

## Focus area I

AB 1a

1

Before dealing with the effects of the loss of biodiversity and the extinction of species in the next focus areas, **focus area I** defines and explains some basic terms. There are a lot of further information, explanations, illustrations and videos on the learning platform.

2

On this worksheet, add definitions and English translations (possibly other languages?) of the most important technical terms in focus area I. Those terms are shown in the mind map below. If you think other terms are important, always feel free to add them.

The mind map will help you to keep an overview while working on the other focus areas and can be supplemented at any time.



What is new/different about the term biodiversity?



Biological diversity

Biodiversity

Gene



Ecosystem



Species



Biocenosis

Biotop



## Focus area I AB 1b

1

Before dealing with the effects of the loss of biodiversity and the extinction of species in the next focus areas, **focus area I** defines and explains some basic terms. There are a lot of further information, explanations, illustrations and videos on the learning platform.

2

On this worksheet, add definitions and English translations (possibly other languages?) of the most important technical terms in focus area I in the correct places. Make a mind map of the different parts. If you think other terms are important, always feel free to add them.

The mind map will help you to keep an overview while working on the other focus areas and can be supplemented at any time.



What is new/different about the term biodiversity?

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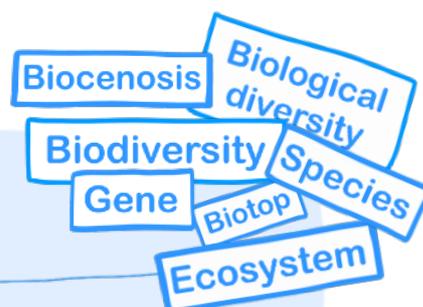
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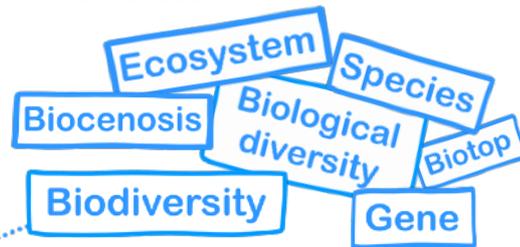
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## Focus area I AB 1c

Use this worksheet to create a **personal (possibly) mind map** with the most important **basic technical terms** and their **definitions**. The mind map helps you to maintain an **overview** when working on the other focus areas and can be supplemented at any time.

The following terms should be used in your mind map or translated into English and defined:



The mind map will help you to keep an overview while working on the other focus areas and can be supplemented at any time. 



## Measuring biodiversity loss introductory text



There is obviously no clear answer to the question. Moreover, it is almost impossible to record the diversity of species and ecosystems worldwide in detail.



Without knowing the exact number of different species of organisms and ecosystems that exist on our planet, it is again difficult to make a statement in percentage about how many species are becoming extinct or are threatened by extinction.

Vertebrates are a group of animals (taxonomic group) that is especially well researched and classified. Frequently, scientists use this group as a proxy to computationally determine the loss of biodiversity.

Most significant for the global analysis of species extinction are especially two indices:



**The Living Planet Index:** This index describes fluctuations in populations and has been published regularly by WWF since 1970. The index is based on data from about 21,000 vertebrate populations of about 4,400 species distributed across the globe. It is divided into different regions, and according to the index, vertebrate populations have declined by about 68% overall since 1970. The index is synonymous for the general decline of biodiversity and thus, also of the deterioration of the ecosystem's health. In the Living Planet Report, the WWF also considers many other factors, such as the fragmentation of ecosystems, human consumption, the decline of plant species or water pollution. In the long term, WWF has also set itself the goal of including insects in the index, but this involves certain hurdles, since in percentage terms, significantly fewer insect species are known (cf. WWF 2020b: 14-16). An executive version of the current Living Planet Report can be found at [here](#).



