

# ***Sterna paradisaea* -- Pontoppidan, 1763**

ANIMALIA -- CHORDATA -- AVES -- CHARADRIIFORMES -- LARIDAE

**Common names:** Arctic Tern; Sterne arctique

## **European Red List Assessment**

### **European Red List Status**

LC -- Least Concern, (IUCN version 3.1)

### **Assessment Information**

Year published:	2015
Date assessed:	2015-03-31
Assessor(s):	BirdLife International
Reviewer(s):	Symes, A.
Compiler(s):	Ashpole, J., Burfield, I., Ieronymidou, C., Pople, R., Tarzia, M., Wheatley, H. & Wright, L.

### **Assessment Rationale**

**European regional assessment: Least Concern (LC)**

**EU27 regional assessment: Least Concern (LC)**

In Europe this species has an extremely large range, and hence does not approach the thresholds for Vulnerable under the range size criterion (Extent of Occurrence 10% in ten years or three generations, or with a specified population structure). Despite the fact that the population trend appears to be decreasing, the decline is not believed to be sufficiently rapid to approach the thresholds for Vulnerable under the population trend criterion (30% decline over ten years or three generations). For these reasons the species is evaluated as Least Concern in Europe.

Within the EU27 this species has a very large range, and hence does not approach the thresholds for Vulnerable under the range size criterion (Extent of Occurrence 10% in ten years or three generations, or with a specified population structure). The population trend appears to be stable, and hence the species does not approach the thresholds for Vulnerable under the population trend criterion (30% decline over ten years or three generations). For these reasons the species is evaluated as Least Concern in the EU27.

## **Occurrence**

### **Countries/Territories of Occurrence**

#### **Native:**

Austria; Belgium; Denmark; Faroe Islands (to DK); Greenland (to DK); Estonia; Finland; France; Germany; Greece; Iceland; Ireland, Rep. of; Latvia; Lithuania; Netherlands; Norway; Svalbard and Jan Mayen (to NO); Poland; Portugal; Russian Federation; Spain; Sweden; United Kingdom

#### **Vagrant:**

Belarus; Bulgaria; Croatia; Cyprus; Czech Republic; Hungary; Italy; Luxembourg; Montenegro; Serbia; Slovakia; Switzerland; Turkey; Ukraine; Gibraltar (to UK)

## **Population**

The European population is estimated at 564,000-906,000 pairs, which equates to 1,130,000-1,810,000 mature individuals. The population in the EU27 is estimated at 160,000-211,000 pairs, which equates to 320,000-422,000 mature individuals. For details of national estimates, see [Supplementary PDF](#).

## **Trend**

In Europe the population size is estimated to be decreasing by less than 25% in 40.2 years (three generations). In the EU27 the population size is estimated to be stable. For details of national estimates, see [Supplementary PDF](#).

## **Habitats and Ecology**

The species breeds along northern coastlines (Gochfeld et al. 2014) and on inshore islands, as well as inland on tundra and forest-tundra (Flint et al. 1984). It shows a preference for habitats with a vegetation cover of less than 40%, nesting on sand or shingle beaches, ridges (Gochfeld et al. 2014) and spits, rocky ground and small islands (Flint et al. 1984) in lakes and coastal lagoons (Gochfeld et al. 2014). It may also nest on islets

or banks along rivers (Snow and Perrins 1998), on swampy tundra and peatlands with bog hummocks (Gochfeld et al. 2014) and reed-covered flats (Flint et al. 1984), or on inland heaths, rough pastures, meadows (Gochfeld et al. 2014) and sedge grassland (Snow and Perrins 1998) not far from water (Flint et al. 1984). The species also forages offshore, in ice-filled coastal bays or over wet tundra (Gochfeld et al. 2014). On passage it largely flies over open ocean (Snow and Perrins 1998) resting at sea on kelp, logs or flotsam, but may occur inland or along coastlines on beaches, reefs and spits (Higgins and Davies 1996). It breeds between May and July (although the exact timing varies with temperature and food availability) in solitary pairs or colonies of a few to several hundred pairs (usually 2–25). The nest is a shallow scrape (Gochfeld et al. 2014) in sand, shingle or turf (Richards 1990) on beaches, ridges and spits, rocky ground, small islands in lakes, coastal lagoons (Gochfeld et al. 2014) and rivers (Snow and Perrins 1998), swampy tundra and peatlands with bog hummocks (Gochfeld et al. 2014) and reed-covered flats (Flint et al. 1984), or on inland heaths, rough pastures, meadows (Gochfeld et al. 2014) and sedge grassland (Snow and Perrins 1998) not far from water (Flint et al. 1984). It will also nest on artificial structures. Clutches are two to three eggs. Its diet consists predominantly of fish as well as crustaceans (especially planktonic species), molluscs, insects (e.g. caterpillars, Chironomidae) and earthworms. It will also take berries in the early spring on arrival on its breeding grounds but does not readily switch to other prey items when preferred prey supplies fail. The species is a very strong migrant and makes exceptional long-distance movements offshore or along western continental coastlines (Melville and Shortridge 2006, Gochfeld et al. 2014) between its high Arctic breeding grounds and Antarctic wintering grounds (Gochfeld et al. 2014).

