Gutiérrez and Guinart 2008]); **Algeria** (100-600, though this figure is highly uncertain and it is hoped that Algeria received some of the lost birds from the Ebro Delta [J. M. Arcos *in litt.* 2019]); **Greece** (350-500), and Sardinia and Tuscan Archipelago;

**Italy** (1,190-1,384, showing overall stability but with dramatically increasing novel colonies in the south and decreasing or even disappearing traditional colonies in the north [Nicola Baccetti *in litt.* 2020); a single large colony in **Portugal** (2,663 pairs in 2019 following the rapid abandonment of the first two colonies in the country [J. Andrade *in litt.* 2020]), Corsica, **France** (44-63); **Cyprus** (15-28), islets and rocks in the southern Adriatic Sea near Korcula and Peljesac Peninsula, **Croatia** (13-60); **Turkey** (47-90) (BirdLife International 2015); **Tunisia** (70-115); and **Morocco** (50-300). It winters on the coast of North and West Africa from **Libya** west to Morocco and south to **Mauritania**, **Gambia**, **Senegal** and **Gabon** (Sanpera *et al.* 2007) and there is a small wintering population in the east Mediterranean along the Aegean coast of Turkey.

The EU population is currently estimated at 15,900- 21,800 pairs (BirdLife International in prep.), a significant drop from what was likely the peak of the population around 2007 at c. 25,000 pairs (BirdLife International in prep.). This still represents a significant increase from an estimated population of 1,000 pairs in 1975, thought to have been the result of the increased availability of effectively protected areas during the 1980s, and unsustainable levels of fish discards from trawlers, particularly around the Ebro Delta (Criado 1997). A very large colony near the Ebro Delta grew rapidly from 1981 (Guitiérrez and Guinart 2008) until its collapse around 2010, which is thought to be due to reproductive failure caused by the presence of mammalian predators (Payo-Payo et al. 2018) and the decline in fishery discards (Calado et al. 2018, García-Tarrasón et al. 2015). The large expansion of this species in the western Mediterranean probably caused the breeding population in other parts of the Mediterranean to increase and new colonies were located in Croatia and even out of the Mediterranean in southern Portugal (BirdLife International 2004, Onmus 2006). The sustainability of these following the population collapse in the Iberian colonies is uncertain, and a slow decline is suspected (although there may be an initial increase at some colonies due to birds dispersing from the Ebro Delta. Recruitment can be extremely rapid when food availability is high, resulting in high population growth rates (Oro and Pradel 2000, Tavecchia et al. 2007). However it also seems that the counter is true: low productivity for the species can result in rapid declines in a short period of time (Genovart et al. 2018).

#### **Country Occurrence:**

Native, Extant (resident): Cyprus; France; Gibraltar; Greece; Italy; Morocco; Spain; Turkey

Native, Extant (breeding): Algeria; Croatia; Portugal; Tunisia

Native, Extant (non-breeding): Gambia; Libya; Mauritania; Senegal

Extant & Vagrant (resident): North Macedonia

Extant & Vagrant (non-breeding): Georgia; Israel; Lebanon; Palestine, State of

Extant & Vagrant: Bulgaria; Czechia; Egypt; Germany; Jordan; Malta; Switzerland; United Kingdom

**Extant & Origin Uncertain (seasonality uncertain):** Albania; Bosnia and Herzegovina; Monaco; Montenegro; Slovenia; Syrian Arab Republic; Western Sahara

#### **FAO Marine Fishing Areas:**

Native: Atlantic - eastern central

Native: Mediterranean and Black Sea

## **Distribution Map**



#### Legend

EXTANT (BREEDING) EXTANT (NON-BREEDING) EXTANT (PASSAGE)

#### Compiled by:

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

Gutiérrez and Guinart (2008) reported a global population of 21,161 pairs. However, more recent figures suggest that the global population is likely to have peaked around 2007 at *c*. 25,000 pairs (BirdLife International in prep.). This has fallen rapidly over the past few years and the current EU population is estimated at 15,900- 21,800 pairs (BirdLife International in prep.)

Allowing for the small known breeding populations outside the EU, the global population probably numbers c. 33,000-46,000 mature individuals.

