

INDICATOR
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Seabirds – common eiders

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Young Sund, Northeast Greenland Carsten Egevang/Arc-Pic.com

The common eider, *Somateria mollissima*, has a circumpolar distribution breeding mainly on small islands in Arctic and boreal marine areas in Alaska (Bering Sea region), Canada, Greenland, Iceland, western Europe, and the Barents Sea region. In Russia, there is a gap in distribution along the mainland coast from the Yugorski Peninsula (Kara Sea) to Chaunskaya Bay in east Siberia (Figure 5.1). Important wintering areas include the Gulf of Alaska/Bering Sea/Aleutian region, southeast Canada, southwest Greenland, Iceland, Western Europe, along the Russian coast of Barents Sea, and in the White Sea. Six or seven subspecies are recognized, of which four occur in North America [1, 2].

The common eider is a highly valued living resource in the Arctic. The birds or their products are harvested throughout most of the circumpolar region. As the largest duck in the Northern Hemisphere, it is important for traditional food and lifestyle not only in many Arctic communities, but also in southeast Canada and the Baltic region [3]. In some countries, especially Iceland, down feather collection constitutes a significant commercial industry [4].

The often close connection between eiders and human societies makes it very feasible to apply traditional

knowledge in monitoring and research of common eiders and examples of this already exist [e.g., 5].

The common eider is dependent on benthic organisms in shallow marine waters for food throughout the year, making them a potential indicator of the health of marine coastal environments. This is similar to situations in which fish-eating seabirds can indicate changes in the pelagic marine ecosystem. Year-round movements have been studied intensively over the past 10–15 years by satellite telemetry [e.g., 6, 7] and this provides a good foundation for monitoring change in the future.



Figure 5.1: Breeding and wintering range of common eiders in the circumpolar region (not all southern breeding areas included) [8].

Population/ecosystem status and trends

The world population of common eiders probably ranges from 1.5 to 3.0 million breeding pairs [1]. Around the early 1990s, it was clear that common eiders in the Arctic, along with other eider species, had generally suffered large declines over the past two to five decades, and the need to stabilize and manage eider populations was increasingly recognized. As part of the Arctic Environmental Protection Strategy, signed in 1991, the Circumpolar Seabird Working Group of CAFF (1997) developed a Circumpolar Eider Conservation Strategy and Action Plan [9].

The factors behind several eider population declines reported in the 1980s and 1990s (including populations in Alaska, Canada, Greenland, and Russia) were often

unknown, but in some cases involved human disturbances, excessive harvest, and severe climatic events [10–12]. The current trend of common eider populations varies but at least some populations in Alaska, Canada, and Greenland are now recovering with improved harvest management as a likely contributing factor [2, 13, 14]. Breeding populations in the Barents Sea region appear reasonably stable or locally increasing [1, 15]. In the more southern distribution range, the eider population in the Baltic region increased up until the early 1990s but is now decreasing [16]. Low rates of recruitment due to viral infections of ducklings, higher predation on breeding females and deteriorating foraging conditions on wintering grounds seem to be contributing to the decline [17–19].



Iceland Alari Kivisaar/iStockphoto

Concerns for the future

Along with other gregarious bird species common eiders are sometimes affected dramatically by diseases. A recent outbreak (2005–present) of avian cholera in the Hudson Strait of eastern Canada abruptly reversed a population increase and reduced the population of a large colony there by 30% in just three years [20]. The cholera outbreaks



Svalbard, Norway Laila Roberg/iStockphoto

appear to be occurring with increasing frequency in the north and may have significant conservation implications. By-catch in fisheries gillnets (mainly for cod, *Gadus* spp., and lump sucker, Family Cyclopteridae) is known to occur in most Arctic countries [21], however, the magnitude of the problem is often not clear. Recent concern has been expressed for Greenland, Norway, and the Baltic region [22–24]. The search for oil and gas reserves in the Arctic is increasing and may put eider ducks at further risk in the future. The direct response of eiders to climate change is currently under investigation in several countries. In Iceland, local weather conditions appear to affect nesting dates and clutch sizes, although not consistently between colonies [25]. The North Atlantic Oscillation Index was found to have no effect on the survival of eider females in Finland [26]. The management of human harvest of eiders or their products, and the management of introduced predators such as foxes, *Vulpes* spp., and mink, *Mustela vison*, will remain important issues in the conservation of common eider populations.