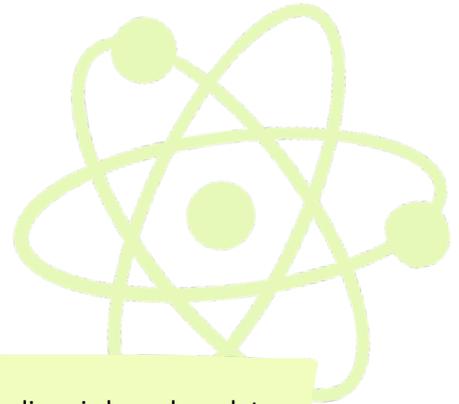
**The Red List Index:** This index is published by the IUCN (International Union for Conservation of Nature - "World Conservation Union"). The IUCN has published the Red List of Threatened Species on a regular basis since 1964. The index also shows trends of generally extinction, based, however, on changes in the risk classification of species on the Red List of Threatened Species. The index is for example used by governments to track their progress in achieving targets to reduce the loss of biodiversity. The IUCN points out that the figures of the statistical overview must be interpreted with extreme caution, as many species are shifted across categories due to improved knowledge or a revised taxonomy. Therefore, the Red List Index only shows trends on the basis of certain groups of species that have been sufficiently examined, so that an updated Red List Category classification mirrors the real improvement in or worsening of their status. The index is currently only available for five taxonomic groups because the species must be rated at least twice in order to be able to show a comparison. These groups are birds, mammals, amphibians, cycads and hot water corals. The status of all these main groups is reversed worldwide and available [here](#) (IUCN, n.d.)



## Measuring biodiversity loss introductory text

Even if biodiversity cannot be exactly measured in detail, a clear and very alarming trend can be identified.

Species diversity and, as far as can be assessed, biodiversity in general are **clearly declining**, especially in **South America**.



The trend in the indices is based on data compiled by **many different scientists** around the world.

They count and calculate the **existence** of many individuals of a species **within a given area**. This data is then compiled within various lists. One of those was mentioned earlier - the **Red List of Threatened Species of the IUCN**.

For Germany, the lists of endangered plants and animals are also of great importance. These were first compiled in the former FRG and the former GDR in 1971 ([Red List Centre](#)). To date, they document the population of species in Germany and assess and document the decline in biodiversity.



The lists of the **IUCN** and the **Red List Centre** **cannot be compared directly**, as they are updated at different times and have different foci in their assessment.

Nevertheless, it is certainly exciting to see whether the species you choose for your pitch are also extinct in Germany or worldwide.



## Measuring biodiversity loss



Read the introductory text and complete the following tasks:

1. Name the two main indices that are most relevant to the global analysis of species loss and state by whom they are published.
2. Describe on which data the two indices are based.
3. Explain the relationship between the Red List Index and the Red List of Threatened Species of the IUCN.
4. Explain the importance of red lists for politics and society.

Now, to choose an exciting species for your pitch, there are four options:

	I already know an endangered species that interests me that I would like to introduce.	➔	AB 3	
	I don't know any endangered species yet, or would like to learn about and research a new one. <b>You can: Select an animal species from the list compiled for the project day (M2).</b>	➔	AB 4	
	I don't know any endangered species yet, or would like to learn about and research a new one. <b>You can: Select a species from the IUCN Red List (M3).</b>	➔	AB 5	
	I don't know any endangered species yet, or would like to learn about and research a new one. <b>You can: Select an animal species from a red list of vertebrates (M4).</b>	➔	AB 6	



1

## I already know one endangered species that interests me!

Great you already have an idea! The tasks below should help you to find more information about the species you already know. You will also find ideas on which tasks you should definitely work on, what information you should include and how you can prepare yourself for the pitch!

First, find out if your species is actually endangered, and if it is, where and why!



1

### Does the species appear in the Red List of Threatened Species of the IUCN?



To find out, visit the IUCN website (<https://www.iucnredlist.org/>) and enter the name of your species in the search bar. **CAUTION:** You must enter the name in English, Spanish, French or Japanese and set the correct language beforehand. If you know the scientific name of your species, you can enter that too. If you need help understanding the website, the presentation (M3) will help you.

3

Is the species on The Blue Planet Red List (M2)? Then you will certainly find a lot of information there!

**Hint:** If you are working in a group, you can also approach points 1-3 with divided responsibilities.

2

### Does the species appear in any of the red lists of vertebrates?

To find out, visit the Red List Centre website (<https://www.rote-liste-zentrum.de/de/Download-Wirbeltiere-1874.html>) and select the latest list for amphibians, marine animals and lampreys, reptiles, mammals, freshwater fish and lampreys or birds - depending on which species it is. If you need help understanding the website, the M4 presentation can help you.





