

Didactical-methodical hints

General information and didactic considerations

The risk of extinction varies among different bird groups.

Garden birds

They are well studied due to regular censuses (Hour of Garden Birds, Hour of Winter Birds). Since they are often sedentary or stick birds, they can adapt well to the changing seasons. Gardens are now often much more ecologically valuable than agricultural landscapes and thus offer a diverse range of food, supported by feeding by humans. Many garden birds are omnivorous and therefore not so dependent on insects. Thus, their population is relatively stable, some species are developing positively.

Migratory birds

Because they travel long distances, often to sub-Saharan areas, due to the lack of food available in winter in our latitudes (insects, amphibians, reptiles), they are handicapped in several ways.

For example, they are more affected by climate change (see examples) = mismatch, as well as by the lack of food due to the decline in the number of insects or other prey, and also by extreme weather events. **Here, the teaching unit "Insects" as well as the topic "Agriculture" can be connected.**

Birds of agricultural landscapes

The impoverishment of the agricultural landscape plays the main role in the particularly strong decline of these birds, which affects both the food supply and the supply of shelter and nesting sites. Depending on the lesson planning, a connection can be made with the unit Insects.

Based on the differentiated threat analysis, protection measures result. These benefit/would benefit all endangered animal species of agricultural landscapes.

- Biotope or habitat management >>> ecological agriculture, programs such as field margins, grove islands, fallowing of fields, recultivation of moors and wetlands, etc.
- Renunciation of pesticides
- Implementation of EU directives in Germany (hardly ever done so far, which is why, for example, Nabu is suing the Federal Republic of Germany for the loss of partridge species).
- The reintroduction of storks through reclamation measures can serve as a positive example.

However, the problem of climate change cannot be tackled locally, but only nationally or globally.

>>> see separate unit.

The learners should therefore recognize that the endangerment potential of different bird species strongly depends on their way of life. For this purpose, they will look at individual animal portraits (monographs). On the other hand, it should also become clear that the endangerment potential strongly depends on factors that go far beyond the demands of the different species, so that an improvement of the situation can only be achieved on an economic and political level. In this context, the various environmental organizations as actors focussing on species protection, such as Nabu or LBV, also play an important role, as well as social and civic engagement against climate change. These aspects are discussed in more detail in T 3 and T 5.

Describe, in a language of your choice, the situation of birds in Germany. Be prepared to do the next step in English.

... by naming "winners" and "losers" as well as bird species whose population is essentially constant.

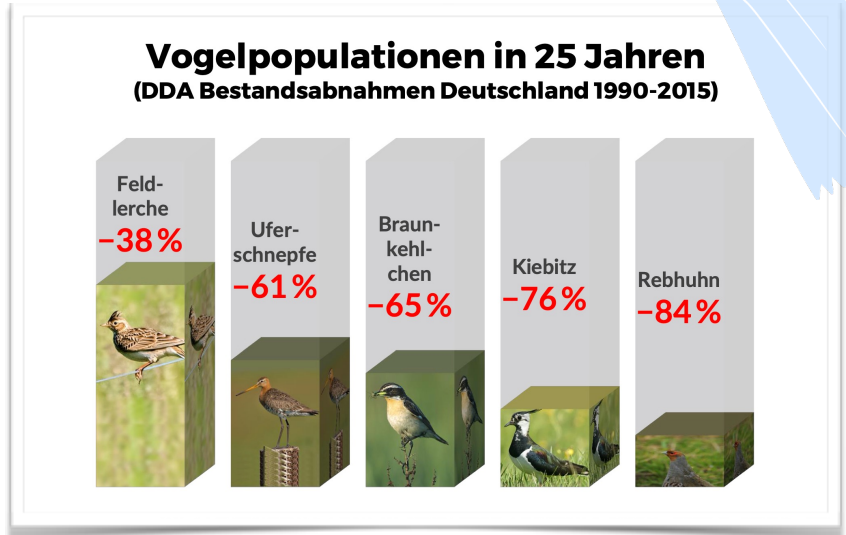


Fig. 5 (DDA o.J.).