### **Trend Justification**

The population has suffered a rapid reduction since around 2010, following the reduction in fisheries discards (after previous unsustainable levels of trawl discards had driven a substantial population increase over the previous three generations). At the same time, the very large colony holding the majority of global population collapsed, which is thought to be due to reproductive failure caused by the presence of mammalian predators (Payo-Payo *et al.* 2018) and the decline in fishery discards (Calado *et al.* 2018, García-Tarrasón *et al.* 2015). Due to the previous increase, over the past three generations (24 years, using the methods described in Bird *et al.* (2020) the rate of decline is approximately 15%, but the reduction for a three generation period between 2006 and 2030 is suspected to be 31-40% (BirdLife International in prep.). It is uncertain whether the reduction will continue at this rate over the next three generations, as new colonies are likely to be founded from the remaining adults. However, with the reduction in food availability, the population is not expected to recover to numbers seen in the first decade of the current century, hence a population reduction over the next three generations of between 20-29% is suspected.

Current Population Trend: Decreasing

### Habitat and Ecology (see Appendix for additional information)

Colonies are located on exposed rocky cliffs and on offshore islands or islets, normally not more than 50 m above sea level (Cramp and Simmons 1983). The Ebro delta colony is located on saltmarsh and a sandy peninsula (Olsen and Larsson 2003). In the Aegean it breeds on uninhabited islands sloping gently to the sea and covered with large stones, eryngo *Eryngium*, grass and low bushes of *Pistacia lentiscus* (Cramp and Simmons 1983). Characteristics of habitats used differ from region to region and even within the same areas in different years: altitude ranges from close to sea-level to 100 m, vegetation cover from bare rocks to 85% bush cover, and slope from 0-90°. Medium vegetation cover is preferred, and this probably provides chicks with shelter from heat and predators. The concentration of breeding colonies in the western Mediterranean is possibly related to the lower water salinity and higher abundance of clupeids. During the non-breeding season the species prefers sheltered bays, either flat and shingly, sandy or with cliffed margins (Cramp and Simmons 1983). It sometimes visits seaside resorts and marinas lured by food, and it especially likes areas on beaches where freshwater occurs, such as stream mouths or floods (Cramp and Simmons 1983).

It is a coastal species, rarely occurring inland and generally not travelling far offshore (Cramp and Simmons 1983). It was historically thought to feed far out to sea, but more recent observations show that it feeds regularly along the coast. The diet consists mostly of epipelagic fish, especially Clupeiformes, for which it sometimes forages at night, taking advantage of its prey's diurnal vertical (diel) migration patterns (Mañosa *et al.* 2004) and of commercial fishing by purse-seine netting

(Pedrocchi *et al.* 2002). It is also known to take some aquatic and terrestrial invertebrates, small birds and plant material such as the peanut *Arachis*, olive *Olea*, and grain (Cramp and Simmons 1983). The Ebro delta colony feeds largely on fish waste dumped by boats fishing nearby (Oro and Martínez-Vilalta 1992). The species is also known to feed on food discarded at tourist beaches (Cramp and Simmons 1983), and during a moratorium on trawling, it was found to forage in marshes, rice fields and occasionally at refuse tips (del Hoyo *et al.* 1996, Mañosa *et al.* 2004). They began to exploit the introduced North American Red Swamp Crayfish *Procambarus clarkia*, which are abundant in rice fields around the delta (Gutiérrez and Guinart 2008). Hence Ebro Delta birds have developed from being mainly pelagic foragers to more coastal-foraging, even scavenging species (Gutiérrez and Guinart 2008). The fishing moratorium was relaxed in 2000 during the breeding season, and as discards became available, so the population was boosted once again (Gutiérrez and Guinart 2008). Diet during the breeding season has been found to vary between colonies due to fishing practices that target different species in the respective areas (Pedrocchi *et al.* 2002).

