



WWF

***Minimizing the Damage to  
Biodiversity Caused  
— by —  
Species Going Extinct Due to  
Human Activities***

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Dear Delegates,

It is with great excitement that we welcome you to Yeni Yol Model United Nations 2023! Our names are Rana Beril Gülcü and Yağmur Onarlı, and we are humbled by the opportunity to serve as your Secretaries-General for the 2nd Session of YYMUN.

The Secretariat team has been working diligently to ensure that all delegates will be given the opportunity to develop broader perspectives, voice their opinions on current global issues, and cooperate with others to produce effective resolutions. We expect that the topics covered in the committees will appeal to all the delegates' levels or more challenging in Intermediate and Advanced committees so that they may provide challenge, helpful guidance to your needs and assistance to improve your visions. After an eventful weekend full of diplomacy, debate, and delight, we wish you to leave our conference with the potential to become future leaders of our society.

This document will provide you with the Study Guide for your committee, which will enable you to comprehend the issue to be debated more easily. The entire Secretariat and Staff have committed countless hours to ensure that the substance and presentation of this document are of the highest quality, and that you are supported with the most useful tools to succeed at the conference. Each Chair has worked over the past few months to provide you with the foundation necessary to continue your own exploration of the topic areas. We look forward to working with you to continue YYMUN's substantive excellence.

Apart from this document, you will also be able to access a number of additional documents that will aid in your preparations for the conference. We will provide you with the **Code of Conduct** that reviews some rules, principles and expectations, as well as our updated **Rules of Procedure**, which you can find on our website.

If you have any questions about this document, the other Guides, or your committee in general, please do not hesitate to contact us or your Under-Secretaries-General. We are truly excited to meet you all and are eager to address any concerns you may have before, during, or after the conference. I hope you enjoy reading the following Study Guide, and I cannot wait to see your solutions in YYMUN'23!

Yours in diplomacy,

Secretaries of General

Rana Beril Gülcü | Yağmur Onarlı

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# Minimizing the Damage to Biodiversity Caused by Species Going Extinct Due to Human Activities

Introduction

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## Introduction

- Extinction is the termination of a kind of organism or of a group of kinds (taxon), usually a species.
- Biodiversity or biological diversity is the variety and variability of life on Earth.

Biodiversity is essential for the processes that support all life on Earth, including humans. Without a wide range of animals, plants and microorganisms, we cannot have the healthy ecosystems that we rely on to provide us with the air we breathe and the food we eat. And people also value nature of itself.

The bonds that hold nature together may be at risk of unraveling from deforestation, overfishing, development, bush meat, hunting and poaching, climate change, pollution and invasive alien species. Because of human pressures, many species may be pushed to extinction in the future, with serious consequences for human beings as well as the rest of life on Earth.

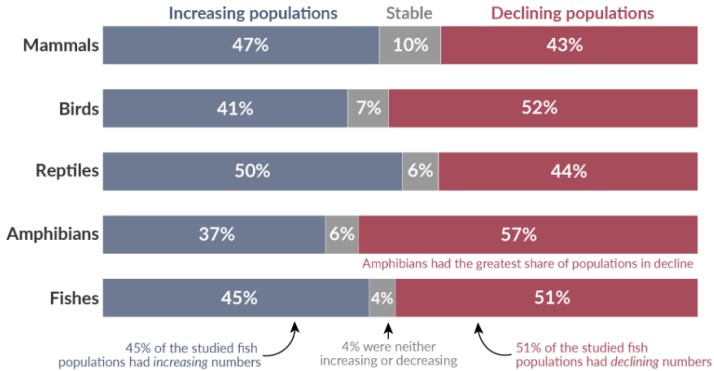
Biodiversity is the balance of our planet and can be easily affected by many factors including the ones that are made possible by humans. By removing just one species as a result of climate change, pollution, habitat loss, or some other natural or man-made factors, a domino effect can occur that has a big impact on the entire ecosystem. As humans, we have a responsibility to coexist harmoniously with other species in the ecosystems we share to ensure a healthy planet. We must work together on all levels from government to individuals.