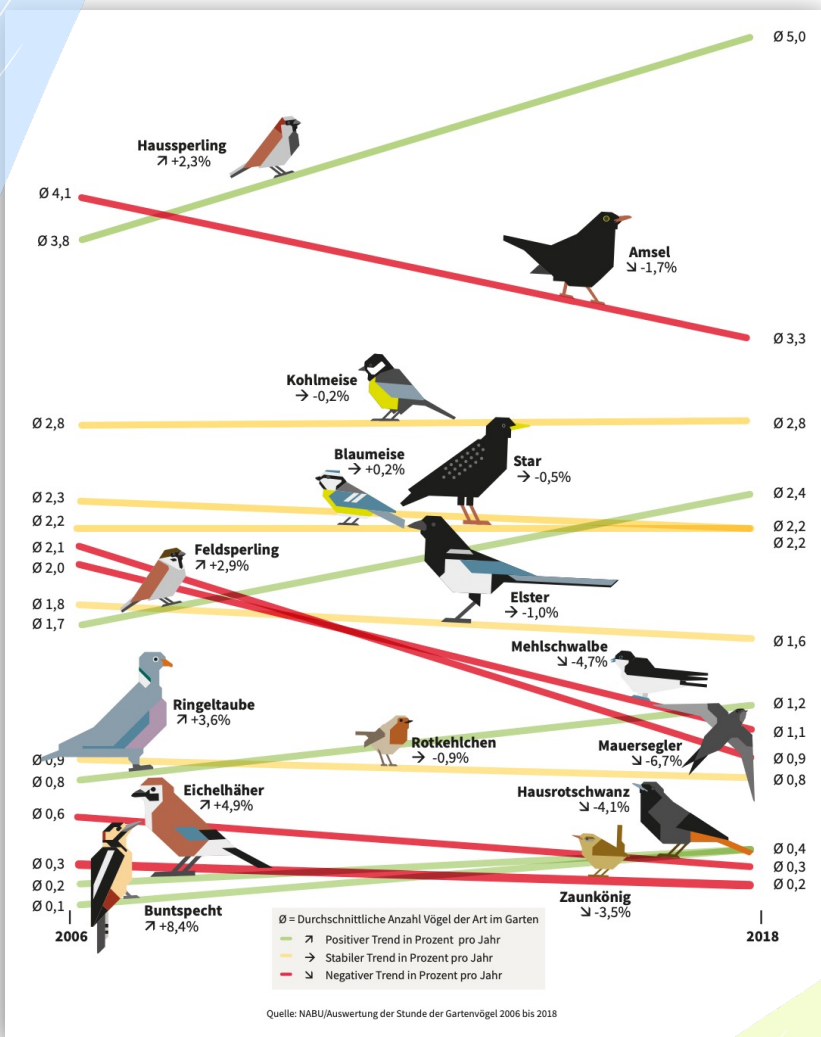


Fig. 4 (NABU 2018)

Development of the bird population total

"Winners"

Constant population number

"Losers"

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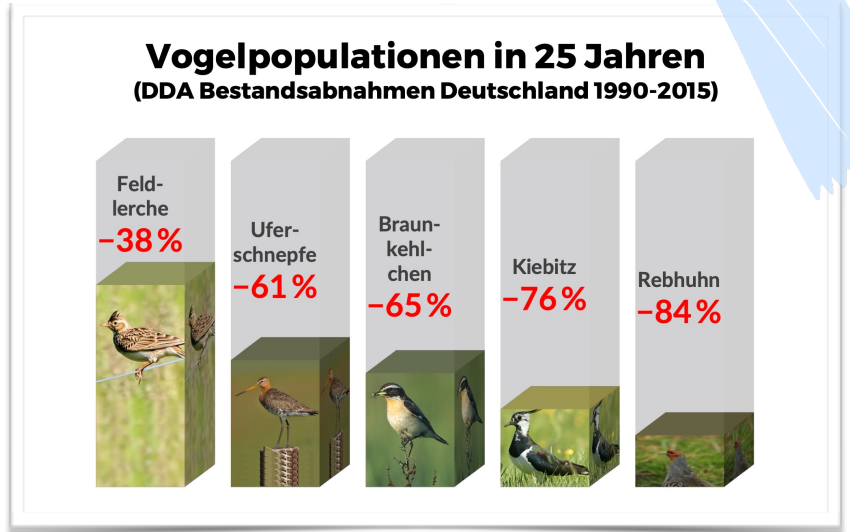


