

State of the Netherlands' Birds 2023



In this State of Birds

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♠ Northern Wheatear
Photo: Martin van der Schalk

Facts about birds

In the annual State of the Netherlands' Birds, Sovon compiles knowledge and trends of breeding and wintering birds in concise, accessible communications around a specific theme. This year we chose a slightly different approach. We wrote short stories on a variety of topics. Of course, the fact that a number of typically southern species bred in our country this year does not go unmentioned either, with Black-winged Stilt as the most obvious example.

This State of our Birds also provides the regular overview of trends of breeding and winter birds and briefly discusses the most remarkable results. A good example is the development in the number of overwintering geese. The wildest stories over this are in circulation, without any basis of evidence. Thanks to our volunteers, who in 2023 have again undertaken over 215 man-years of fieldwork (well done!), we know very well how the numbers are really developing and we show, based on the facts, what is genuinely happening. The same is true for our farmland birds. Everyone knows that numbers have fallen sharply, but what exactly is going on? Central to this is the mysterious Ruff. It has virtually disappeared as a breeding bird in agricultural areas but is still present during spring and autumn migration – and if you are wondering how well the birds are doing in their protected areas, this State of the Netherlands' Birds provides an attractive map, which shows an overview the state of bird numbers in Birds Directive areas.

Such a map of bird trends in these important areas summarises a lot of data in a simple way. Behind that interpreted information however, lies a large amount of counts and analyses. Sovon is able to realise such analyses more and more, bringing otherwise complex information on birds into broader discussions. In this way, the monitoring network and atlas counts increasingly make important contributions to environmental issues. It is to be hoped that our new government remains willing to put this information to good use when making difficult decisions about how we want to use the various areas of our country.

I hope that you enjoy reading this diverse State of the Netherlands' Birds 2023. Above all, I hope that you are inspired by the tremendous amount of knowledge that it represents. Thanks to the thousands of bird counters in the field who made this possible.

Theo Verstrael

CEO Sovon Dutch Centre for Field Ornithology



2023

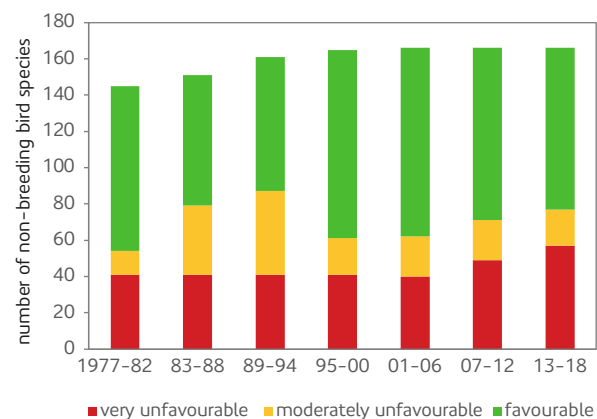
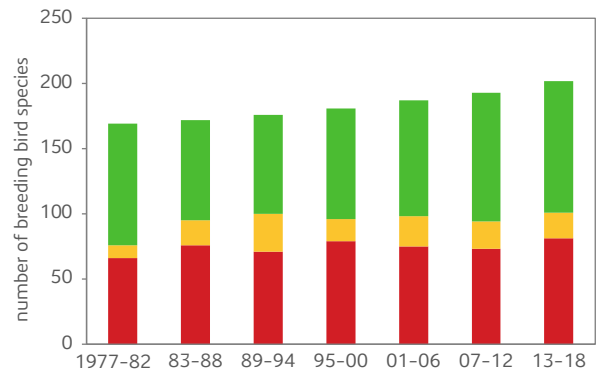
The state of our birds

How do birds that breed in our country fare? What is happening to populations of species that overwinter in the country? Usually, we show this in an overview of population trends. However, trends do not always show whether a species is endangered or whether there is the need for concern. For this, today's nature policies uses the Conservation Status of a species.

The Conservation Status (CS, in Dutch: Staat van Instandhouding) of a bird species tells us how sustainable the population is. This CS is an important concept in nature policy and important for bird conservation. It is determined by estimating four facets: population development, area of distribution, quality and extent of habitat, and an assessment of future developments and threats. Each facet is ultimately given a score. A species can have a favourable, a moderately unfavourable, or a very unfavourable CS.

The two figures on the right reconstruct the CS for breeding and non-breeding bird populations for seven time periods. Around 1980, at the time of the introduction of the Birds Directive, around 75 species of breeding birds had an unfavourable CS. That number quickly rose to around 100 species and has changed very little since. For about half of all regular breeding birds, the situation today remains unfavourable, and this even includes species that are numerous, such as European Herring Gull and Rook. The number of species for which we can determine a CS has increased over time. On the one hand thanks to improved knowledge, and on the other because new breeding birds have arrived in our country.

For non-breeding birds, we see more variation. In 1980, the CS was unfavourable for about 50 species. That number increased rapidly to over 80, before declining again. In recent periods, we again see a steady increase in the number of species with an unfavourable CS. Almost half of all populations of overwintering species assessed are not in a good state, including those of Common Eider and Goldcrest.



▲ Reconstruction of the Conservation Status of bird populations breeding (above) or wintering (below) in the Netherlands. It is not possible to determine the CS for all species occurring in our country, but this number is increasing.

Read more:

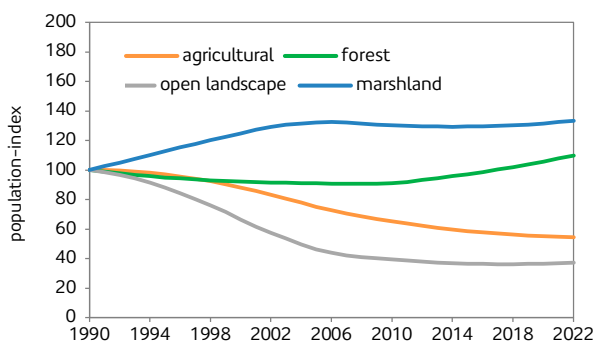
Looking for the Conservation Status of a certain species? Find the information via *Vogelrichtlijn* in the species accounts on stats.sovon.nl



🦆 *Young Common Redshank*
Photo: Marcel van Kammen

Trends in breeding birds by habitat

To get a quick impression of how breeding birds are succeeding in different habitats, indicators have been developed that summarise population trends at a glance. These indicators are part of the Living Planet Index (LPI), which Statistics Netherlands (CBS) updates annually to track the status of wildlife in the Netherlands. These bird indices show that since 1990, the characteristic breeding birds of open landscapes (heathland, dune and salt marsh) and farmland birds have fared worst. Bear in mind that two-thirds of the Netherlands is agricultural land, so this decline is taking place over a large part of our country. In general, typical marshland birds and forest birds actually did well during the same period. However, there is great variation between species and regions. For example, we see more positive trends for characteristic forest birds on clay and peat soils than on sandy soils, and within sandy soils more negative trends and densities in the regions where the nitrogen load is highest.

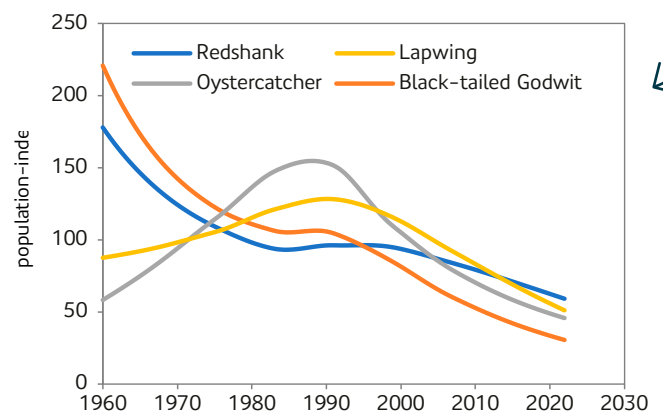


The decline in characteristic breeding birds of open landscapes seems to stagnate. However, the average trend masks major differences between species that increased recently (Wryneck, Nightjar, Red-backed Shrike), declined (Curlew, Short-eared Owl) and at present (almost) disappeared (Tawny Pipit, Black Grouse, Hen Harrier).

Meadow birds: structural recovery fails to take place

In the Netherlands, four of our most typical grassland birds have been in steep decline for decades. In 2022, Black-tailed Godwit, Eurasian Oystercatcher, Northern Lapwing and Common Redshank even reached their lowest numbers since counts started in the early 1960s. The decline is mainly related to the increase and intensification in agriculture. Moist, herb-rich grasslands have given way to drained and levelled ryegrass fields where mowing takes place more often and earlier in the year. Increased predation and dry springs exacerbate the problems. Despite all management and conservation efforts, and certainly local successes, too few chicks are being raised on a national scale to stabilise populations. An exploratory analysis of the effects of the national agricultural nature and landscape management scheme (ANLb) in the period 2016–21 shows that while the numbers of Black-tailed Godwit and Lapwing are still declining in areas with agricultural nature management, they are less pronounced than in areas without this management. For most other farmland birds, no clear differences in trends are visible as yet.

Preliminary figures from breeding season 2023 indicate all four species increased slightly with a few percent relative to the previous breeding season 2022.