### Global Living Planet Index: how are wildlife populations changing?



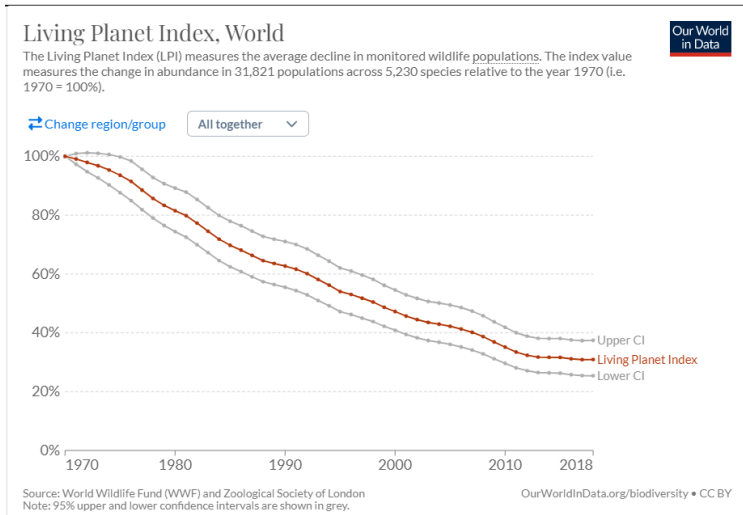
Shown is the share of studied populations in each taxonomic group with increasing, stable or declining abundance. The 2022 Living Planet Index reported a 69% average decline in wildlife populations since 1970.

Around half of populations are increasing, and half are in decline.



Source: WWF (2022) Living Planet Report 2022 – Building a nature positive society. Almond, R.E.A., Grooten, M., Juffe Bignelli, D. & Petersen, T. (Eds). OurWorldinData.org – Research and data to make progress against the world's largest problems. Licensed under CC-BY by the author Hannah Ritchie.

Currently there are many studies that shows us the immediate action that needs to be taken. IPBES reports that one million of the world’s estimated 8 million species of plants and animals are threatened with extinction. On average, monitored species population abundance declined by 58 per cent between 1970 and 2012. Humanity currently needs the regenerative capacity of 1.6 Earths to provide the goods and services we use each year. More than 42,100 species are threatened with extinction as of now reported by IUCN Red List of Threatened Species. And if we don’t take any preventative measures these numbers will continue to rise with the effects that it has to humans and the planet as a whole.



This issue can also be considered to be a part of Sustainable Development Goal 15 which reads *“protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss”*

### Important Aspects of the Issue

Throughout the history humans have affected the environment in various ways. With many technological advancements and the overall development of humanity we have started to exploit the planet in many ways, one of the being biodiversity. Extensive exploitation of resources has led to the destruction of many species habitats which has led us to worry about what the future holds in terms of the variety of life on planet Earth.

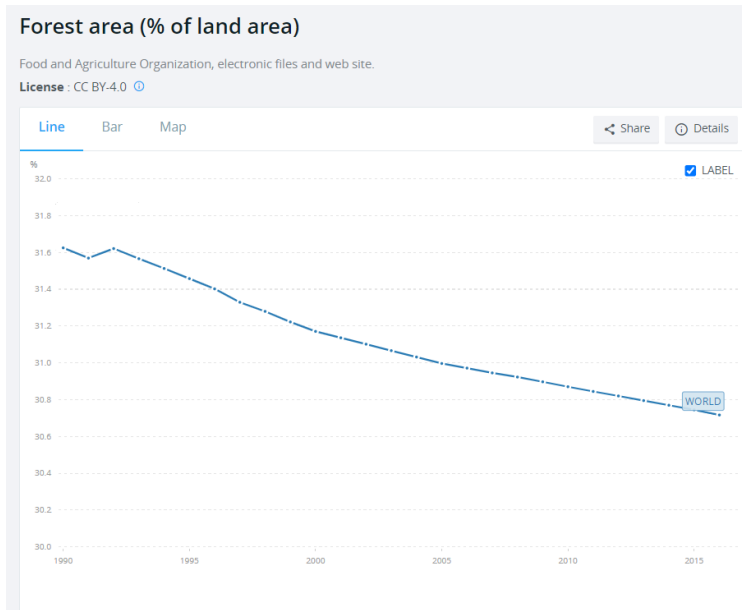
Some of the occasions that has led detrimental effects on biodiversity are: agricultural expansion, industrialization, climate change, overexploitation, pollution, invasive species, urbanization, water use, hunting etc. These occurrences have damaged the natural order of many species' lives in operation.

### Agriculture Expansion

- Extensification: Bringing more wild lands into agriculture to produce more food.
- Intensification: Producing more food without expanding farms onto more land, often by relying on synthetic fertilizers and pesticides.

Agriculture relies on natural processes and living things to create food, but often changes the environment around it. While farms can be managed in ways that minimize their damage to the environment around them, industrial agriculture's focus on productivity means that too many farms are disruptive to wild species both near and far. When environments are too altered or polluted by industrialized agriculture, vulnerable species may lose their habitats and even go extinct, harming biodiversity.

Agricultural extensification isn't new. One of the most dramatic examples of biodiversity loss through extensification is the ongoing destruction of the tropical rainforest. Rainforests are hotspots of biodiversity, with the Amazon alone containing nearly 25 percent of all living terrestrial species.



Industrial agriculture’s impacts are not limited to habitat destruction through its expanding footprint: its reliance on heavy chemicals to create giant stands of single crops has serious consequences for plant, animal and microorganism biodiversity. Pesticides and herbicides are designed to eliminate pests that can harm or compete with crops, but these chemicals can harm plants and animals outside of farm fields affecting many species.