Fig. 5 (DDA o.J.).

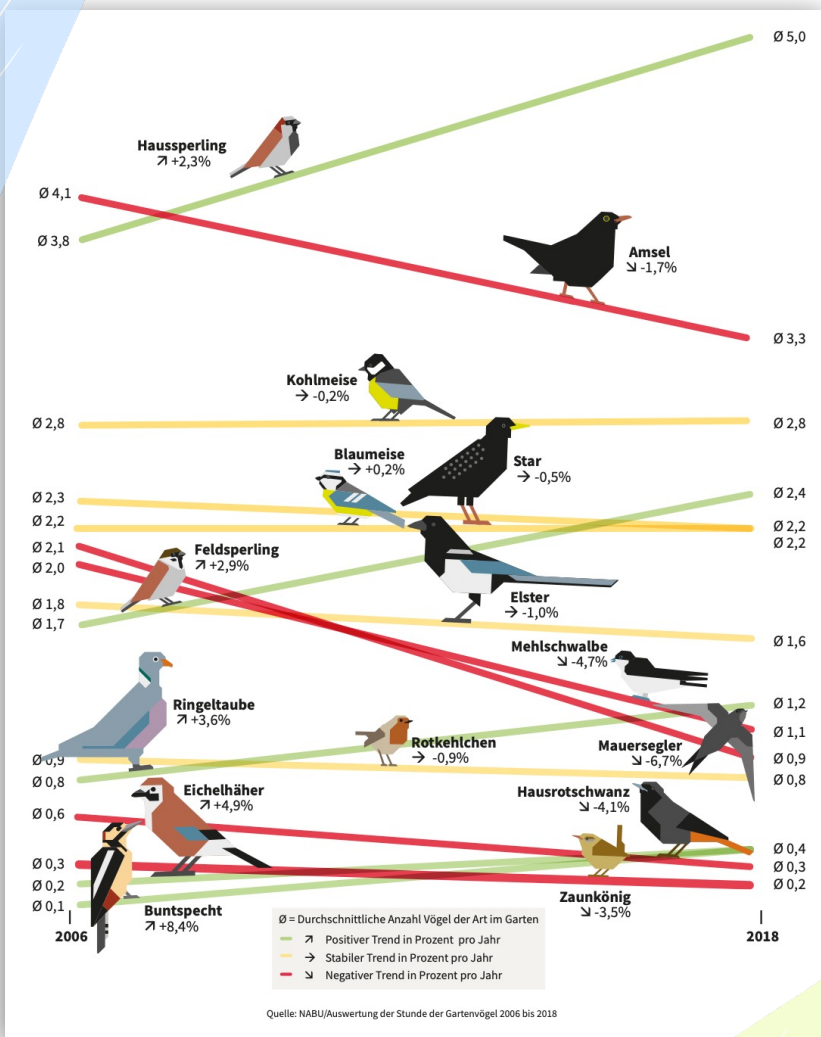


Fig. 4 (NABU 2018)

Development of the bird population total

For most bird species, the trend is negative or constant, with only a few species increasing in numbers.

"Winners"

Tree and house sparrow, wood pigeon, jay, great spotted woodpecker.

Constant population number

Great tit, blue tit, starling, robin.

"Losers"

Blackbird, swift, wren, redstart, Skylark, black-tailed godwit, whinchat, Lapwing, Partridge.