<b>Habitats &amp; Altitude</b>		
Habitat (level 1 - level 2)	Importance	Occurrence
Grassland - Tundra	suitable	breeding
Marine Coastal/Supratidal - Coastal Brackish/Saline Lagoons/Marine Lakes	suitable	breeding
Marine Intertidal - Sandy Shoreline and/or Beaches, Sand Bars, Spits, Etc	suitable	breeding
Marine Intertidal - Shingle and/or Pebble Shoreline and/or Beaches	major	breeding
Marine Neritic - Macroalgal/Kelp	major	breeding
Marine Neritic - Macroalgal/Kelp	major	non-breeding
Marine Neritic - Pelagic	suitable	breeding
Marine Neritic - Pelagic	suitable	non-breeding
Marine Neritic - Seagrass (Submerged)	major	breeding
Marine Neritic - Seagrass (Submerged)	major	non-breeding
Marine Neritic - Subtidal Loose Rock/pebble/gravel	major	breeding
Marine Neritic - Subtidal Loose Rock/pebble/gravel	major	non-breeding
Marine Neritic - Subtidal Rock and Rocky Reefs	major	breeding
Marine Neritic - Subtidal Rock and Rocky Reefs	major	non-breeding
Marine Neritic - Subtidal Sandy	major	breeding
Marine Neritic - Subtidal Sandy	major	non-breeding
Marine Neritic - Subtidal Sandy-Mud	major	breeding
Marine Neritic - Subtidal Sandy-Mud	major	non-breeding
Wetlands (inland) - Bogs, Marshes, Swamps, Fens, Peatlands	suitable	breeding
Wetlands (inland) - Permanent Freshwater Lakes (over ha)	suitable	breeding
Wetlands (inland) - Tundra Wetlands (incl. pools and temporary waters from snowmelt)	suitable	breeding
Altitude	max. 100 m	Occasional altitudinal limits

### **Threats**

The species is potentially threatened by climate change because it has a geographically bounded distribution: its global distribution is restricted to within c.10° latitude from the polar edge of continent within 20–50% of current vegetation type is projected to disappear under a doubling of CO<sub>2</sub> levels (Birdlife International, unpublished data). In many parts of Scandinavia, declines have been caused in the past by egg collecting, however this has decreased in recent years allowing the population to recover (Gochfeld et al. 2014). In some areas predation by Starlings (*Sturnus vulgaris*) (Horobin 1971) and American Mink (*Mustela vison*) can be a problem (Hagemeyer and Balir 1997) and mortality has been recorded as a result of red tide (Horobin 1971). In northern Britain the collapse of sand eel stocks have caused a crash in the population and in Svalbard the population may be vulnerable to oil, particularly in the post-breeding period (Gochfeld et al. 2014). Pollution is likely a major factor in the species's decline and yachting and other leisure activities have led to an increase in disturbance. Declines have also been correlated with gull abundance (Hagemeyer and Blair 1997).