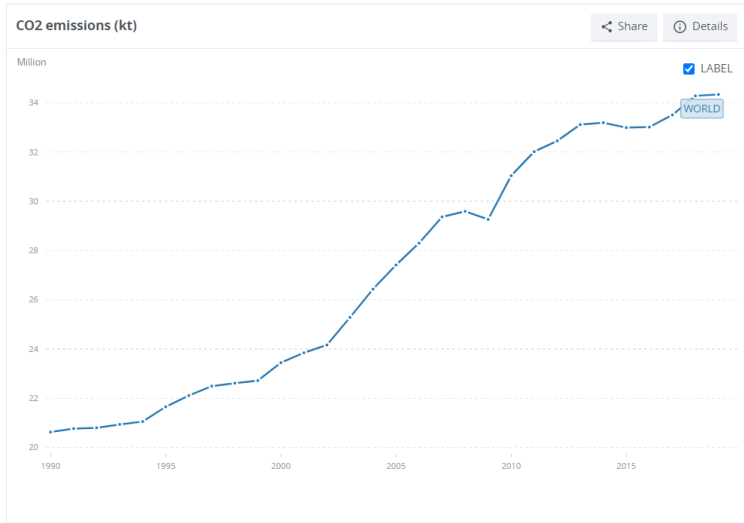
There are also many other techniques that are used to gain more profit without thinking about its effect on the biodiversity and the wellbeing of many species.

### Climate Change

Climate change is playing an increasingly important role in the decline of biodiversity. Climate change has altered marine, terrestrial, and freshwater ecosystems around the world. It has caused the loss of local species, increased diseases, and driven mass mortality of plants and animals, resulting in the first climate-driven extinctions.



On land, higher temperatures have forced animals and plants to move to higher elevations or higher latitudes, many moving towards the Earth's poles, with far-reaching consequences for ecosystems. The risk of species extinction increases with every degree of warming.



In the ocean, rising temperatures increase the risk of irreversible loss of marine and coastal ecosystems. Live coral reefs, for instance, have nearly halved in the past 150 years, and further warming threatens to destroy almost all remaining reefs.

Overall, climate change affects the health of ecosystems, influencing shifts in the distribution of plants, viruses, animals, and even human settlements. This can create increased opportunities for animals to spread diseases and for viruses to spill over to humans. Human health can also be affected by reduced ecosystem services, such as the loss of food, medicine and livelihoods provided by nature.

### Overexploitation

Since the middle of the 20th Century, the human population has grown dramatically from around 2.6 billion to reach 7.8 billion in 2021. Housing and feeding so many people have accelerated the

destruction of natural habitats, while higher levels of consumption, particularly in some richer parts of the world, have also increased the exploitation of natural resources and led to growing levels of pollution.

With global population expected to reach 10.9 billion by the end of the century, the impact that humans have on biodiversity is expected to accelerate unless steps are taken to reduce consumption and modify our current global food system. In particular the people of the poorer lower and middle-income countries will also wish to increase their consumption over the coming decades in order to raise their standards of living. The richer industrialized countries will need to take steps to reduce their high levels of consumption to compensate for this.

### Urbanization

As the global urban population is poised to grow by 2.5 billion over the next 30 years, urban land conversions are expected to be an increasingly prominent driver of habitat and biodiversity loss.

It is also estimated that around 8% of terrestrial vertebrate species on the International Union for Conservation of Nature (IUCN) Red List of Threatened Species are primarily threatened due to urban expansion

### Pollution

There are many kinds of pollution such as; air, water, soil, plastic pollution. Plants and animals are often specifically adapted to their environmental surroundings, so even small changes to their habitat can have severe implications for entire ecosystems.

Air pollution is can be directly harmful to humans, plants, and animals, but also indirectly by contributing to the greenhouse effect. It can have effects on ecosystems and change its dynamics with acid rain damages, melting ice sheets, forest fires, and migration to cooler regions that lead to reduction of habitats.

Water pollution concerns the runoff or diffusion of chemicals or wastes into oceans, rivers, and other watercourses. It is usually caused by a number of reasons such as: agricultural runoff, urban waste, poor waste treatment, acid rains etc.

Soil pollution is the contamination of soils by the addition of chemicals or physical disruption. This type of pollution is a huge concern in agriculture, as pollution of soils can cause infertility and inhibit crop growth.

Some other types of pollution like noise, light, heat pollution also alter the habitats and affect species poorly which lead to the change of balance.

### Invasive Species

- An invasive species is an organism that causes ecological or economic harm in a new environment where it is not native.