The bird species listed in Fig. 5 live in open landscapes and agricultural landscapes. Fig. 6 shows the different development of bird populations depending on their habitat.

Hypothesize in English about the causes of the different stock development. Include your results from task 4.

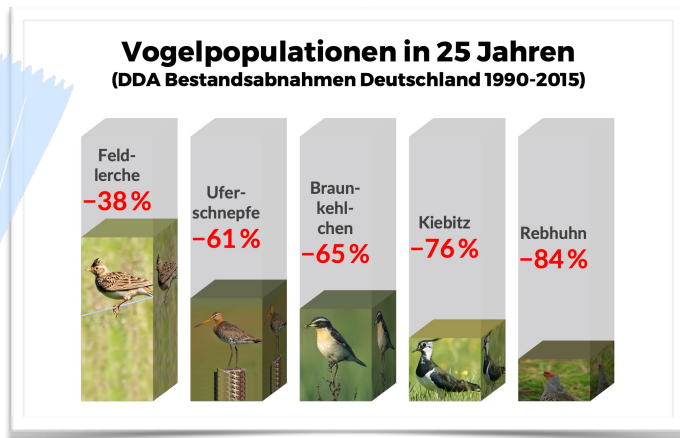
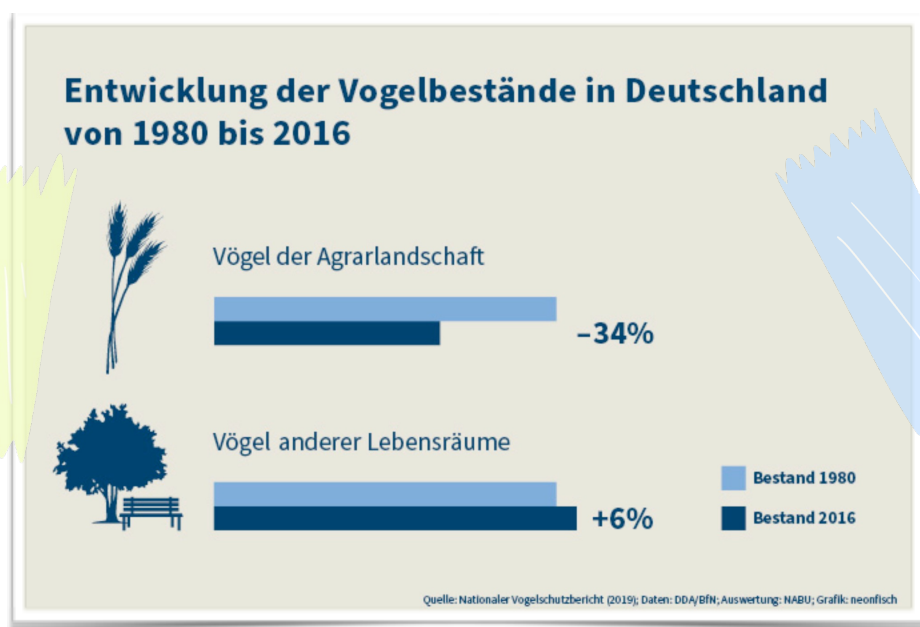


Fig. 5 (DDA o.J.).





In group work, you can now take a closer look at individual bird species. Create a poster or a short presentation or a pitch (see T 1, AB 3).

Fig. 6 (NABU e.V. 2020)



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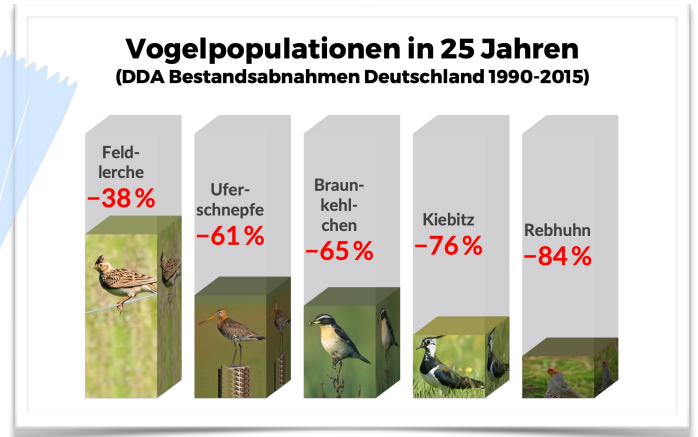


Fig. 5 (DDA o.J.).