<b>Threats &amp; Impacts</b>					
<b>Threat (level 1)</b>	<b>Threat (level 2)</b>	<b>Impact and Stresses</b>			
Biological resource use	Fishing & harvesting aquatic resources (unintentional effects: (large scale) [harvest])	<b>Timing</b>	<b>Scope</b>	<b>Severity</b>	<b>Impact</b>
		Ongoing	Majority (50-90%)	Slow, Significant Declines	Medium Impact
		<b>Stresses</b>			
		Indirect ecosystem effects			
Biological resource use	Hunting & trapping terrestrial animals (intentional use - species is the target)	<b>Timing</b>	<b>Scope</b>	<b>Severity</b>	<b>Impact</b>
		Ongoing	Minority (<50%)	Slow, Significant Declines	Low Impact
		<b>Stresses</b>			
		Species mortality			
Climate change & severe weather	Habitat shifting & alteration	<b>Timing</b>	<b>Scope</b>	<b>Severity</b>	<b>Impact</b>
		Ongoing	Unknown	Unknown	Unknown
		<b>Stresses</b>			
		Indirect ecosystem effects			
Climate change & severe weather	Other impacts	<b>Timing</b>	<b>Scope</b>	<b>Severity</b>	<b>Impact</b>
		Ongoing	Unknown	Unknown	Unknown
		<b>Stresses</b>			
		Indirect ecosystem effects			
Climate change & severe weather	Storms & flooding	<b>Timing</b>	<b>Scope</b>	<b>Severity</b>	<b>Impact</b>
		Ongoing	Unknown	Unknown	Unknown
		<b>Stresses</b>			
		Indirect ecosystem effects; Species mortality			
Energy production & mining	Renewable energy	<b>Timing</b>	<b>Scope</b>	<b>Severity</b>	<b>Impact</b>
		Ongoing	Minority (<50%)	Causing/Could cause fluctuations	Low Impact
		<b>Stresses</b>			
		Indirect ecosystem effects; Species mortality; Species disturbance			
Human intrusions & disturbance	Recreational activities	<b>Timing</b>	<b>Scope</b>	<b>Severity</b>	<b>Impact</b>
		Ongoing	Unknown	Unknown	Unknown
		<b>Stresses</b>			
		Species disturbance			
Invasive and other problematic species, genes & diseases	American Mink (Neovison vison)	<b>Timing</b>	<b>Scope</b>	<b>Severity</b>	<b>Impact</b>
		Ongoing	Majority (50-90%)	Causing/Could cause fluctuations	Medium Impact
		<b>Stresses</b>			
		Species mortality; Reduced reproductive success			
Invasive and other problematic species, genes & diseases	Common Starling (Sturnus vulgaris)	<b>Timing</b>	<b>Scope</b>	<b>Severity</b>	<b>Impact</b>
		Ongoing	Unknown	Causing/Could cause fluctuations	Unknown
		<b>Stresses</b>			
		Species mortality			
Invasive and other problematic species, genes & diseases	Unspecified DINOFLLAGELLATA	<b>Timing</b>	<b>Scope</b>	<b>Severity</b>	<b>Impact</b>
		Ongoing	Unknown	Causing/Could cause fluctuations	Unknown
		<b>Stresses</b>			
		Indirect ecosystem effects; Species mortality			
Natural system modifications	Other ecosystem modifications	<b>Timing</b>	<b>Scope</b>	<b>Severity</b>	<b>Impact</b>
		Ongoing	Unknown	Unknown	Unknown
		<b>Stresses</b>			
		Ecosystem degradation; Indirect ecosystem effects			
Pollution	Herbicides and pesticides	<b>Timing</b>	<b>Scope</b>	<b>Severity</b>	<b>Impact</b>
		Ongoing	Unknown	Unknown	Unknown
		<b>Stresses</b>			
		Species mortality			
Pollution	Industrial & military effluents (type unknown/	<b>Timing</b>	<b>Scope</b>	<b>Severity</b>	<b>Impact</b>
		Ongoing	Majority (50-90%)	Unknown	Unknown

<b>Threats &amp; Impacts</b>					
<b>Threat (level 1)</b>	<b>Threat (level 2)</b>	<b>Impact and Stresses</b>			
		<b>Stresses</b>			
		Species mortality			
Pollution	Oil spills	<b>Timing</b>	<b>Scope</b>	<b>Severity</b>	<b>Impact</b>
		Past, Likely to Return	Majority (50-90%)	Rapid Declines	Past Impact
		<b>Stresses</b>			
		Species mortality			
Transportation & service corridors	Shipping lanes	<b>Timing</b>	<b>Scope</b>	<b>Severity</b>	<b>Impact</b>
		Ongoing	Majority (50-90%)	No decline	Low Impact
		<b>Stresses</b>			
		Species disturbance			

## **Conservation**

### **Conservation Actions Underway**

CMS Appendix II. EU Birds Directive Annex I. Bern Convention Appendix II. In the Baltic Sea, removing feral American Mink (*Neovison vison*) from a large archipelago with many small islands resulted in an increase in the breeding density of this species in the area (Nordstrom et al. 2003).

### **Conservation Actions Proposed**

Gull control measures may also be practised successfully at some sites to reduce predation and displacement, especially when carried out in conjunction with the use of recordings and models to induce recolonisation of nesting terns (Buckley and Buckley 1984). This species also benefits from the removal of American Mink (Nordstrom et al. 2003).

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# European Regional Assessment



## *Sterna paradisaea*

### Range

■ Extant (breeding)

Citation:  
BirdLife International (2015)  
European Red List of Birds



Map created 05/12/2015