During the non-breeding season, surveys in Morocco found birds no further than 46 km from the coast (Hoogendoorn and Mackrill 1987), and generally <40 km from the colony seems to be the norm (Mañosa *et al.* 2004). However, the maximum recorded foraging range from a colony was 160 km (Mañosa *et al.* 2004). In recent years, some birds have remained at the Ebro Delta colony over winter, with an average of c. 90 birds during 1996-2008, but occasionally up to 300 birds (Gutiérrez and Guinart 2008). The species primarily forages in coastal and continental shelf areas between 5 and 15 nautical miles (nm) offshore. A radius of 15 nm from the Ebro Delta would ensure the protection of 30% of the birds (or 30% of the foraging area). A 30 nm radius would protect 80% of birds. These distances could be reduced in colonies where the surrounding continental shelf is narrower (SEO/BirdLife *in litt.* 2010). Juveniles tend to forage in upwelling zones, whereas subadults and adults are more independent of these sites (Martinez-Abrain et al 2002). It remains extremely rare along the northern coast of Spain (Gutiérrez and Guinart 2008).

It is partially migratory and dispersive (del Hoyo *et al.* 1996). It breeds in large monospecific colonies ranging from 10 up to 10,000 pairs (del Hoyo *et al.* 1996) at a density of up to one nest/ sq. m (del Hoyo *et al.* 1996). Egg-laying takes place in the second half of April until the beginning of May, and peak hatching occurs in late May (del Hoyo *et al.* 1996), with fledging mainly in the first two weeks of July. It has a large foraging range while breeding, and has been recorded up to 200 km from the colony (Mañosa *et al.* 2004). After breeding the birds disperse widely around the Mediterranean coast (Sanpera *et al.* 2007; del Hoyo *et al.* 1996). Almost all juveniles and some adults migrate past Gibraltar during July-October (Olsen and Larsson 2003), peaking in August (Guitiérrez and Guinart 2008), to winter on the North African coast (del Hoyo *et al.* 1996). During the winter it roosts in flocks of several thousand (Olsen and Larsson 2003). It returns to its breeding sites between late February and mid April (del Hoyo *et al.* 1996). First year birds remain in the non-breeding range throughout the summer (Cramp and Simmons 1983), while most third-summer birds attend the breeding colony as non-breeders (Gutiérrez and Guinart 2008). Second-summer birds migrate to the Mediterranean but do not join the colony, instead forming large gatherings, often far from colonies (Gutiérrez and Guinart 2008).

Very high colony-site fidelity is probably related to previous breeding success. However, in the Aegean Islands, birds return to the same "island group" but not necessarily to the same islet. When the Ebro Delta, Spain, colonies were expanding rapidly, c. 1,400 breeders were dispersing to other colonies every year, generating marked fluctuations at those sites (Tavecchia *et al.* 2007). The Audouin's Gull is one of

the few species of Larid to show nocturnal foraging patterns, which may be linked to fisheries activities; arrivals and departures from the Ebro Delta colony were in accordance with the trawling timetable (Mañosa *et al.* 2004). The species scavenges around fishing vessels, and uses discards extensively and very efficiently (Mañosa *et al.* 2004). The species's association with fisheries is more pronounced in the western than in the central and eastern Mediterranean (Pedrocchi *et al.* 2002), and the trawler moratorium off the Ebro Delta established in 1991 reduced food availability to birds and impacted breeding success, possibly by increasing foraging ranges (Arcos and Oro 1996). This tight relationship with trawler discards is likely to have been a major driver in the recent declines, as further tightening of the discard regulations to improve sustainability of the fishery greatly reduced the quantity of available discards (Calado *et al.* 2018, García-Tarrasón *et al.* 2015). It is a long-lived species with high adult survival and relatively low fertility. Adult annual survival has been estimated at 0.95 (Oro *et al.* 1999, 2004; Tavecchia *et al.* 2007), however this was in a rapidly increasing population and trait-based modelling estimates a stable value of 0.83 (Bird *et al.* 2020).

#### Systems: Terrestrial, Marine

### Threats (see Appendix for additional information)

Many of the gulls rely on discards from fisheries operating in the Ebro Delta (Cama *et al.* 2013), and due to new EU discard laws this food source is likely to decrease, which would alter the current food supply considerably, likely resulting in a population decline (Celdao *et al.* 2018, García-Tarrasón *et al.* 2015). The species is also highly prone to bycatch in longline fisheries (Laneri *et al.* 2010), which may still pose a threat to the species (Genovart *et al.* 2017).On land, the largest known colony collapsed apparently as a result of very low reproductive success caused by the presence of multiple (native) mammalian predators (Payo-Payo *et al.* 2018). This may be a typical trajectory for such large colonies (this had exceeded 15,000 pairs in 2006 [Genovart *et al.* 2018]), as they are discovered by greater numbers of predators reproductive success falls and many adults depart. However, there appears to be little other suitable nesting area for the gulls, with many displaced birds forming colonies in what appear suboptimal habitat (Oro *et al.* 2009). The finding that the global population dynamics of the species appears to be driven by immature survival and fertility suggests that sudden catastrophic reproductive failure of two-thirds of the population will cause a significant population reduction (Genovart *et al.* 2018).