Bird populations in agricultural landscapes have declined sharply over the past 36 years, while birds in other habitats have shown a slight increase. It can be assumed that the respective habitats are decisive. Gardens, parks and forests are not likely to have changed fundamentally, but rather to have become more natural. The negative change in agriculture is probably related to changes in agricultural production methods. (see T 3 and T 5)

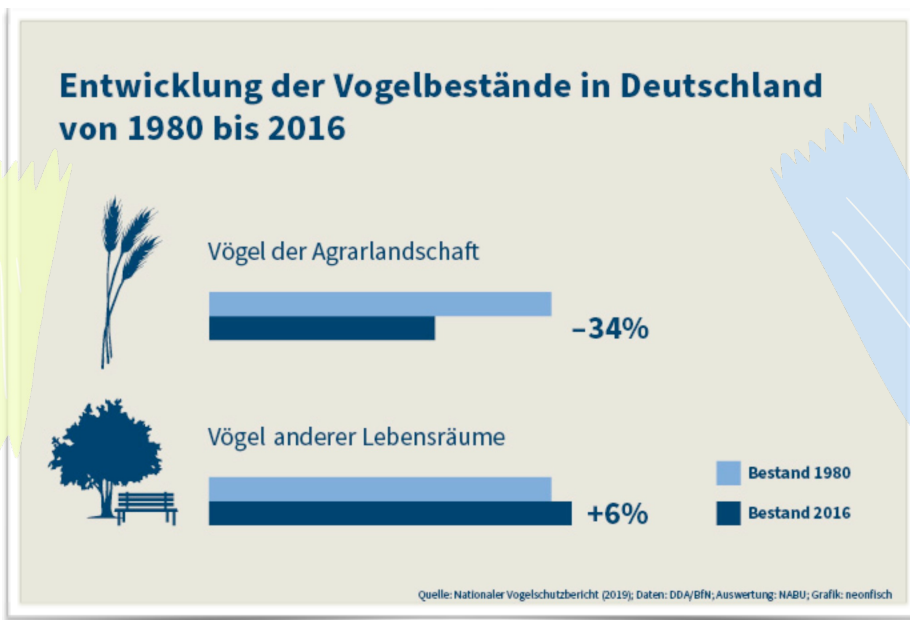


Fig. 6 (NABU e.V. 2020)

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Endangered and threatened species

Bird species extinct or threatened with extinction

The **NABU** lists a number of birds that are extinct or in acute danger of extinction.

[Red List of Breeding Birds](#) (NABU e.V. 2021)



[Little Bustard](#) (lifePR 2012)



[Crested Lark](#) (NABU e.V. o.J.a)



[Mornell's plover](#) (NABU e.V. o.J. b).



[Caspian tern](#) (NABU e.V. o.J.c)



Task

Pick a species, describe it and explain the reasons for its extinction. Under the links you can find more information about individual species, e.g. the Little Bustard, a plover or a tern. Of course you can choose another species.

You can decide if you want your presentation to be in English, German, or even bilingual!

You can also look in Topic 1, AB 4. There you will find tips on how to work with the Red List.

Subject area II

Group work - Exemplary consideration
endangered bird species

Task for all bird species after research
is complete:

Create a poster or a short
presentation or pitch (see T 1, AB
3).