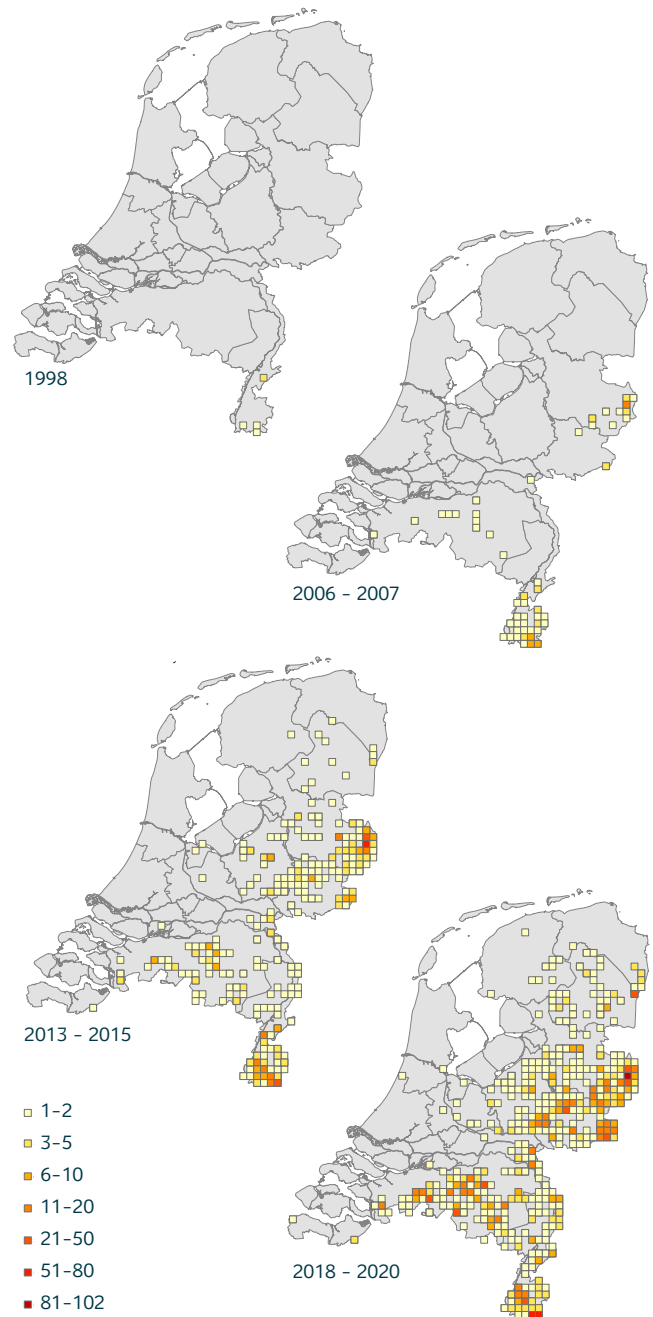
◀ Middle Spotted Woodpecker
Photo: Marc Gottenbos

Trends in more detail

The rise of the Middle Spotted Woodpecker

In the past 25 years, the Middle Spotted Woodpecker colonised the loess and sandy soils of the upper Netherlands. The fast increase started after a breeding case was found in De Hamert (Limburg) in 1995, after an absence of several decades. The species has since established itself in 11 of the 12 provinces and the breeding population is currently estimated at 1900-2400 pairs. Traditionally, Middle Spotted Woodpeckers breed in central and southern Europe, but in the last century the limit of occurrence has shifted more northwards. From the 1980s, populations increased in Germany and the Belgian Ardennes. The fact that the Netherlands has seen an increase is largely due to the ageing of (deciduous) trees such as the oak, and more natural forest management, which leaves dead trees in place. It is mainly young woodpeckers that roam and colonise new areas. Middle Spotted Woodpeckers regularly establish new territories, sometimes over 70 kilometres from existing settlements. The future looks bright for this woodpecker species: certainly not all suitable habitat has been colonised yet and global warming is making it increasingly favourable for the species. The invasion of the Middle Spotted Woodpecker seems far from over, and as the poplar forests in Flevoland age, the woodpecker species is expected to eventually triumph as a breeding bird in this province too.

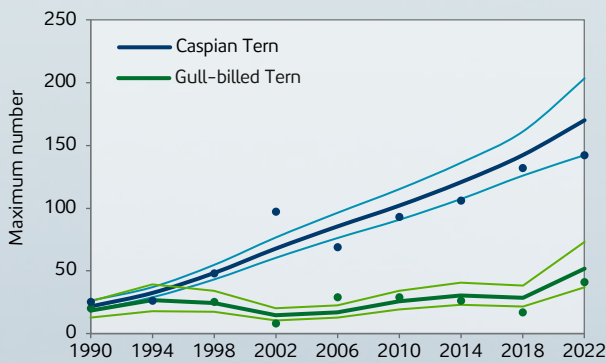
The rise of the Middle Spotted Woodpecker as a breeding bird shown for four periods. The numbers of territories per 5x5 km square are given for 1998 – 2020. At the start, the species was a rare breeder, only occurring in Limburg. In 25 years the species has spread through 11 of the 12 provinces.



Rare terns in roosts

Caspian Terns and Gull-billed Terns appear in wetlands in the Netherlands every summer. They make a stopover in July and August during their migration to their wintering grounds in West Africa. In 2023, the highest numbers ever were counted of both species. The maximum number of these terns can best be determined by simultaneous counts at roost sites. After all, they forage over a large area during the day. These roost counts show that the numbers of Caspian Terns are steadily increasing, a development consistent with the population recovery in the Baltic Sea, where these birds originate from. By far the most Caspian Terns roost along the Frisian Wadden coast and the IJsselmeer coast.

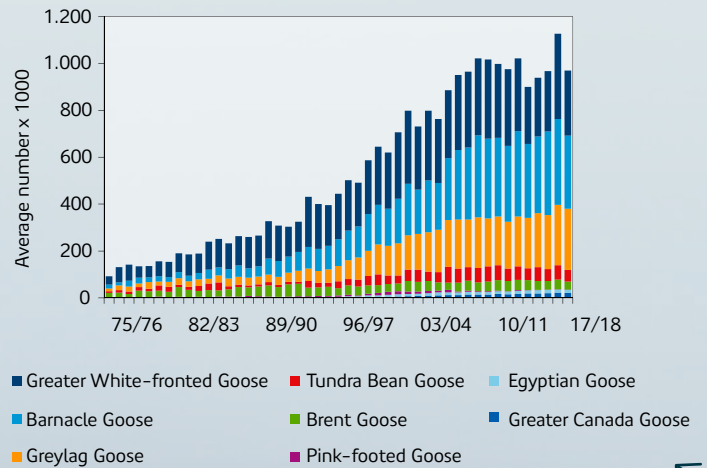
In the case of Gull-billed Terns, things are very different. The individuals migrating through the country come from the only remaining colony in north-western Europe, at the mouth of the River Elbe in Germany, where the number of breeding pairs fluctuates around 40. More birds have been seen at Dutch roosting sites in the Dollard and Balgzand in recent years. One of the reasons is probably a series of several successful breeding years, in which more young have been raised.



➤ Trend of Caspian Terns and Gull-billed Terns on passage in the Netherlands.

Stable numbers of wintering geese

Over the past decade, the numbers of geese that winter in the Netherlands have stabilised. The record numbers counted in 2019/20 seemed to prelude a new growth spurt. But the counts from this most recent season appear to show an exception to the rule for now. In past seasons, a maximum of about 2.4 million geese stayed in our country during midwinter. There are several explanations for the recent stabilisation. What is particularly striking is that northern migratory birds are arriving in our country on average later in autumn. In addition, the maximum numbers of the Greater White-fronted Goose and Barnacle Goose, the most common wintering geese, have not increased since 2013/14. Greylag Goose and Greater Canada Goose, species that both breed in our country, are still on the rise. However, their numbers are smaller than those of Barnacle Goose and Greater White-fronted Goose, so they do not compensate for the stabilisation in these species. The later arrival of geese may be caused by better feeding conditions during migration, likely facilitated by warmer autumn months.



Trend in wintering geese in the Netherlands since 1975/76, concerning the eight most common wintering species. The sum of the seasons' average is displayed.



Breeding earlier

Climate change brings all kinds of new challenges for birds. Some species possess a surprising adaptability and are doing their best to keep up with the unprecedented rapid changes.

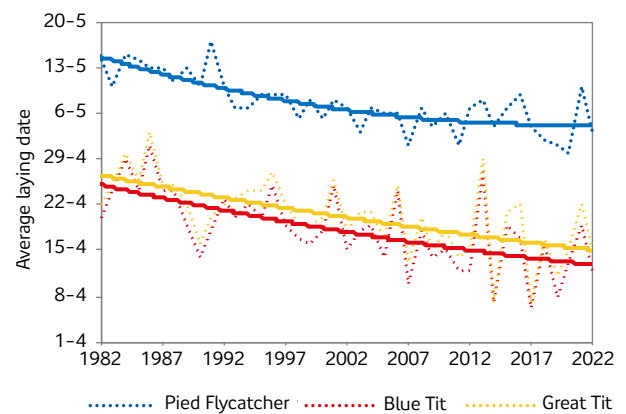
One way of tracking birds' adaptability is through the national Nest Monitoring Scheme. Each year, data from many thousands of nests are submitted and those data are used to monitor, for example, the average time of year when species start their egg laying. Nest box breeders such as the Great Tit, Eurasian Blue Tit and European Pied Flycatcher are relatively easy to monitor and show interesting trends in their laying dates over the years.

All three species have advanced their average laying date since the 1980s to adapt to warmer springs. Such conditions lead to caterpillars, important staple food for these species, emerging earlier and earlier in spring. By adapting to this phenomenon, birds can provide their young with sufficient food at the time when the quantity of caterpillars is at its peak. The Great Tit and Blue Tit have managed to advance their average laying date by more than a week.