### **Conservation Actions** (see Appendix for additional information)

#### **Conservation and Research Actions Underway**

CMS Appendix I and II. A European action plan was published in 1996. The ecology of this species, particularly its breeding and foraging behaviour and demography and population dynamics, has been extensively studied. Lebanon prepared an action plan to restore the breeding population back to Palm Islands Nature reserve. Several LIFE Nature projects have been implemented between 1992 and 2006 in Spain and Italy, contributing to successful recolonisation of breeding islands. There is work underway to introduce best practice measures on board fishing vessels to reduce the incidence of seabird bycatch, however the use of bycatch mitigation gear is not currently widespread in vessels within the Mediterranean, and enforcement is generally very low. Control of invasive black rats *Rattus rattus* has been effective at some colonies (Jones *et al.* 2008). Culling of Yellow-legged Gulls *Larus michehellis* was conducted from 2000 to 2009 on Alborán Island, Spain, and demonstrated immediate local benefits (Paracuellos and Nevado 2010). However, even in small, remote colonies, culling needs to be continuous

to avoid a return to the original situation (Paracuellos and Nevado 2010), and at large colonies direct predation and kleptoparasitism from Yellow-legged Gulls did not significantly impact the population, although may do in periods of resource scarcity (Martínez-Abraín *et al.* 2003). A European Union LIFE project ran from 2009 to 2012 in Greece; the conservation actions implemented included rat eradication on nine groups of islets supporting over 50% of the species's Greek population and identification of marine IBAs (Fric 2014). In 2014 the species received additional protection when many of its key sites were designated as marine protected areas by Spain – including the area offshore from the Ebro Delta, which is heavily used for feeding by birds from the world's largest breeding colony (Cantaloube 2014).

#### **Conservation and Research Actions Proposed**

Continue to monitor breeding colonies. Conduct surveys along the north African coast to determine whether birds from the Iberian colonies have relocated there. Use satellite-tracking technology to identify additional colonies and undertake rapid assessments of these when discovered. Identify appropriate actions to mitigate against the key threats. Implement strict fishery management policies in the species's range. Increase the area of suitable coastal habitat (especially marshes and coastal wetlands for foraging [D. Oro *in litt.* 2020]) that is protected from development and degradation. Enforce laws designed to minimise marine pollution. Implement measures to reduce mortality in fishing gear, perhaps facilitated by legislation. Ensure regulation of the river Ebro benefits the species.

### Credits

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# Disclaimer

To make use of this information, please check the <u>Terms of Use</u>.

# **External Resources**

For <u>Supplementary Material</u>, and for <u>Images and External Links to Additional Information</u>, please see the Red List website.

# Appendix

## Habitats

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

Habitat	Season	Suitability	Major Importance?
9. Marine Neritic -> 9.1. Marine Neritic - Pelagic	Non- breeding season	Suitable	Yes
9. Marine Neritic -> 9.2. Marine Neritic - Subtidal Rock and Rocky Reefs	Non- breeding season	Suitable	Yes
9. Marine Neritic -> 9.3. Marine Neritic - Subtidal Loose Rock/pebble/gravel	Non- breeding season	Suitable	Yes
9. Marine Neritic -> 9.4. Marine Neritic - Subtidal Sandy	Non- breeding season	Suitable	Yes
9. Marine Neritic -> 9.5. Marine Neritic - Subtidal Sandy-Mud	Non- breeding season	Suitable	Yes
9. Marine Neritic -> 9.7. Marine Neritic - Macroalgal/Kelp	Non- breeding season	Suitable	Yes
9. Marine Neritic -> 9.9. Marine Neritic - Seagrass (Submerged)	Breeding season	Suitable	Yes
10. Marine Oceanic -> 10.1. Marine Oceanic - Epipelagic (0-200m)	Resident	Marginal	-
10. Marine Oceanic -> 10.2. Marine Oceanic - Mesopelagic (200-1000m)	Resident	Marginal	-
12. Marine Intertidal -> 12.1. Marine Intertidal - Rocky Shoreline	Breeding season	Suitable	No
12. Marine Intertidal -> 12.2. Marine Intertidal - Sandy Shoreline and/or Beaches, Sand Bars, Spits, Etc	Breeding season	Suitable	No
12. Marine Intertidal -> 12.3. Marine Intertidal - Shingle and/or Pebble Shoreline and/or Beaches	Non- breeding season	Suitable	No
12. Marine Intertidal -> 12.6. Marine Intertidal - Tidepools	Breeding season	Suitable	No
13. Marine Coastal/Supratidal -> 13.1. Marine Coastal/Supratidal - Sea Cliffs and Rocky Offshore Islands	Breeding season	Suitable	Yes