General information

Potsdam - In an agricultural area like Brandenburg, wild animals often do not find good living conditions, but rather hostile, even deadly living conditions. In a [current inventory of the State Office for the Environment \(LfU\)](#), 6000 animal species are classified as endangered. Accordingly, 581 species are on the Red List as acutely endangered, 389 species have already become extinct here. According to LfU spokesman Thomas Frey, these include, for example, the black grouse, the ruff and the moor duck. ([Schlüter, C. 2021](#))

The black
grouseAs a regionally extinct or
endangered species.

The black grouse is a, in Germany formerly widespread, **year-round** occurring **breeding bird**, whose population is now **highly endangered**. Black grouse grow up to 40 - 55 cm and live in **mountainous regions** between about 1500 and 2200 m altitude.

They feed mainly on plants, but also on larvae and adult insects, especially during the breeding period. The courtship display of the males is spectacular.



Task

You may decide in which language you do this task. If you choose a language other than English and German, add a few dashes in one of the two languages to help the others understand your answer.



Sources

[NABU e.V. n.d.](#)



[King 2014](#) (video)

Subject area II

Group work - Exemplary consideration
endangered bird species

The cuckoo

Bird species whose
population is declining

Have you heard a cuckoo this year?
Then you are lucky!

That the number of cuckoos **strongly declines**
is mainly due to the **climate change**.

As you surely know, the cuckoo is a so-called **incubator**. The females lay one egg each in different nests of host birds and match the color of the eggs to that of the host birds. However, the cuckoo egg is larger than the host bird's eggs and the hatched chick is also larger than the "stepsiblings". For the host parents, the large egg, as well as the hatched large chick, represents an over-optimal trigger and is not recognized as foreign. As soon as the cuckoo chick hatches, it throws the eggs or the hatched chicks out of the nest and continues to be fed devotedly. However, this "business model" only works when the breeding seasons of cuckoos and host birds are in sync. Due to climate change, host birds are breeding earlier and earlier, but the cuckoo has not changed its migratory behavior, so it arrives too late to have its eggs hatched. This is called "mismatch."



Sources

[LBV o.J.](#)



[Knowledge before eight - Nature](#)



[BR Know](#)



Tasks

1. Use the text and other sources to learn about the cuckoo's lifestyle and population decline.
2. Make a connection to climate change in English.

More sources

[Newcomer 2018.](#)



[Weather Online 2020.](#)



Subject area II

Group work - Exemplary consideration endangered bird species



The swift

Population strongly declining or endangered

Swifts announce summer with their shrill cries. They are migratory birds that spend only a few months in our country to raise their young. Swifts feed on insects that they catch in flight. They are widespread throughout Europe, but their population in our country is decreasing significantly. In some areas the species is classified as endangered, e.g. in Bavaria.



[Bavarian State Office for the Environment n.d.](#)



Tasks

1. Find out about the swift's way of life and explain the numerical decline of this species in our latitudes.
2. Explore, name, and evaluate which conservation measures could help stabilize swift populations.

You may decide in which language you do this task. If you choose a language other than English and German, add a few dashes in one of the two languages to help the others understand your answer.

More sources

[Swifts \(BUND NRW e.V. o.J.\)](#)



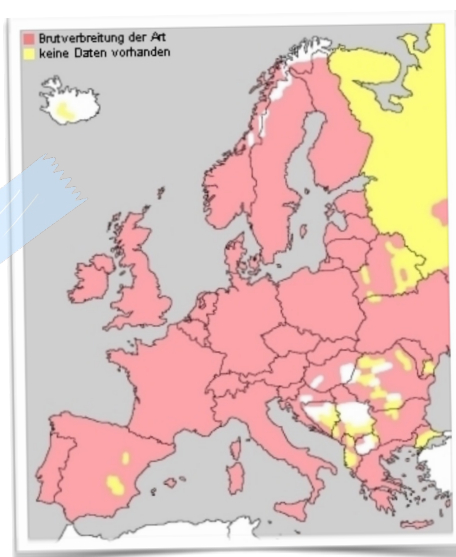
[Swifts \(NABU e.V. o.J.\)](#)



