

## Trends of wintering waterbirds in the European Union: Summary of the 2023 update

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### Introductions

The European Union (EU) is an important wintering area for many waterbird species. For many of these species, the majority of the population breeds outside the EU or even Europe. Species listed on Annex I of the EU Birds Directive as well as other migratory species are subject to site protection measures under Article 4 of the Directive while species listed on Annex II of the Directive can be hunted either across the whole EU or in certain Member States. The EU Biodiversity Strategy for 2030 aims to stop the decline of species in unfavourable conservation status under the Birds or the Habitats Directive, and have positive trends in the status of at least 30% of such species. Halting the decline of huntable bird species listed on Annex II of the Birds Directive has recently emerged as a priority.

Wetlands International and its predecessors have been coordinating the International Waterbird Census since 1967 and this long-term dataset allows the continuous monitoring of populations, including useful feedback concerning the status of key wintering species in the EU.

### Materials and methods

#### Data collection

This report is based on data collected by national wintering waterbird monitoring schemes in the European Union contributing to the International Waterbird Census (IWC). The IWC is a long-term, site-based monitoring scheme that started in Europe in 1967. Originally, the IWC was organised to estimate numbers and to monitor changes in (the Northern) wintering waterbirds. Therefore, the core IWC counts are carried out in January across the entire African-Eurasian Flyway. The IWC is also commonly referred to as the midwinter counts, particularly in Europe. The IWC operates through national schemes in each country. These schemes are organised by national coordinators who are affiliated with government agencies, scientific institutes or non-governmental organisations. In turn, the national coordinators work with a large network of professional and volunteer observers. The national IWC schemes contribute to the monitoring obligations of governments under international treaties such as the Ramsar Convention on Wetlands, the African-Eurasian Migratory Waterbird Agreement and the Birds Directive of the European Union. Often it is supported by the respective governments.

#### Selection of species

For this report, we have analysed the long- and short-term trends of the wintering populations of seven species listed on Annex I, 18 species listed on Annex II and eight species not listed on any of the annexes of the Birds Directive (Table 1). We have selected species that mostly winter in Europe and are associated with inland and coastal wetlands. Geese (associated mainly with farmlands) and waterbirds that mainly winter at sea and gulls were also excluded because the International Waterbird Census is not the most suitable monitoring method for them.

Table 1. Species whose trends were analysed for this report. Non-secure taxa listed in Annex II of the Birds Directive are marked with \* in the EU Red List column.

English name	Scientific name	EU Red List
<b>Species listed in Annex I of the Birds Directive</b>		
White-headed Duck	<i>Oxyura leucocephala</i>	VU
Whooper Swan	<i>Cygnus cygnus</i>	LC
Tundra Swan (Bewick's Swan)	<i>Cygnus columbianus bewickii</i>	VU
Smew	<i>Mergellus albellus</i>	LC
Greater Flamingo	<i>Phoenicopterus roseus</i>	LC
Great White Egret	<i>Ardea alba</i>	LC
Bar-tailed Godwit	<i>Limosa lapponica</i>	LC
<b>Species listed in Annex II of the Birds Directive</b>		
Common Goldeneye	<i>Bucephala clangula</i>	LC
Goosander	<i>Mergus merganser</i>	LC
Red-breasted Merganser	<i>Mergus serrator</i>	NT*
Common Pochard	<i>Aythya ferina</i>	VU*
Tufted Duck	<i>Aythya fuligula</i>	VU*
Northern Shoveler	<i>Spatula clypeata</i>	NT*
Gadwall	<i>Mareca strepera</i>	LC
Eurasian Wigeon	<i>Mareca penelope</i>	VU*
Mallard	<i>Anas platyrhynchos</i>	LC
Northern Pintail	<i>Anas acuta</i>	EN*
Common Teal	<i>Anas crecca</i>	LC*
Common Moorhen	<i>Gallinula chloropus</i>	LC
Common Coot	<i>Fulica atra</i>	LC*
Eurasian Oystercatcher	<i>Haematopus ostralegus</i>	VU*
Grey Plover	<i>Pluvialis squatarola</i>	LC
Bar-tailed Godwit	<i>Limosa lapponica</i>	LC
Red Knot	<i>Calidris canutus</i>	LC
<b>Species not listed in any of the annexes of the Birds Directive</b>		
Common Shelduck	<i>Tadorna tadorna</i>	LC
Little Grebe	<i>Tachybaptus ruficollis</i>	LC
Great Crested Grebe	<i>Podiceps cristatus</i>	LC
Black-necked Grebe	<i>Podiceps nigricollis</i>	LC
Great Cormorant	<i>Phalacrocorax cabo</i>	LC
Ruddy Turnstone	<i>Arenaria interpres</i>	EN
Sanderling	<i>Calidris alba</i>	LC
Dunlin	<i>Calidris alpina</i>	LC

### Trend analyses

In this analysis we applied the same trend analysis procedure as in the population-level trend analyses (see pages 12-15 in Nagy & Langendoen, 2020).

## Multi-species trends

We have calculated multi-species trends based on the status of species on the annexes of the Birds Directive (Table 1). The multi-species trends were calculated using a Monte Carlo method (Soldaat et al., 2017) that is able to combine trends with different starting years.

## Data presentation

The results are presented in a dashboard format on the IWC Online Portal (<https://iwc.wetlands.org/index.php/eumsi>). Multispecies indices are provided with stack charts summarising short- and long-term population changes followed by the trend graphs for the species contributing to the multi-species trend.

## Results

### Annex I species

The multi-species trend of species listed in Annex I of the Birds Directive shows an increasing trend both in the long- and the short-term. In the 2010s a recovery has followed the decline between 1995 and the end of the 2000s.