# Use and Trade

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

End Use	Local	National	International
Sport hunting/specimen collecting	Yes	Yes	No

End Use	Local	National	International
Food - human	Yes	Yes	No
Pets/display animals, horticulture	No	No	Yes

## Threats

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

Threat	Timing	Scope	Severity	Impact Score
5. Biological resource use -> 5.4. Fishing & harvesting aquatic resources -> 5.4.4. Unintentional effects: (large scale) [harvest]	Ongoing	Majority (50- 90%)	Rapid declines	Medium impact: 7
	Stresses:	1. Ecosystem st	resses -> 1.3. Indirect	ecosystem effects
		2. Species Stres	ses -> 2.1. Species me	ortality
		2. Species Stres	ses -> 2.3. Indirect sp	ecies effects
8. Invasive and other problematic species, genes & diseases -> 8.2. Problematic native species/diseases -> 8.2.2. Named species (Meles meles)	Past, likely to return	Majority (50- 90%)	Rapid declines	Past impact
	Stresses:	2. Species Stres	ses -> 2.1. Species m	ortality
		2. Species Stres	ses -> 2.2. Species dis	sturbance
		2. Species Stres	ses -> 2.3. Indirect sp	ecies effects
8. Invasive and other problematic species, genes & diseases -> 8.2. Problematic native species/diseases -> 8.2.2. Named species (Vulpes vulpes)	Past, likely to return	Majority (50- 90%)	Rapid declines	Past impact
	Stresses:	2. Species Stres	ses -> 2.1. Species me	ortality
		2. Species Stres	ses -> 2.2. Species dis	sturbance
		2. Species Stres	ses -> 2.3. Indirect sp	ecies effects

# **Conservation Actions in Place**

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

Conservation Action in Place
In-place research and monitoring
Action Recovery Plan: Yes
Systematic monitoring scheme: Yes
In-place land/water protection
Conservation sites identified: Yes, over entire range
Occurs in at least one protected area: Yes
Invasive species control or prevention: Yes
In-place species management
Successfully reintroduced or introduced benignly: No
Subject to ex-situ conservation: No

**Conservation Action in Place** 

In-place education

Subject to recent education and awareness programmes: No

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 Action Needed**

1. Land/water protection -> 1.1. Site/area protection

2. Land/water management -> 2.1. Site/area management

5. Law & policy -> 5.1. Legislation -> 5.1.2. National level

5. Law & policy -> 5.2. Policies and regulations

5. Law & policy -> 5.4. Compliance and enforcement -> 5.4.1. International level

## **Research Needed**

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

Research Needed
1. Research -> 1.2. Population size, distribution & trends
1. Research -> 1.6. Actions
3. Monitoring -> 3.1. Population trends

# **Additional Data Fields**

#### Distribution

Continuing decline in area of occupancy (AOO): Unknown

Extreme fluctuations in area of occupancy (AOO): No

Estimated extent of occurrence (EOO) (km<sup>2</sup>): 2200000

Continuing decline in extent of occurrence (EOO): Unknown

Extreme fluctuations in extent of occurrence (EOO): No

Number of Locations: 11-100

Continuing decline in number of locations: Unknown

Extreme fluctuations in the number of locations: No

Distribution
Lower elevation limit (m): 0
Upper elevation limit (m): 100
Population
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): 8.1
Movement patterns: Full Migrant
Congregatory: Congregatory (and dispersive)

## The IUCN Red List Partnership



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

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