The Pied Flycatcher has also started breeding earlier and earlier in recent decades; a remarkable achievement as this species migrates to Africa every winter and faces completely different conditions there. Pied Flycatchers may additionally have a trump card up their sleeve. Recently, some cases of females that managed to raise two broods in one year by starting the breeding season early have been observed, a rare phenomenon in this species. Could this strategy become more popular in the coming years?

A caveat is the annual large variation in laying date, depending on changing weather conditions. The spring of 2021, for instance, was exceptionally cold and led to relatively late laying, whereas the average laying date in 2022 (with a mild, sunny and dry spring) fits the earlier trend better. The data for 2023 are not yet complete, but the first impression is that tits in particular were again somewhat late in laying their eggs this year.

Nevertheless, even these flexible and resourceful species have limits to how quickly they can adapt. While numbers of Great Tits and Blue Tits are still moderately increasing nationally, trends in a number of habitats are beginning to stagnate, and nest success and clutch size of both species have been declining for years. This raises the question of whether these common species can sustain themselves in the coming years as the climate continues to change at an unprecedented rate.



▲ Trend in average laying date of three species based on data from the Nest Monitoring Scheme and NESTKAST.

✦ Blue Tits have advanced their egg laying by more than a week in the last 40 years
Photo: Harvey van Diek



» Red Knots, Grey Plovers
and Dunlins
Photo: Ruurd Jelle van der Leij

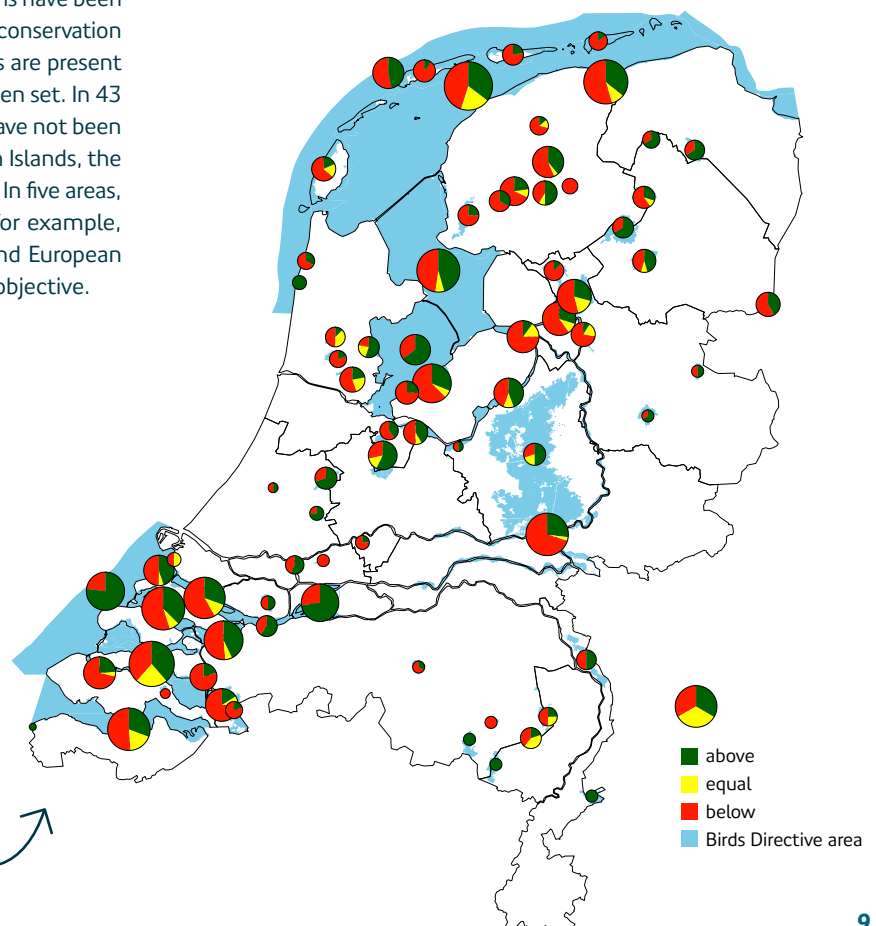
Challenges in Bird Directive areas

The Netherlands has 78 Natura 2000 sites designated under the Birds Directive (also called Bird Directive areas). The Wadden Sea and Oosterschelde are examples of such areas and have conservation targets for dozens of bird species. These targets are formulated in numbers of birds and are linked to three functions: breeding site, foraging site, or resting or roosting site. The functions differ per area. The important thing is that the habitat is of sufficient size and quality to accommodate these numbers. Bird counts are important to collect data on species and areas with such conservation targets.

The map shows the extent to which the conservation targets for birds are being met. For each area, it shows the proportion of species for which numbers in the past five seasons have been above, equal to (with a 10% margin) or below the conservation targets. The larger the pie chart, the more species are present in the area for which conservation targets have been set. In 43 areas, half or more of the targets for bird species have not been met. Examples are the dune areas on the Wadden Islands, the Lauwersmeer and the branches of the River Rhine. In five areas, all targets are met. The Meinweg in Limburg, for example, holds sufficient Woodlarks, European Nightjars and European Stonechats to meet the habitat size and quality objective.

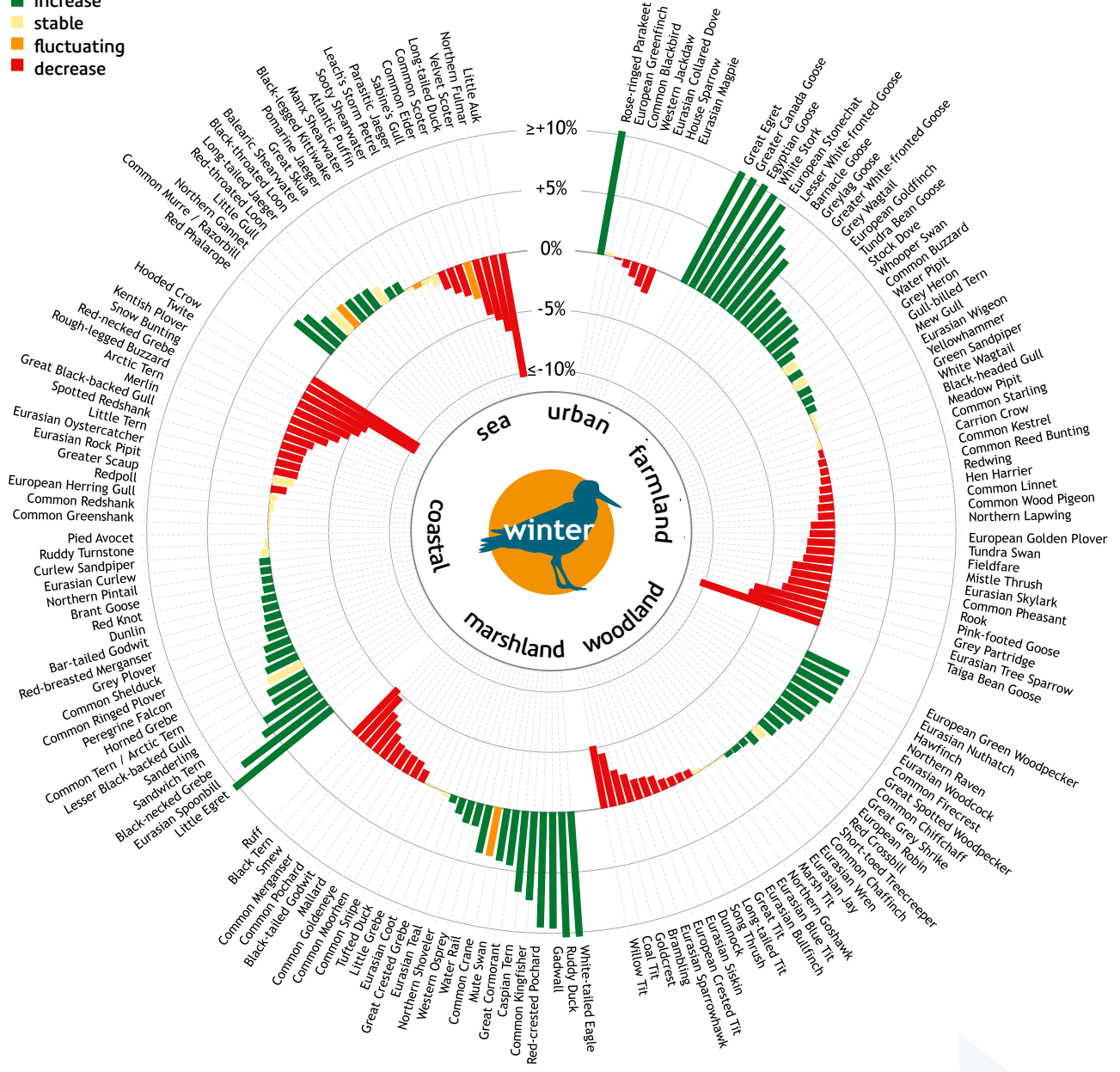
Rare target species such as the Hen Harrier, Common Ringed Plover, Great Reed Warbler, Corn Crake and Kentish Plover are scarce almost everywhere. In contrast, the conservation targets in areas of breeding birds that are increasing nationwide such as the Woodlark, Eurasian Spoonbill and Common Reed Warbler are achieved in almost every area. Among waterbirds, the balance is more positive, with about half of the targets being met. For wintering species that have re-established themselves, including Great Egret and White-tailed Eagle, the conservation targets have all been met. Compared to three years ago (see State of the Netherlands' Birds 2020), the number of targets achieved has remained the same.