Invasive species are capable of causing extinctions of native plants and animals, reducing biodiversity, competing with native organisms for limited resources, and altering habitats. This can result in huge economic impacts and fundamental disruptions. Biological invasions are a major threat to global food security and livelihoods, with developing countries being the most susceptible.

### Hunting

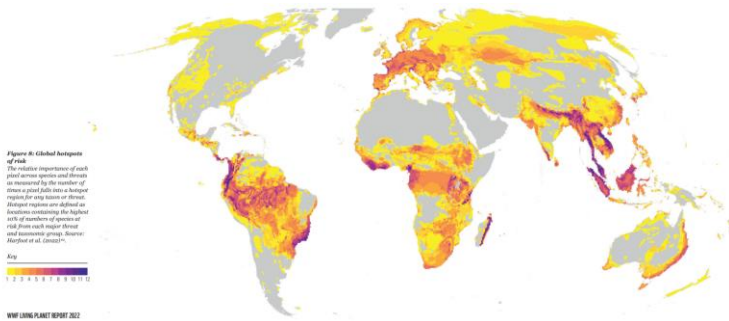
Humans have been hunters for a very long time but with the recent advancements it has become a rather dangerous aspect for species. The reduction of a species' population, altering the life cycles and traits of species because of the selection that people hunt, over hunting which leads to the lack of food available in the system are some of the effects it has on the dynamics of biodiversity.

### Indigenous Communities

For thousands of years, Indigenous communities have served as the planet's most effective environmental stewards. Many indigenous communities live in isolated and often highly biodiverse areas, where living in balance with nature is crucial for survival. As keen observers of their environments, indigenous peoples often possess knowledge linking various phenomena to ecosystem change – changes in weather patterns, for example, or the impacts of new species coming into their territories.

## Current Situation

Biodiversity is not equally distributed around the world and many countries struggle with different problems in the battle against the loss of biodiversity. It is extremely important and necessary to carefully consider and research countries' own problems and take unique approaches in the preventative measures that will be taken.



### Brazil

Brazil is at the top among the 18 megadiverse countries. It hosts between 15 and 20 per cent of the world's biological diversity, with more than 120,000 species of invertebrates, about 9,000 vertebrates and more than 4,000 plant species. With this comes huge potential to boost economic growth and social inclusion, but also a huge responsibility. It is also home to a big part of the Amazon rainforest which is a significant place for biodiversity.

### Indonesia

Indonesia boasts the second highest level of biodiversity in the world. It is one of the 17 megadiverse countries and has two of the world's 25 biodiversity hotspots, 18 World Wildlife Fund's "Global 200" ecoregions and 24 of Bird Life International's Endemic Bird Areas. It also contains the world's third largest area of rainforest after the Amazon and Africa's Congo Basin. These forests include species like the endangered orangutans and critically endangered Sumatran tigers and rhinos. Along with a high diversity of species, the country also has significantly high levels of endemism.

## Australia

In Australia, scientists have identified more than 1.75 million species of plant, animal and microorganism, and the odds are, there are many more, as yet unidentified life forms, living among us. Australia's biodiversity is unlike any other in the world, with 46% of our birds and 69% of our mammals unique to this country.

## China

China is among the 12 mega-biodiverse countries in the world. Forest cover accounts for 20.36% of the total land area, while the stock volume of forest plantations may be the largest in the world, harboring abundant and diverse wildlife.

### **Actions Taken**

- United Nations Convention on Biological Diversity
- EU Biodiversity Strategy for 2030
- 2030 Agenda: Sustainable Development Goal 15- Biodiversity
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)
- United Nations Framework Convention on Climate Change (UNFCCC)
- Cartagena Protocol on Biosafety to the Convention on Biological Diversity

### **Possible Preventative Measures**

As there are many variables in this issue there are many precautions that can be prioritized to prevent it to develop and limit its effects. It is important to save and protect the natural habitats which makes the expansion of protected areas such as national parks very important.

As discussed previously agriculture has a very profound effect on the environment which leads us to believe that new, advanced and sustainable ways of production of food should be implemented. There should be techniques more focused on the

optimized amount of food grown in a limited space with limited resources.

Not only in agriculture but with every aspect of this problem overexploitation is one of the leading causes which we believe the solution is to be efficient in the way we use natural resources.

Taking active steps to reduce pollution in our oceans, forests and lands should be a priority as it disrupts the habitats of all species. Also trying to prevent illegal ways of hunting to save the lives of the species that are already endangered and trying to combat new species being added to the list of endangered is an important goal.

The connection of nature and global warming has been a long relationship and preventing both is important for the conservation of our planet. That is why limiting global warming is extremely important and setting up realistic goals and working towards these goals are extremely important.

As with any global problem connecting and facing issues together is the first step before anything. Especially with different countries fighting for the same planet it becomes an essential step in the steps of success. That is why enforcing and strengthening environmental laws is a must in this journey.

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