[Swifts \(Stiehl 2021\).](#)



[Swifts \(Nature Detectives o.J.\)](#)



© [Bavarian State Office for the Environment oJ](#)

Subject area II

Group work - Exemplary consideration
endangered bird species**The House Martin***Delichon Urbicum***On the list of endangered
species**

Like the swift, to which the House Martin is not related, the House Martin is a summer messenger; it too is a migratory bird, but unlike the Swift, it occurs mainly in rural areas. Even though the species is not considered endangered, however, its population is steadily declining, cf. fig. 4

**Sources**

[House Martin \(NABU e.V. o.J.\)](#)



[House Martin \(LBV e.V. o.J.\)](#)

**Task**

Find out about the swallows' way of life and their population situation and explain the decline in population numbers.



Subject area II

Group work - Exemplary consideration
endangered bird species

The lapwing

Vanellus vanellus

Highly
vulnerable
(category 2)

BirdLife Switzerland has chosen the lapwing as Bird of the Year 2019. The endangered species once lived in wet meadows and after their drainage in arable land. The intensification of agriculture with numerous cultivation passes and the spraying of pesticides almost brought the lapwing to extinction in Switzerland. Thanks to close cooperation between conservationists and farmers on nesting sites, the dazzling bird is getting a chance again.



More sources

[BirdLife Switzerland n.d.](#)

Tasks

1. Check out the [video](#) about the lapwing.
2. Summarize the information about the peewit's way of life in English.
3. Now describe in German which changes have led to the population decline of the lapwing in Switzerland.
4. Protection measures for lapwings have been implemented in Switzerland. Name and evaluate them in the language of your choice. If you have chosen neither English nor German, include an explanation in one of the two languages shortly.



Sources

[Video II \(NABU e.V. 2017\)](#)

[Lapwing \(Bavarian State Office for the Environment oJ\)](#)

Note

Species from Fig. 5 could also be studied here.

See Nabu bird portraits: [Braunkehlchen \(NABU o.J.\)](#).





The white stork

Ciconia ciconia

A success story or an endangered species?

Tasks

1. Describe the development of the number of storks in Germany since 1840 (Fig. 1 and 2).
2. Using the materials in English, analyze causes of the stork population decline as well as its recovery.
3. Discuss whether there is actually a success story here. You have the choice whether to use German or English.
4. Make the product multilingual, at least in English or German. Any other language you know would be a bonus.