Percentage of the conservation targets per Bird Directive area that were above, equal to or below the target number, based on the average in 2018-22. Two areas in the North Sea are excluded from this figure.



birds per habitat

- increase
- stable
- fluctuating
- decrease



Want to know more?

Visit our websites for more information:

- > National, regional and Natura 2000 trends for each species: stats.sovon.nl
- > Species distribution: vogelatlas.nl
- > Monitoring reports: stats.sovon.nl/pub

Source: Netwerk Ecologische Monitoring (Sovon, RWS, CBS, provincies)

Messengers from the dry south

The Black-winged Stilt is turning up more and more often in our country in spring. Other Southern European species, such as the Glossy Ibis and the Baillon's Crake, are also seen in increasing numbers. Are they messengers of global warming or do other causes also play a role?

A variety of bird species are expanding or moving their breeding distribution northwards due to rising temperatures in Southern Europe. The precise mechanisms of such changes often differ between species. It is also often slow and the numbers of birds in areas that become too warm or too dry, for example, first decrease gradually before areas are actually abandoned. This applies, for example, to the Icterine Warbler. At the same time, some southern breeding birds surprise us because their rise is relatively slow or erratic, such as the Zitting Cisticola. There are only a few species that can respond very quickly to changes in their breeding range: the so-called pioneers. Some of such pioneers that occur south of the Netherlands have been appearing more and more frequently in our country in recent years, including Black-winged Stilt, Glossy Ibis and Baillon's Crake – and so the question arises as to what causes this.

Spanish Stilts

In spring 2023, Black-winged Stilts were reported in many areas across the Netherlands and at least 148 breeding pairs were identified. These are numbers that were unthinkable in the previous century. The first breeding records of Black-winged Stilt in the Netherlands date back to 1931. In the decades that followed, the species bred irregularly. Years with influxes of sometimes dozens of breeding pairs alternated with periods without any breeding birds. The breeding hotspot was almost always in Zeeland. This changed from the early 1990s onwards: with the exception of 1996 and 2003, the species became an annual breeding bird, and in the last ten years its numbers have clearly increased.

✚ Green 159 at Dordrecht on 8 May 2022.
Photo: Michiel Haye

Influx or settlement? establishment?

When birds suddenly start to move on a large scale due to changing circumstances, we can call it an *influx*. The question is whether the number of Black-winged Stilts remain dependent of those influxes. Perhaps, a returning population starts to settle, independently from the circumstances in Southern Europe. An individual ringed as a nestling as 'green 159' near Seville in Spain in 2018, was seen in both 2022 and 2023 in the Netherlands. Last year, it is thought to have bred in the Ezumakeeg, Lauwersmeer – the first proof of settlement?





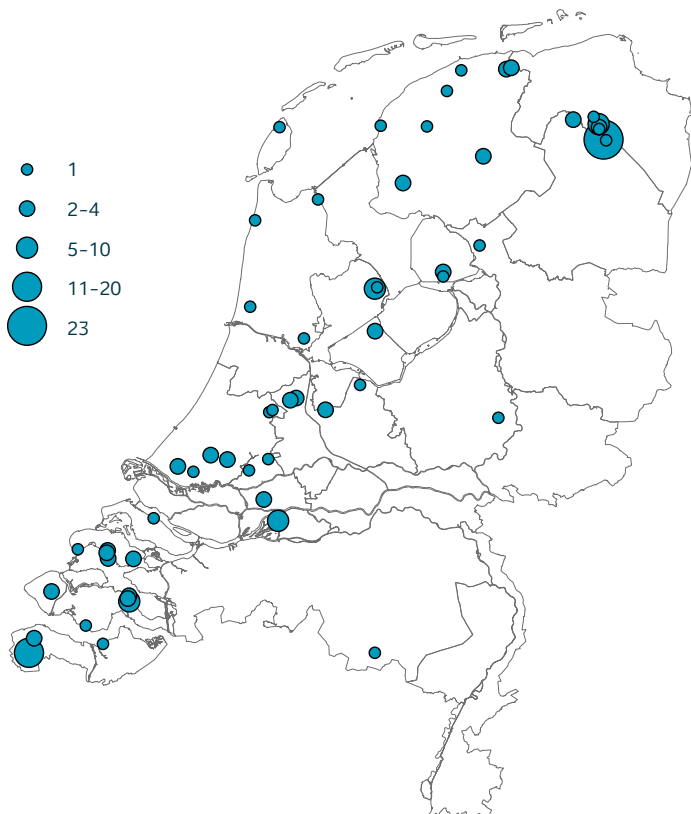
Breeding areas

Why are Black-winged Stilts appearing more and more regularly? To understand this, it is important to check if anything is known about the origin of these birds. In recent years (from 2015), at least four different individuals with a colour-ring from Spain have been reported in the Netherlands. So there is at least a connection with the Spanish population. This is not surprising as it is home to Europe's largest breeding population of about 28,000 pairs, which furthermore shows a positive trend over the period 2007-2018. The Ebro delta, Doñana and lagoons near Valencia host hundreds to thousands of pairs every year. In Spain, numbers vary greatly between wet and dry years and many movements between years take place. Because Black-winged Stilts are dependent on shallow water, drought can cause the loss of suitable breeding areas. The presence of shallow water (<20 cm) for a significant period during the breeding season is a prerequisite for breeding. Their long legs, which comprises about 60% of their total body height, allow Black-winged Stilts to easily wade through the water to pick small insects from the water surface. During periods when precipitation is absent and evaporation causes the drying out of these areas, all kinds of salt marshes and lagoons become unsuitable.

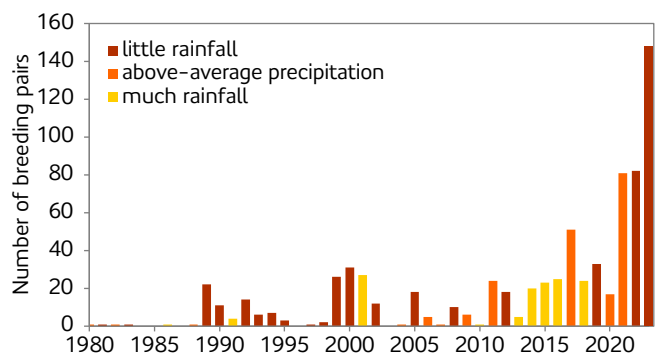
Increase in the Netherlands

The combination of periods of drought and a growing population create more dynamics in the numbers of Spanish Black-winged Stilts. We also notice this in the Netherlands. The 2017 and 2021-23 breeding records all followed a period of low precipitation in Spain. Even when the Spanish increase is taken into account, there is a significant correlation between the amount of precipitation in Spain in January-March and the number of breeding pairs of the Black-winged Stilts in the Netherlands in the following months (see figure below). Not all dry periods result in higher numbers in the Netherlands, but after drier Spanish winters there is a greater chance of many Black-winged Stilts (dark bars) than after wetter winters (light bars). The extreme drought that started in large parts of Spain in 2022 and continued into 2023 undoubtedly caused more Black-winged Stilts to fly north in search of suitable breeding grounds. We cannot rule out the possibility that this also included breeding birds from southern France. The average precipitation in that region generally corresponds to that in Spain.

Undoubtedly, the expansion of suitable breeding habitat in the Netherlands is also beneficial for the Black-winged Stilt. For example, there are more and more water storage areas, marshlands and restored flood plains where they can breed. In 2023, there were concentrations of breeding pairs in such areas, including Tusschenwater in the Hunzedal in Drenthe (24), Sophiapolder in Zeeland (11), the Marker Wadden (10) and in Yerseke Moer (9). The advance of the Black-winged Stilts is also being noticed in neighbouring countries. In Belgium, for example, dozens of pairs have been reported in recent years. There too, the development of nature reserves seem to be attracting them, such as the East Coast Polders, IJzer Valley and Antwerp-Left Bank. In England, Black-winged Stilts have been breeding annually since 2014.



✂ Number of breeding pairs of Black-winged Stilts in 2023. They breed almost exclusively in the lower parts of the country.



✂ Number of breeding pairs of Black-winged Stilt in the Netherlands in relation to how much precipitation in Spain (little = <150 mm, above average = 150 - 175 mm, much = >150 mm) in period 1980 to 2023.



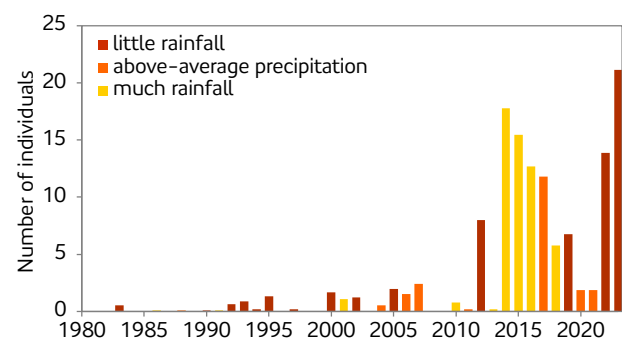
Waiting for the Glossy Ibis

The increasing number of Glossy Ibis appearing in the Netherlands in spring is also related to developments in Southern Europe. Here, numbers have increased spectacularly in recent decades. However, the species has huge population fluctuations and is able to quickly colonise new areas. An example of this nomadic behaviour is its colonisation in the Camargue, France. Until 2005, Glossy Ibis rarely nested in France. Then the species settled in the Camargue and in 2017 as many as 2,087 pairs were breeding across ten colonies, mainly in the Camargue but also in other areas along the Mediterranean coast. In Spain, the country with by far the largest population in Europe, there are three areas with large colonies: the Ebro Delta, the Doñana and lagoons near Valencia. The rice fields near these nature reserves provide a stable food supply for the colonies: ibises can forage for food there all year round, alternating with foraging in more natural wetlands. The Spanish population has grown significantly in recent decades.

