

Forum: United Nations Environment Programme

Issue: Addressing the Prevention of Habitat Loss as a Result of Human Activity.

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Introduction

Habitat loss is a pressing and extensive environmental issue which negatively impacts biodiversity and its ecosystems. It is a phenomenon where the natural living space of plants and animals undergo damage, degradation or even complete removal making it very difficult for them to survive or reproduce. Although habitat loss is not solely a result of human activities, a significant amount of it can be attributed to human influence.

Human activity has altered the Earth's land for thousands of years, with a significant increase in industrialization and population growth over the last three centuries but more particularly in the last 70 years: this has led to a substantial increase in land and a disruption of habitats globally.

In order to put this issue into perspective, in one ecosystem, you could find hundreds of thousands of species of plants and animals, but due to human activity, the number of species found decreases significantly. It is estimated that habitat loss due to human activities is the primary cause of the possible extinction of 14 000 to 35 000 species on Earth.

There are many causes of habitat destruction caused by human actions but the most significant ones are agriculture, urbanization, coastal development,

deforestation, and meat production. Hence, it is imperative that the United Nations Environment Programme alongside its member states to promptly address and find immediate solutions for this ongoing and highly destructive issue which concerns our whole world.

Definition of Key Terms

Agriculture

Agriculture is the science and practice of farming, including cultivation of the soil for the growing of crops and the rearing of animals to provide food, wool and other products.

Coastal Development

Coastal Development entails different steps such as planning, constructing and establishing of human infrastructure which includes residences, hotels, tourism-related enterprises and most importantly ports. Coastal development can have a significant impact on ecosystems, habitats and biodiversity.

Ecosystem

An ecosystem is simply referred to a community or group of living organisms that live and interact with each other in a specific environment. There are different types of ecosystems such as terrestrial ecosystems, marine ecosystems, grassland ecosystems etc.. which vary from one environment to another.

Habitat Destruction

Habitat Destruction is the damage or elimination of the necessary conditions for animals and plants to survive. It is the primary threat to the well-being and existence of fauna and flora worldwide. This can lead species to extinction which means that the organisms are either dead or displaced, therefore reducing biodiversity and species abundance. Therefore, habitat destruction is often related to habitat loss.

Habitat Loss

Habitat loss is the consequence of the previously stated definition of habitat destruction. When an ecosystem is drastically altered or damaged by human activities, it may no longer be able to provide the necessary conditions for its species to survive such as (but not limited to): food, water, cover and places to raise young wildlife to survive. It usually results in the extinction of species, which leads to the loss of biodiversity.

Meat Production

Meat production is the process of raising livestock such as cows, chickens or pigs for the purpose of obtaining meat for human consumption. This process includes a various number of stages: breeding, feeding and raising the animals to finally slaughter them to harvest their meat for food.

Overgrazing

Overgrazing occurs when livestock animals consume an excessive amount of vegetation (e.g: grass) which damages the land and makes it unable to recover its own vegetation. This results in the deterioration of plants and land.

Resource Depletion

Resource Depletion is the consumption of a resource faster than it can be replenished. Therefore, it refers to the decreasing amount of resources left on earth such as non-renewable resources (oil, steel, aluminum, coal...) and these resources could potentially run out quicker than expected if its consumption is not regulated.

The Ripple Effect

The Ripple Effect is an expression used to describe an initial cause which triggers a series of events that are all somehow related to each other. In other terms, this affects ecosystems because they are all linked to one another by the food web. When one species becomes extinct, this could potentially affect other species in its ecosystem because one may need the other to survive.

Key Issues

Reduced Biodiversity and Habitat Loss.

Biodiversity loss, also known as reduced biodiversity, refers to the decline or disappearance of biological diversity and its species which is understood as the variety of living organisms that inhabit the planet, its different levels of biological organization and their respective genetic variability, as well as the natural patterns present in ecosystems. In mid-2019, the United Nations (UN), in collaboration with IPBES, presented a report on biodiversity warning that out of a total of eight million, one million species are in danger of extinction. Some researchers even declared a possible sixth mass extinction in the history of the planet.

half-century which has impacted a countless number of species. Moreover, a study published by the Nature Communications estimated that due to this loss of species (due to deforestation and human activities), 60% of ecosystems and species are threatened with extinction, primarily due to the absence of fauna and flora they need to survive. All in all, this loss echoes across ecosystems and affects pollination, seed dispersal, symbiosis, predator-prey relationships and most importantly ecosystem stability.

Major Parties Involved and Their Views

Australia

Australia is one of the major parties in protecting habitats from human activities through their conservation initiatives but most importantly, their environmental policies. Their country is known for its diverse and unique ecosystems that are unfortunately heavily threatened by human-induced activities such as deforestation, coral bleaching and land degradation.