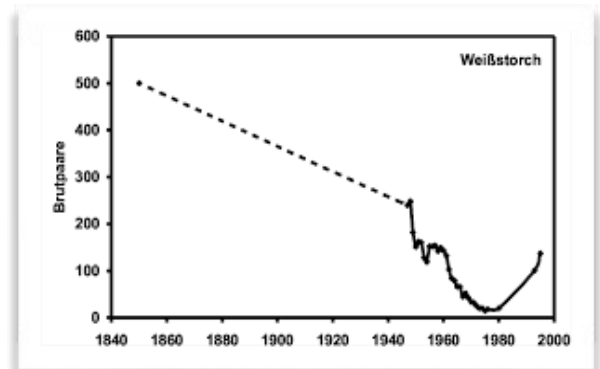


Fig. 1: Population development of the white stork in Baden-Württemberg

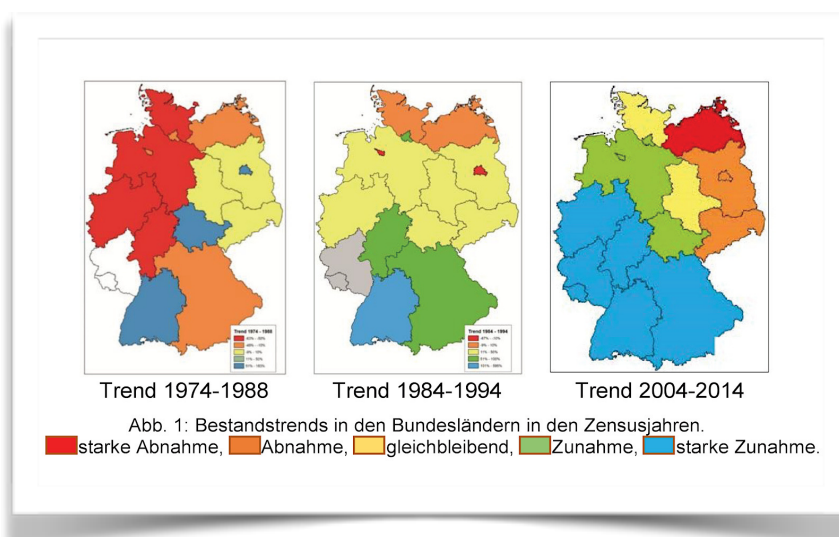
(Sources: BERTHOLD et al. 1975 and 1977, HÖLZINGER 1987, HÖLZINGER et al. 1981 and 1996).

Sources

[NABU e.V. 2019](#)



[WWF n.d.](#)



Trend 1974-1988

Trend 1984-1994

Trend 2004-2014

Abb. 1: Bestandstrends in den Bundesländern in den Zensusjahren.

■ starke Abnahme, ■ Abnahme, ■ gleichbleibend, ■ Zunahme, ■ starke Zunahme.

Fig. 2: NABU e.V. 2018: 22



Subject area II

Group work - completion of the subunit birds



1

Create a mind map or a sketchnote about the different causes of endangerment of the bird species you have been working on. Use both German and English, and feel free to use other languages as well.

2

You could now find out information about many bird species. Now compile all the results in the table. Decide in your group which language you want to use.

Type	Threat status	Causes



The field hamster

Until now, it was assumed that there were still plenty of field hamsters in Eastern Europe. This was obviously a fallacy. The animal is acutely threatened with extinction and has been included in the Red List of the World Conservation Union.

Once, the field hamster was found in millions from Alsace to Siberia. Now it is officially threatened with extinction throughout its entire range. This is the result of the new Red List of endangered animal and plant species presented by the World Conservation Union (IUCN).

The reduced occurrence in Western and Central Europe was already known. In the EU, the field hamster is strictly protected. However, conservationists had assumed that there were still plenty of field hamsters in Eastern Europe and Russia. This was apparently a fallacy. "If nothing changes, the field hamster will become extinct within the next 30 years," reported the IUCN.

The causes of the disappearance of the field hamster are not yet clear. However, the expansion of monocultures in agriculture, global warming and light pollution are considered possible causes. ([Link 1](#))



[Tagesschau.de](https://www.tagesschau.de)



[Red List Center o.J.](#)



[Bavarian State Office for the Environment n.d.](#)



Tasks

Read the info text ([Link 1](#)). Further information can be found at [Links 2](#) and [3](#).

1. Summarize the information on the situation of the field hamster in English and name the suspected causes.
2. In Link 3, protection programs are presented - present them and evaluate their chances of success. You may decide whether you do this in German or English.

Subject area II

Endangered mammals of the agricultural landscape p.2

The brown hare

The population of the brown hare has been declining in Europe for decades. In an ever more intensively used agricultural landscape, it can hardly find any hiding places from predators or places to raise its young. Its diet is also becoming smaller and smaller. In the cultivation of intensive monocultures such as corn or wheat, no "weeds" are desired and are fought with the help of pesticides. If he still finds something in such a field, he is threatened with poisoning. In Germany, the field hare, which used to be so widespread, is doing particularly badly. It is listed as an endangered species on the national red list. ([NABU e.V. o.J.](#)).



Tasks

1. Describe the lifestyle and population threats of the brown hare in English (text and video).
[Video \(German Wildlife Foundation 2019\)](#)
2. You find a detailed profile e.g. [here: \(German Wildlife Foundation o.J.\)](#)
3. Compare the threats faced by field hamsters and hares with those faced by birds in the agricultural landscape. Decide whether you will do this in German or English.