The increase in Southern Europe is also noticeable in the Netherlands. Until 1999, the Glossy Ibis in our country was considered a vagrant and records were assessed by the Dutch Rarities Committee (CDNA). Since then, birds observed in the Netherlands have been registered by Sovon and waarneming.nl. In the past ten springs, Glossy Ibises were invariably recorded, often in small groups. They mainly migrate into our country during April–June and sometimes stay for the winter. A reconstruction of the numbers during these spring months shows that Glossy Ibis also migrate to the Netherlands after winters with considerable precipitation in Spain (see figure). There is a correlation with precipitation figures, but it is much less clear than for the Black-winged Stilt. Despite few ringing reports of Glossy Ibises in the Netherlands, some colour-ring observations suggest a connection with the large colonies in Southern Europe: two individuals seen in November 2013

in Oudewater (Utrecht) and were from Spain (white 04FV and white 0797). White 0797 was subsequently seen more frequently at various sites in the Western Netherlands until April 2015. A third individual was ringed in 2007 in Camargue, France as white V02 and was seen in late summer 2011 in Workumerwaard.

The Glossy Ibis has not yet established itself as a breeding bird, but that seems only to be a matter of time. This colony bird likes to join other herons. It is possible that colonies of Eurasian Spoonbills, Purple Herons and Great Egrets, which are mainly showing increases, could attract vagrant Glossy Ibises in the coming years. In England, breeding attempts failed in 2014 and 2016, but a pair was successful for the first time in Cambridgeshire in 2022.



▲ Average number of Glossy Ibises in the Netherlands in April–June in relation to rainfall amount in Spain (little = <150 mm, above average = 150 – 175 mm, many = >150 mm) in period 1980 to 2023.



In the last ten springs, Glossy Ibises were seen regularly, often in small flocks. Their main period of arrival is April - June. Sometimes birds stay and overwinter.

Baillon's Crake

Wet conditions are also very important for a small rail like the Baillon's Crake. This species prefers shallow marshes and flood plains, where the vegetation consists mostly of rush, sedge and other low marsh plants. Water levels that are too low as well as too high are unfavourable; a stable layer of about ten centimetres is optimal. Crakes are generally opportunistic species, able to quickly discover (temporary) suitable areas. Permanent breeding areas south of the Netherlands can be found in Spain and France. Baillon's Crakes have been breeding irregularly in the Netherlands for at least two centuries and are not newcomers in this respect. The latest estimate is 20-45 territories in the years 2018-2020. The numbers reported annually in the Netherlands are low but have clearly increased in the period 2007-2022. During this period, there is a significant correlation between precipitation rates in Spain and numbers in the Netherlands. Recent years with influxes, 2012 and 2019, coincided with dry years in Spain. For example, 2012 was the driest year there since 1940.

Whether we can expect more Black-winged Stilts, Glossy Ibises and Baillon's Crakes in the coming years depends on population trends in countries south of us. (Lack of) rainfall also plays an important role. The patterns found in Black-winged Stilt and Baillon's Crake numbers are indications of this. Since around 1980, the number of dry years on the Iberian Peninsula has been increasing and periods of extreme drought are expected to increase. There are probably a variety of other factors that also play a role in the movements of these three species, which merit further investigation.

» Baillon's Crake
Photo: Martin van der Schalk

Baillon's Crake almost never show themselves. Their rattling calls are the easiest to hear. Special nocturnal counts in marshland areas help to map the species.



Fewer and fewer Ruffs

The sight of thousands of Ruffs on roosting sites is fast fading. Nowadays these numbers are more likely to be in the hundreds. Ruffs are seen mainly in Friesland, traditionally the most important province for these waders to forage in grasslands during their spring migration. In the 1990s, 40,000 – 50,000 roosting birds were still counted there.

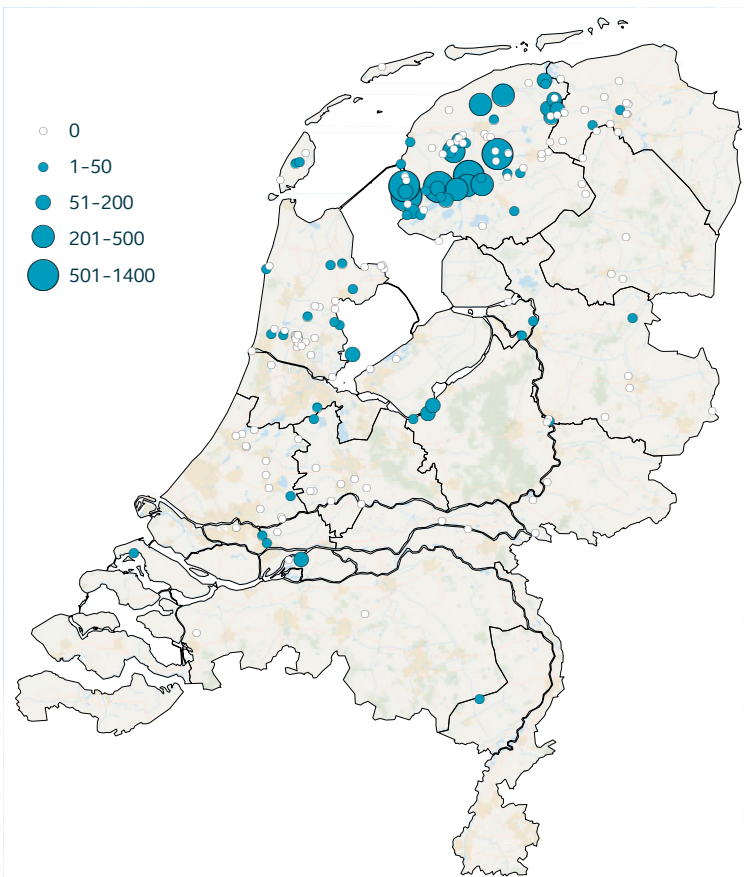
Research in the Frisian meadows some 20 years ago already showed that the present Ruffs (in Frisian named *Hoantsen*) did not fatten up and moult very well there, probably due to a lack of food. As a result, within one generation Ruffs started to choose an increasingly easterly migration route in spring. A stopover in the Pripyat delta in Belarus became more attractive than in, say, Oudegaasterbrekken, the Netherlands. An analysis of trends in different areas also showed that Ruffs were increasingly shifting their breeding grounds from the European part to the Asian part of the Siberian tundra.

The changes in numbers of migrating Ruffs in the Netherlands are best monitored by counts on roosting sites. The species likes to forage in small groups scattered over a large area and are easily missed. In the evening, Ruffs gather in groups on communal roosts, often on a marshland or in shallow wetlands, where it is relatively safe to spend the night. Such places are mostly found in the lowest, western parts of the Netherlands. In spring 2023, a nationwide count of Ruffs on roosts was coordinated for a fifth time. Previous spring counts were in 2008, 2011, 2015 and 2019. In Friesland, there is a long-standing tradition of wader counts on roosts.

Roost counts were conducted at dusk around 11 March and 1 April, often combined with counts of Black-tailed Godwit, Eurasian Oystercatcher, Eurasian Curlew and Eurasian Whimbrel. During the first counting period, 168 sites were visited, while 157 were visited during the second period. On most roosts no Ruffs were present, but on 37 sites Ruffs were seen. Most of these were in Friesland (figure). The national maximum was 14,477 individuals. The largest numbers were seen during the second count (with better weather conditions than in March). The largest roosts were in Workumerwaard (1400)

and Wydlannen in Alde Feanen (1375). There are five Natura 2000 sites that have been designated partly because they are important roosts for the Ruff. Of these five areas, only the Oostvaardersplassen met the target number, as several hundred Ruffs were found here in August.

Not only the migration numbers are lower compared to previous century. In large parts of northern Europe, Ruff are declining in numbers as a breeding bird. In the Netherlands, the species is hanging on by a thread. Only a few territories are still found annually. Suitable breeding habitat, very wet and extensively used grassland, can hardly be found in the Dutch landscape anymore. There seems to be little prospect for *Hoantsen* (Ruffs).



✦ *Ruffs and Black-tailed Godwits*
Photo: Marcel van Kammen



✦ *Maximum number of Ruffs on roosting sites in spring 2023 (blue). Counted areas without Ruffs are also shown (white)*



♠ Male Ruff in breeding plumage, with its distinctive collar.
Photo: Henk Laverman



Bird flu has impact

For almost a decade, highly pathogenic avian influenza has had a major impact on some bird populations in Europe. The virus has killed thousands of ducks, geese, gulls, terns, seabirds and birds of prey. Other species are also affected, sometimes en masse, and sometimes almost unnoticed. Here we outline the most affected species and the impact on populations.

November 2014 marked the beginning of a series of waves of highly pathogenic avian influenza (bird flu) in the Netherlands that have since been seen around the world. That month, a highly dangerous variant of bird flu was detected at a poultry farm in Hekendorp in the Netherlands. Soon the 'culprits' were found: Eurasian Wigeons nearby were also found to be infected, according to samples of their droppings. They could have taken the virus with them on their migration from the northeast. Indeed, wild birds carrying the same variant were also found in Asia and Eastern Europe. The link between outbreaks in the Dutch poultry sector and wild birds spreading the virus was quickly established, but large-scale mortality in wild birds did not occur in the winter of 2014/15. After that, the virus was not noted in the Netherlands for two years, at least according to tests done in wild birds during ringing sessions.