2

I would like to select an animal species from the list compiled for the project day.

It's totally fine if you don't have an idea yet which species you are interested in! Sometimes there is not enough time during class to learn how to read complex lists correctly. In this case, everyone is welcome to choose a species from the *The Blue Planet Red List*. Here, the most important information is already collected and you can also research in the given sources or freely on the internet. Nevertheless, make sure that you solve the guiding tasks for the pitch below and prepare yourself well.



Click through *The Blue Planet Red List* for a bit and see which endangered species and topics interest you most. If you can't yet answer the questions for the pitch with the information you have, or if you want to find out more information, you can also search for your species in the original lists:

1

Search for your species on the IUCN Red List of Threatened Species.

To do this, visit the IUCN website (<https://www.iucnredlist.org/>) and enter the name of your species in the search bar.

**CAUTION:** You must enter the name in English, Spanish, French or Japanese and set the correct language beforehand. If you know the scientific name of your species, you can enter that too. If you need help understanding the website, the presentation M3 can help you.



2

Is your species explicitly endangered only in Germany? Then look for it on one of the Red Lists of vertebrates.

To do this, visit the Red List Centre website (<https://www.rote-liste-zentrum.de/de/Download-Wirbeltiere-1874.html>) and select the latest list for amphibians, marine animals and lampreys, reptiles, mammals, freshwater fish and lampreys or birds - depending on the species. If you need help understanding the website, the M4 presentation can help you.





3

## I would like to select an animal species from the IUCN Red List

It's totally fine if you don't have an idea yet which species you're interested in! The IUCN Red List of Threatened Species of the International Union for Conservation of Nature (IUCN) was launched in 1964 and has become the world's largest source of information on the global status of the extinction risk of animal, fungal and plant species. In addition, the IUCN Red List is an important indicator of the state of global biodiversity. Therefore, you are sure to find an exciting species that you would like to research more about! However, research precisely because the list is so comprehensive, you need to know exactly how to search best! Then, work on the guiding tasks below for the pitch.



1

Watch the presentation "M3 IUCN Red List" and try to explore the website step by step.

2

After you have selected the appropriate Red List categories (most interesting are the categories *Critically Endangered* and *Endangered*), set different filters. Are you interested in a species that is endangered because of climate change? Or a species that is endangered in a certain habitat or region? You can retrieve all categories there and see what species you come across.

3

If you've done some testing and found an interesting species, click on it and see how much information you can already find on the site. If you find a lot of information, great! Then the research can continue and you will surely find a lot on the internet about the species. If you find little information on the IUCN site, you may want to search again for a new species. It may be that the research will then be rather disappointing because the particular species has not yet been researched extensively.

4

Once you have decided on one species, work on the guiding tasks for the pitch and prepare for the upcoming research.

**EXTRA:** Want to learn more about the IUCN Red List? The following video is very informative and helpful if you want to understand the function of the list better!  
<https://www.youtube.com/watch?v=VukyqMajAOU>.





# 4

## I would like to select an animal species from one of the red lists of vertebrates

It's totally fine if you don't have an idea yet which animal species you are interested in! If you are particularly interested in animal species that are threatened with extinction in Germany, i.e. at national level, you can for sure find an exciting animal species for the pitch on one of the Red Lists of the Red List Centre! These lists document the population of species in Germany since 1971 and evaluate and document the decline in biodiversity.



# 1

Look at the **presentation "M4 RoteListeZentrum"** and try to explore the website step by step.

# 2

After you have **selected and downloaded one of the red lists of vertebrates** (amphibians, marine fish and lampreys, reptiles, birds, mammals and freshwater fish and lampreys), familiarize yourself with the list, **learn the symbols** of the list and choose a species.

# 3

Try to find as much information as possible in the list. Especially species with an additional comment (^^) are suitable (look at the presentation!). In addition, you can search for the selected animal species again via the species search engine on the website and find interesting information in the profile.

# 4

Once you have decided on a species, work on the guiding tasks for the pitch and prepare for the upcoming research.

**EXTRA:** Do you want to learn more about the Red Lists of different levels and their similarities and differences? Then you can read the following interesting article: <https://www.rote-liste-zentrum.de/de/Vergleich-mit-anderen-Roten-Listen-1713.html>