In the long-term, all Annex I species assessed have increased except for the Bewick's Swan (*Cygnus columbianus bewickii*). The trend is more varied between 2014 and 2023. The Greater Flamingo (*Phoenicopterus roseus*) and Bewick's Swan are declining, the Whooper Swan (*Cygnus cygnus*), Bar-tailed Godwit (*Limosa lapponica*) is stable, the White-headed Duck (*Oxyura leucocephala*) is uncertain, while the Great White Egret (*Ardea alba*) and Smew (*Mergellus albellus*) are increasing.

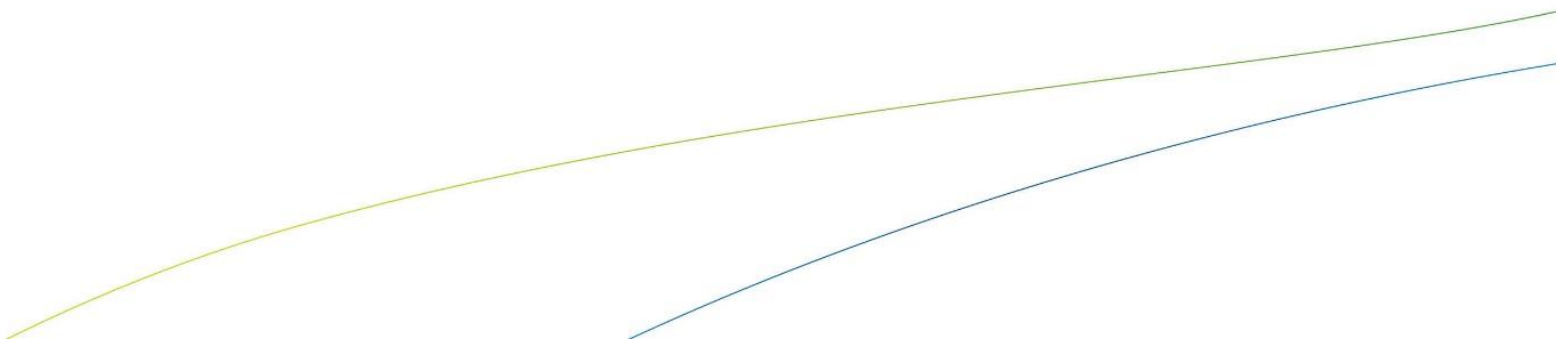
### Annex II species

The multi-species trend of huntable species listed in Annex II of the Birds Directive show a moderate decline in the long-term, but there are signs of an overall recovery in the short-term. The long-term trend confounds an overall increase from 1980 to the mid-1990s, followed by a more rapid decline in the late-1990s and 2000s.

In the long-term most Annex II species show an increasing wintering trend in the EU with the exception of the Goosander (*Mergus merganser*), Mallard (*Anas platyrhynchos*), Tufted Duck (*Aythya fuligula*), Common Pochard (*Aythya ferina*), Common Coot (*Fulica atra*) and Eurasian Oystercatcher (*Haematopus ostralegus*).

In the short-term, in total six species have increased. Besides Mute Swan (*Cygnus olor*), Gadwall (*Mareca strepera*), Common Moorhen (*Gallinula chloropus*) this list includes also three species that are listed as Annex II species with unsecure status: Common Pochard (*Aythya ferina*), Common Teal (*Anas crecca*) and Eurasian Wigeon (*Mareca penelope*).

Two species, the Mallard and Northern Shoveler (*Spatula clypeata*) have declined also in the short-term. For two additional species, the Eurasian Oystercatcher and the Red Knot (*Calidris canutus*) the short-term trends were statistically uncertain, but indicating a negative population tendency.



## Species not listed on any of the annexes of the Birds Directive

The overall trend of species not listed on any of the annexes of the Birds Directive is positive both in the long- and the short-term.

In the long-term, the EU wintering populations of all species have increased. In the short-term, however, the wintering populations of the two Arctic breeding waders and the Black-necked grebe (*Podiceps nigricollis*) have declined in the EU .

## Discussion

The 2023 update of wintering waterbird trends in the EU indicates that two-thirds of the assessed species have increased since the early 1980s, i.e. since the Birds Directive has entered into force. In the short-term, 44% of the species were stable, 28% have increased, 16% declined and the trend of 13% was uncertain.

The most recent 10-year trends based on the IWC data suggest a more positive trend than what has emerged from the breeding trends reported for the period of 2007-2018 (BirdLife International, 2021). This is particularly welcome in the case of Common Teal, Eurasian Wigeon and Common Pochard.

In the absence of comparable breeding bird surveys, it is unclear however whether the positive wintering trends indicate any recovery of the EU breeding population as these figures characterise the wintering population including birds coming also from outside of the EU. In addition, our trend analysis might be biased by the varying sampling intensity in different EU Member States. Also, the International Waterbird Census covers mainly wetlands where most waterbirds concentrate, but some species (e.g. swans) extensively use also agricultural areas and the trend in wetlands might be not fully representative for them (Clausen et al., 2019; Rees et al., 2019). The distribution of wintering waterbirds may respond to the weather conditions more dynamically than their breeding distribution (Ridgill & Fox, 1990) and redistribution of waterbirds may lead to apparent population changes that do not reflect the changes in breeding populations (Dalby et al., 2013; Pavón-Jordán et al., 2015; Van Roomen et al., 2022). Country-level trends indicated range shifts towards the breeding areas for some species such as the Smew and Tufted Duck, but not for others (see species accounts).

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