Nevertheless, several winters later in 2016, some species of waterbirds died en masse from highly pathogenic avian influenza. Low pathogenic, less infectious bird flu viruses have always been present among waterbirds but mutations and the merging of highly pathogenic and low pathogenic viruses have created very infectious and deadly variants and species-specific adaptations over the last 25 years. In each case, these are H5 subtypes of the avian influenza virus: initially variants of H5N8 dominated but now mainly H5N1 viruses evolved from them. Waterbirds, birds of prey and scavengers are particularly susceptible to bird flu. The virus can be easily transmitted through faeces in water. The virus can also remain contagious in water for months. Birds that live close together in water or breed in large colonies are therefore particularly vulnerable. Birds of prey and scavengers that eat infected prey can ingest the virus through their gastrointestinal system and become infected. In recent years, there have also been increasing cases of avian flu among carnivorous mammals. Susceptibility to bird flu varies greatly among species and can change suddenly if the virus mutates.

Endemic

Since summer 2021, highly pathogenic avian influenza has become endemic in Western Europe. This means it is present year-round in the Netherlands and continues to circulate mainly among waterbirds. Before then, the circulation of the virus in the Netherlands was relatively short-lived, and mainly in autumn and winter. There seemed to be a pattern in which bird flu waves came along with migratory wintering birds but also died out after some time. However, since 2022, breeding populations have also been affected and bird flu has also been detected in seabird colonies along the European coast. In the Netherlands, the Sandwich Tern is the clearest example.

A Dutch overview from August 2023 shows that highly pathogenic avian influenza has now been detected in 65 different bird species since 2016. Especially waterbirds and birds of prey are affected, but also pigeons and owls, for example. Potentially, many different species could be affected. From 2020, the AI-Impact Working Group is trying to understand the impact of bird flu on wild bird populations. Sovon is part of this working group. Based on reports of dead birds by Dutch Wildlife Health Centre (DWHC), Sovon and waarneming.nl, peaks in mortality are recorded. For some colony-nesting birds, such as the Sandwich Tern, coordinated disposals of carcasses has made it possible to make good estimates of the total level of mortality in the population. Combined with results from laboratory-tested samples and carcasses, a picture of the extent to which wild birds are affected by bird flu is emerging. Some of these data have since been summarised in scientific articles and reports (see p. 31), including an overview report by Sovon. This information is summarised below very briefly by bird group. Seabirds, such as the Northern Gannet and Great Skua, are not included in this article.



▲ Eurasian Wigeon
Photo: Erik van Velden

Geese and swans

Among geese and swans, Barnacle Goose and Mute Swan have so far proven to be the most susceptible to bird flu. Mortality among Barnacle Geese was remarkably high from October 2020 to spring 2022. Several thousand dead Barnacle Geese were found along the Frisian coast during this period. Mortality in the winter of 2021/22 was estimated to be around 7% of the winter population. Other goose species, such as Brent Goose, Greater Canada Goose and Greylag Goose, also appear to be susceptible to avian influenza. The virus was found in some of the dead specimens tested. Increased mortality is likely in these species, but so far without clear peaks in mortality. However, Mute Swans did show a peak in mortality rates during the same period as Barnacle Geese. The estimated mortality of Mute Swans for the 2021/22 season was 11%. In the summer of 2021, two Mute Swans were affected by highly pathogenic avian influenza, evidence that the virus was beginning to circulate year-round and no longer only affecting wintering birds.

Season	Species	Estimated mortality
2022	Sandwich Tern	up to 56%
2021/22	Peregrine Falcon	up to 56%
2021/22	Great Black-backed Gull	up to 15%
2020/21	Common Buzzard	up to 12%
2021/22	Mute Swan	up to 11%
2021/22	Barnacle Goose	up to 7%
2016/17	Eurasian Wigeon	up to 5%
2016/17	Tufted Duck	up to 5%

Ducks

Both Wigeon and Tufted Duck have shown notable mortality due to bird flu. It is estimated that about 5% of the wintering population of both species died in the 2016/17 season. The outbreak of H5N8 began in November in the Gouwzee and Wolderwijd, where hundreds of dead Tufted Ducks were found. A strong wave among Wigeons followed in December, with thousands of dead individuals found in wetlands in the Western Netherlands. Infected Wigeons were also found regularly in the following years, both alive (via ringing catches) and dead, but a new peak in mortality rates did not occur. Although highly pathogenic avian influenza has been found in more duck species in Europe, large-scale mortality in the Netherlands has so far been limited to these two species. In recent years, peaks in mortality were also observed a few times in Common Shelduck, but it is not clear what role bird flu played in this. Too few specimens have yet been tested, and botulism was identified as a major cause in many cases.

« Estimated mortality rates as the percentage of the Dutch winter population. For Sandwich Tern, these are the adult birds of the breeding population. Only the seasons with the largest impact are mentioned. These estimates have a high degree of uncertainty. No figures are yet known from 2023.



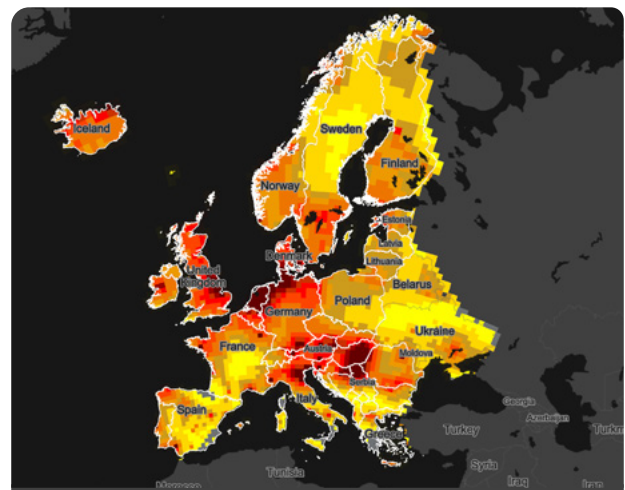
Peregrine Falcons are major victims of high pathogenic avian influenza, which they catch through their prey. It is estimated that about half of wintering Peregrine Falcons died in 2020/21.

Waders

Since 2020, more dead Eurasian Curlews are being found. In 2020/21, four out of every six dead Curlews tested were found to be infected with highly pathogenic avian influenza. The number of reports of dead Curlews has increased, but the impact on population cannot yet be estimated. In mid-December 2021, hundreds of dead Red Knots washed up on the beach at Schiermonnikoog. Some birds were tested and found to be infected. Many dead Knots were also found in the German part of the Wadden Sea, but the mortality did not spread to the rest of the Dutch Wadden Sea. There are too few data to estimate the impact on the population of wintering Knots (subspecies *islandica*). An infected Dunlin was found in 2020/21, but as yet no mass mortality has been noted. Some cases are also known from some other species of waders.

Birds of prey

Less conspicuous, but no less significant, is the mortality of raptors eating infected waterfowl. Peregrine Falcon and Common Buzzard are the two clearest examples of this. During winter, many Peregrine Falcons specialise in hunting mid-sized waterbirds such as ducks and gulls; known carriers of avian influenza viruses. In the winter of 2016/17, 16 dead Peregrine Falcons were reported nationwide, of which a few tested positive for bird flu. Based on this, the extent of mortality was estimated at 11–39%. For the winter of 2021/22, mortality is even estimated at up to 56%. It is noteworthy that the steady increase in numbers of wintering Peregrine Falcons came to a halt in 2014 and turned to a decline from 2017. Bird flu seems to be a major reason for this. In the winter of 2020/21, hundreds of dead Buzzards were also found. Bird flu was found to be the cause of death in 30% of those tested, and overall mortality in the population was estimated at about 12%. Buzzards can become infected because they frequently eat carrion. White-tailed Eagle and Northern Goshawk also appear to be susceptible; in both 2021 and 2022, a dead White-tailed Eagle nestling tested positive for highly pathogenic avian influenza, and in the last year, three other dead young were also suspected cases. Because the Dutch population of White-tailed Eagles is small and they are long-lived birds, an effect on population level may only become visible in the longer term. Based on dead Goshawks tested in the winters since 2020, it is clear that bird flu is also a cause of mortality in this species, however, its effect cannot yet be fully estimated.



Bird Flu Radar

The Bird Flu Radar was launched in spring 2023. This interactive online map shows the likelihood of a highly pathogenic avian influenza outbreak for each European region. The map combines the distribution data of 12 species of waterbirds based on current counts with information on movements of these species (ringing data) and with current reports of outbreaks. The Bird Flu Radar was co-developed by Sovon on behalf of the European Food Safety Authority (EFSA) and can be found at: app.bto.org/mrmt/avian_influenza_map/avian_influenza_map.jsp

Gulls and terns

The group of gulls and terns appears to be highly susceptible to bird flu, especially to the 'BB variant' of H5N1 circulating in 2022 and 2023. Many gull species have now tested positive for bird flu in the Netherlands. Great Black-backed Gulls and Black-headed Gulls are clearly affected. For other gull species the data are still too scarce to be able to say anything about the impact, but for example, Mediterranean Gull is also known to be affected. Many dead Great Black-backed Gulls, a typical scavenger, were found in the winters of 2016/17 and 2020-22. A good proportion of these were found to be infected, and for the winter of 2021/22 mortality is estimated at up to 15%. In European Herring Gulls, there was a higher mortality than normal at the end of the summer in 2022 in both the Wadden Sea and Delta. However, too little data have been collected from this species to estimate the extent of mortality. In spring 2023, many colonies of Black-headed Gulls and Common Terns were severely affected, and thousands of dead individuals were reported and removed. Both species were already affected in 2022 in colonies where Sandwich Terns were also breeding.

The extent of mortality in these species has not yet been determined but it is considerable. Even greater is the impact of avian flu on Sandwich Terns, which were affected in both the 2022 and 2023 breeding seasons. In 2022 alone nearly 10,000 dead adult terns were found in and near colonies, a mortality rate of at least 30% of adult breeding birds. In 2023, chicks of this species were mostly affected (see box).

Sandwich Terns severely hit

The outbreak in June 2022 in Sandwich Terns was disastrous for colonies in the Netherlands and Belgium. Two variants of the subtype H5N1 caused a very high death rates among adult birds and nestlings. At least 30% of breeding adults were found dead and only a total of 1100 young fledged, three-quarters less than the average of recent years. In 2023, about a quarter fewer Sandwich Terns returned to the colonies. This year, a high mortality was seen in nestlings that were on the verge of fledging. The death rate of young birds isn't known at this moment. After two springs in which many Sandwich Terns died, the question arises as to when the population will recover. There are many factors being of influence, such as the numbers of floaters in the population that will find new space in the colonies and of course, possible new outbreaks of bird flu in the coming years. Model analysis predicts it will cost up to decades for the population to recover and to reach the level of 2022, even if bird flu doesn't play any part in the near future.



♠ Blyth's Reed Warbler, 27 June 2021, Zuidplaspolder-
noord, Waddinxveen. On dutchbirding.nl you can find
good explanations about the song and the differences
with Marsh Warbler.
Photo: Thijs Glastra

A new warbler

Blyth's Reed Warblers are increasingly being observed in the Netherlands. This increase matches the expansion of this species towards Western Europe. As appearance and song are very similar to that of Marsh Warbler, this new warbler should be one to watch out for.

The distribution range of many breeding birds is dynamic. Take the disappearance of the Crested Lark from Northwestern Europe and the rise of the Cetti's Warbler. These are examples of rapid changes that observers need to be alert to. Blyth's Reed Warblers are reasonably the latest phenomenon, although there is not yet an established population in the Netherlands. The Blyth's Reed Warbler is closely related to the Marsh Warbler but breeds on average somewhat further north, from Scandinavia to Central Asia. In the last forty years or so, the population in Finland increased fivefold and Blyth's Reed Warblers established themselves in Sweden and Eastern Norway. Small populations have also developed in Lithuania, Belarus and Poland. This increase probably also accounts for the influxes to Western Europe, even as far away as Britain. Blyth's Reed Warblers winter all the way as far as India and Bangladesh, a lot further east than the other reed warblers that breed in the Netherlands and migrate to Africa.

Spring birds

After the first ringing capture in 1990, most of the reports of Blyth's Reed Warblers consisted of autumn catches at ringing sites. These were clearly migratory birds. However, in spring of some years around and after the turn of the century, singing birds were also briefly observed. In 1998, one such singing bird turned out to be paired with a Marsh Warbler near Utrecht and this mixed pair raised two young. More recently 2020 became a remarkable year: suddenly singing birds were found at 31 sites, mainly along the coast. Four of them stayed for at least ten days, indicative of a territory. This influx coincided with a prolonged period of easterly winds that had probably carried these birds to the Netherlands. A successful breeding attempt on the northern tip of Texel was discovered in 2021. Since 2020, a few singing birds have been observed annually, many staying for at least ten days. This may be the beginning of a more regular occurrence.

Habitat

Blyth's Reed Warblers are known to have a varied habitat choice. They breed not only in shrubby vegetation, such as nettle and bramble, but also in areas with creeping willows, elder and trees. Woodlands in drier areas are also occupied; the species is not as strongly tied to water as other reed warblers. So they are not habitat specialists. In Finland, for example, Blyth's Reed Warblers have discovered areas with lush bushes and have increased rapidly there. This offers prospects for the species in the Netherlands, where all kinds of areas are rapidly becoming overgrown, for example as a result of excessive nitrogen deposition.

Identification

Subtle details such as the pale brown colour and shorter wings distinguish the Blyth's Reed Warbler from Marsh Warbler and Eurasian Reed Warbler. Because of these details, it is difficult to recognise the species by sight alone. The song, which can only be expected from the end of May, can be a more certain way of identifying the species. Blyth's Reed Warblers alternate bright, rather slow utterances and scales with clicking sounds. They also take short pauses between bursts of song more often than Marsh Warblers. Similar to Marsh Warblers, they are known for their nocturnal singing, which is mainly attributed to individuals that have just established a territory. Birds that sing presumably do not have a partner yet. Once mated and breeding, Blyth's Reed Warblers become virtually silent, like many other songbirds.



On 4 June in the influx year 2020, Henk Koekkoek filmed a supposed Marsh Warbler in the Diessens Broek near Hilvarenbeek. Later, this turned out to be a Blyth's Reed Warbler. The recording on YouTube gives a good impression of the song and habitat of this bird. Scan the QR code to watch the video.

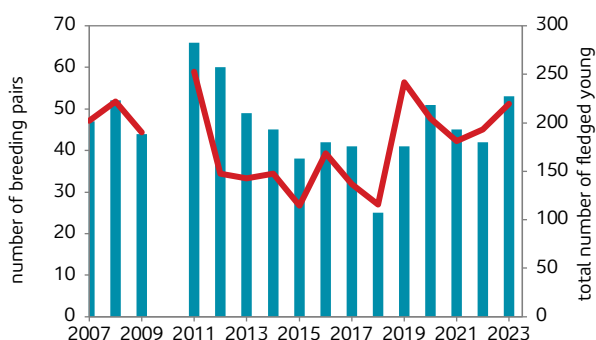
Seventeen years of surveying Northern Wheatears

In the Netherlands, the Northern Wheatear breeds almost exclusively in grasslands of open dunes. Excessive nitrogen deposition and a sharp decline in rabbits causes problems for the species. Nevertheless, the population in the dunes of the Noordkop near Den Helder is holding up. Although not without a struggle, as seventeen years of research and management shows.

Rabbits graze the vegetation short and dig burrows providing ideal habitat for Northern Wheatears to run around, catch insects and nest (they like to nest in rabbit holes). For a long time, this was the situation in the dunes of the Noordkop near Den Helder, the only remaining stronghold of the Wheatear on the Dutch mainland. Yet when the rabbit population collapsed here in 2006 onwards, the effects of nitrogen deposition became even more visible. The dunes quickly grew dense and became less suitable for this characteristic breeding bird. Sovon started a study to provide insight into the population so that measures could be taken to conserve the Wheatear.

Population study

The study aimed to understand the cumulation of effects that Wheatears are gradually facing: how does succession and increased predation affect their numbers, breeding success and survival? Since 2012, the number of breeding pairs began to decline sharply. Based on colour-ring observations, it became clear that there was no increased mortality. Moreover, mortality was somewhat lower than in other, stable populations. So the problem was not a deterioration in conditions during migration or the overwintering areas in Africa. Lack of food for nestlings was also not a determining factor either as the number of fledged young per successful nest remained stable and comparable to other populations. Moreover, nest failure was rare and only occurred in periods of persistently bad weather, or with young that fledged in a severely underdeveloped condition.



Nest success counts

What turned out to be the key factor was the decline in the proportion of successful nests. From 2012 onwards an increasing proportion of breeding pairs failed to rear any young. In an increasing proportion of territories, there were no nests found and the proportion of solitary males increased sharply. As a result, more than half less young were produced in 2012–18 than in 2007–11. All in all, the decrease in rabbits led to a reduction in suitable foraging habitat and nesting sites for Wheatears. This development probably also caused predators such as foxes and martens to switch to other prey animals, including Wheatears. This was reflected in the increase in predated nests.

Management

To save the rapidly declining population of the Noordkop from extinction, from 2015 onwards more and more nests were being actively protected from predation. This is done by stretching a wide piece of chicken wire over the entrance to the nest hole to stop predators. In addition, the site manager (Landschap Noord-Holland) started tailor-made management measures including small-scale mowing and short-term winter grazing with a herd of sheep. From 2019, the annual nest success rates are back to their old levels. The proportion of successful nests has increased thanks to nest protection. The number of breeding pairs is also growing again, especially in the local areas where management measures are taken. Colour-ringed birds are settling in nearby dune areas that were previously abandoned. Is the operation complete? Not entirely, to allow the population to stand on its own feet, more rabbits are still needed and nitrogen deposition needs to be further reduced.

« Northern Wheatears in the Noordkop in 2007–2023. Number of breeding pairs, excluding pairs without a nest (bars, left axis), and total number of young fledged (line, right axis).



Equally brilliant, but not equally successful

The upper male, RLMV, got its colour-rings as a nestling in May 2020. A year later, it settles two kilometres north of its place of birth, but after finding no partner there it moves three kilometres southwards. There it squabbles with the other male pictured (BWMO). This bird is one year older and at the time of the photo busy to successfully raise its offspring for the second year in a row. He subsequently managed to do this in 2022 and 2023. Extraordinary, since less than 5% of Wheatears reach four years of age. In contrast, RLMV was not seen after 2021 and thus probably never produced offspring.

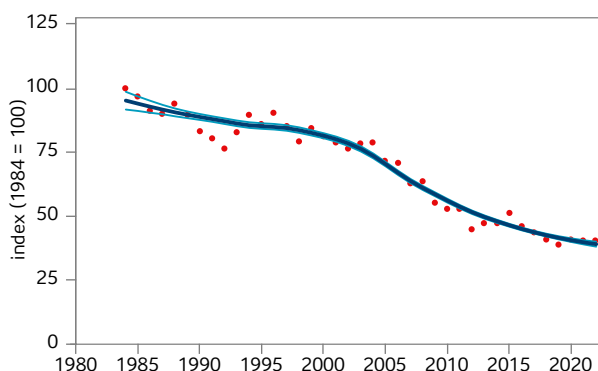


⚡ Despite suitable habitat, this little Lapwing has little chance of fledging. Photo: Tim Visser

Young Northern Lapwings stand little chance

Our 'national bird' the Black-tailed Godwit gets a lot of attention within (agricultural) nature management schemes, because this species is not doing well. But its close neighbour, the Northern Lapwing, is doing just as bad these days, its going just as bad these days. Despite the fact that Lapwings know how to find wet grasslands, they are struggling to raise enough chicks.

Until the 1990s, the population trend of the Northern Lapwing in the Netherlands was more or less stable. In the last 20 years however, the species has been declining as fast as the Black-tailed Godwit. This recent rapid decline is concerning. Lapwing show a significant decline both as a breeding bird and as a wintering bird. Compared to 1985, the number of breeding Lapwings in our country has more than halved.



Decrease

Recent research suggests that the number of chicks surviving through spring is low. Habitats with sufficient food in the form of insects and earthworms are a must-have for lapwing chicks. In addition, structure-rich vegetation is important to provide sufficient shelter for the young and helps to reduce predation. Without a soil teeming full of life and vegetation to hide in, chicks cannot grow up successfully. Do Lapwings still find such suitable sites? Is there a difference between breeding success of Lapwings nesting in different areas? And how does the management and design of agricultural areas and weather conditions affect the Lapwing's habitat?

⚡ Trend of breeding Lapwings since 1984 based on the Breeding bird census (BMP).

Research

To answer these questions, Sovon, together with Altenburg & Wymega and Wageningen Environmental Research, conducted research on the habitat selection of Lapwings with chicks. In 2022, 43 breeding Lapwing females across the Netherlands were fitted with a GPS transmitter and then tracked. The transmitter provided information on the birds' location and behaviour. Once the females started walking with their chicks, the research team visited weekly to take measurements at the sites. A whole range of habitat characteristics were measured: vegetation structure, vegetation height, soil moisture, soil resistance, earthworm numbers and weights, and arthropod management and presence. Also, six representative reference sites per area as well as plots that the Lapwings had already left were included in weekly measurements.

Survival

The study confirmed the suspicions that chick survival is very low. Most families could be followed for less than two weeks. The first breeding attempts resulted in 30 pairs with chicks. Of those, only seven pairs raised at least one young. On the second breeding attempt, none of the Lapwings raised any young. Chicks that hatched later had a smaller chance of survival. However, as the chicks got older, the daily probability of survival did increase.



Multiple studies show that there are too few young Lapwings surviving in farmland.

Plot selection

Lapwing families appeared to be perfectly capable of finding the best places in the landscape to breed. Both successful and unsuccessful families chose plots that, compared to reference plots and abandoned plots, had moist soils, relatively short vegetation and low soil resistivity. The crop on the plots was low, averaging about 10 centimetres compared to 25 centimetres on reference plots. The moisture content of the soil on which Lapwings bred was about 27% higher than in the reference plots. The spring in which the research was conducted was very dry. Hardly any precipitation fell in late April and early May, causing the grasslands to dry out. The Lapwing families preferred the relatively wet spots during this period. In these places, the resistance of the soil was lower, making it easier for the birds to pick in the soil. Higher numbers of arthropods, especially insects and spiders, were also found on these moist patches. Analysis of habitat characteristics showed that Lapwings selected sites with relatively high levels of relief, such as bumps and ditches in the grassland and slow-growing grass. Thus, the presence and accessibility of food for Lapwing young appeared to be the decisive factor in site selection.

Although Lapwings manage to find good habitat, chick survival is still not great. The families surviving had not chosen a better habitat than the other families. No relationships were found between chick survival and habitat characteristics in this study. It is possible that the sites chosen are still not good enough for the young Lapwings to grow up successfully. A second possible explanation is that there are other factors that are even more determining, which we did not measure in this study. The low survival rate may also result from a combination of the two; sub-optimal habitat condition plus other factors, such as predation.

Drought

Then there was the drought. The very dry spring of 2022 may not have left enough suitable habitat. Because it was so dry, there was also less food to be found; the supply of earthworms in the middle of the breeding season was too low. Two of the sampled females left for Eastern Europe after a failed first breeding attempt, suggesting that the adult birds also struggled. In addition, drought may cause Lapwings to concentrate more in the wet areas, which may attract predators as there will be many chicks together. All in all, Lapwings face multiple challenges in spring that keep their breeding success low.

« Northern Lapwing female with chicks
Photo: Marcel van Kammen

House Sparrow needs help

Every year, Sovon and Birdlife Netherlands announce a new Bird of the Year to draw attention to a species that needs it, and 2024 will be the Year of the House Sparrow. In this year, with the help of a wide audience, we will conduct additional research on breeding House Sparrows.

With a national population estimated at 600,000 to 1 million pairs, the House Sparrow is one of the most numerous breeding birds in the Netherlands and is found across almost the entire country. Yet the species has declined by more than 60% since 1980. In the rest of Europe, the decline over the same period is similar with 64% of sparrows having disappeared. Much is still unclear about the underlying causes. In the Year of the House Sparrow, we want to increase our knowledge about this species.

Despite the House Sparrow being one of the most common bird species in the Netherlands, we know little about its reproduction. Data collected for the Nest Monitoring Scheme give an overall impression of the species' breeding success, but the number of recorded nests is too low to make comparisons between different habitats, regions or periods. Research conducted by René Oosterhuis in the province of Groningen does provide a detailed picture of the breeding biology of the House Sparrow on a local scale, which allows differences in laying onset, nest success and chick survival to be compared in rural and urban areas.

Causes

International and Dutch literature shows that many different factors have been looked at to find the causes of decline: urbanisation and changes in this urban environment, intensification of agriculture, increased predation pressure, parasites and other pathogens, pollution and waste management. However, this does not mean that these are also the most important factors. One way to gain more insight into this is to do a so-called PODICEPS analysis. This is a method developed by Sovon and Birdlife in which the so-called pressure factors of a species are determined based on the current literature and expert knowledge. The results are then converted into flow charts which provide insight into which pressure factors affect the House Sparrow and through which mechanisms they can influence the population dynamics of the species.

Where houses the House Sparrow?

There are more questions about the House Sparrow. For example, more insights into population trends in gardens and rural areas are needed. Collecting more nest records would make it possible to compare nesting success between different habitats or regions of the country. Therefore, an important part of the Year of the House Sparrow is about collecting data on their breeding biology with the help of volunteers. An important question is on which places House Sparrows prefer to nest as they can be particularly versatile. Nests can be found under roofs, behind bushes, drainpipes and awnings. House Sparrows also make use of nest boxes and nest bricks intended for Common Swifts. But which nesting sites are the most popular? With the "Where does the sparrow nest?" census, we hope to find out more. In addition, experienced nest researchers can make a valuable contribution to the Year of the House Sparrow by following the fortunes of as many House Sparrow nests as possible.





Year-round Garden Bird Survey

With the help of data from the Year-round Garden Bird Survey more is known about the reproduction and survival of the House Sparrow. Because participants in this census count species in their gardens throughout the year, we have a good picture of the number of House Sparrows before and after their breeding season. By analysing the garden count data from 2015-2023, we hope to form a better picture of the breeding success of the House Sparrow in the Netherlands. The focus here is on urban areas, as data from gardens from rural areas are scarce.

Thank you for all your efforts

This State of the Netherlands' birds could not exist without the efforts of thousands of volunteers. Many have been committed for years to conducting bird counts, ringing birds and searching for nests. By collecting data in a structured and detailed way, we are able to compare time series on a national and international scale. This information is indispensable for nature policy and for effective bird conservation. Birds are important indicators of our natural world.

In 2023, Sovon celebrated its 50th anniversary. The fieldwork for the first Atlas of Dutch breeding birds from 1973 onwards once formed the start of Sovon. Since then, more and more birders have been dedicating themselves to getting a clear picture of the occurrence of birds in the Netherlands and the changes in their populations. This publication shows just some of the information that has become available thanks to them. We are grateful for the selfless efforts of all volunteers, coordinators and validators. We also thank the bird working groups, species working groups, individual researchers, institutes and site managers for their pleasant cooperation. Without these joint efforts, we would not know how birds are doing in the Netherlands.

> sovon.nl/tellen



Colophon

The State of the Netherlands' Birds is an annual publication by Sovon in which we provide insight into the status and trends of bird species. In addition to this, we publish several reports each year in which we share results of projects: <https://pub.sovon.nl>.

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How are birds doing?

In the State of the Netherlands' Birds, Sovon lists the most important developments. Which species are increasing, and which are being seen less and less? Thanks to 50 years of censuses and research by many volunteers and professionals, we are able to know the trends of 199 species of breeding birds and 209 migratory and wintering bird species. Some of the causes behind these changes are also explained.

This 2023 edition focuses on some striking developments. Partly due to increasing drought in Southern Europe, southern bird species are increasingly managing to reach our country and are even starting to breed. Highly pathogenic avian influenza has been haunting wild birds for years and has long-term effects on populations. Research on species such as the Northern Wheatear and Northern Lapwing shows the bottlenecks, but also sheds light on the best protection measures. Birds remain important indicators of the state of our natural world.