One of the most relevant and important Australian initiatives is the National Reserve System. Their aim is to conserve biodiversity whilst protecting habitats through the establishment and management of areas which are deemed “protected”. These areas could be parks, reserves and marine protected areas.

Australia is also one of the main actors in the Ramsar Convention on Wetlands. By designation multiple sites of international importance which are classified as “Ramsar Protected Sites” which are lakes, marshes and most importantly, coastal areas. Thanks to their involvement in the Ramsar Convention of Wetlands, Australia demonstrates efforts to preserve their vital

wetlands and their habitats.

Australia also promotes sustainable land management and many habitat restoration projects such as “Landcare”, a community-based movement which encourages sustainable agriculture practices without damaging the environment and its ecosystems.

Malaysia

Malaysia actively engages in protecting their habitats from human activities through a range of initiatives but most importantly policies and laws focused on biodiversity conservation and protection. The Country is committed to safeguarding its habitats from multiple threats such as deforestation, habitat fragmentation and overexploitation as well as maintaining a network of protected areas to conserve their unique biodiversity and habitats thanks to their implication in the Ramsar Convention of Wetlands.

Moreover, Malaysia is specially known for countless Non Governmental Organizations, which actively contribute to the conservation and sustainable development of these protected areas and biodiversity. Out of all NGOs in Malaysia, the Malaysian Nature Society, WWF-Malaysia and Reef Check Malaysia are undoubtedly the most important ones.

Starting with the Malaysian Nature Society (MNS), its goal is to promote the study, appreciation and conservation of Malaysia’s habitat and biodiversity. Created in 1940, it is the most prominent NGO that defends the importance of biodiversity protection, especially from human activities. Over the years, it now focuses on setting policies for the whole country on habitat and wildlife conservation by giving a “protection” status to the key habitats that are vital for the protection of their ecosystems and biodiversity.

WWF-Malaysia, established in 1972, is one of the many branches of the World Wide Fund for Nature. Its formation was an urgent response to the need for habitat and biodiversity conservation in Malaysia due to its very special ecosystem and species. One of the most important projects is the Heart of Borneo, aimed at conserving one of the world's last remaining tropical rainforests by promoting sustainable land use and fostering cooperation between Malaysia, Brunei and Indonesia.

Finally, Reef Check Malaysia is a very important NGO focusing on marine conservation and the protection of underwater biodiversity. Established in 2007, Reef Check Malaysia is a part of the Global Reef Check Foundation and its goals is to monitor and conserve coral reefs, create surveys to assess the health of those reefs as well as raising public awareness about the importance of coral reefs. One of their crucial projects is the Coral Reef Conservation Project which involves monthly coral reef assessments and capacity building to empower local stakeholders in reef conservation and most importantly, to contribute to the long-term health and resilience of Malaysia's Coral Reefs.

Brazil

Brazil is one of the main parties involved in the following issue of Habitat Loss due to Human Activity. Home of the Amazon Rainforest, the country has faced numerous challenges due to its deforestation. To prevent further habitat destruction, Brazil has worked tirelessly to propose and engage in numerous NGOs and projects to protect its land and ecosystems.

The Amazon Conservation Association is one of the main actors in helping out the Amazon Rainforest. This association which operates in both Brazil and Peru, works on

protecting the Amazon Rainforest through initiatives like land conservation, reforestation and biodiversity monitoring. They also engage with local communities to educate and promote sustainable livelihoods and conserve critical habitats.

Another noteworthy project is the Nature Conservancy of Brazil which works very closely with the WWF. They have ongoing projects aimed at preserving the ecosystems and land in Brazil. They are known for educating younger generations via school interventions but also to help with habitat restoration thanks to the help of volunteer scientists and most importantly wildlife conservation.

In order to contribute to habitat restoration, the Amazon Environmental Research Institute plays a prominent role in gathering science reports as well as advocating for sustainable land use and reducing deforestation. This NGO collaborates with multiple other associations such as the WWF to also provide easy-to-understand interventions in local communities and high risk industries to prevent and regulate human activities to prevent further habitat loss.

United Arab Emirates

Another major country involved in protecting habitats and advocating for a more sustainable future is the United Arab Emirates. This country aims to host international conventions and to most importantly safeguard their land and its ecosystems.

One of the most remarkable projects is the “Mangroves Project” launched by the Abu Dhabi Environment Agency. This project aims to restore and protect mangroves along the UAE Coastline. In fact, mangroves play a very important role in the United Arab Emirates: they provide critical habitats for various species and serve as a natural buffer

against coastal erosion. This project took the initiative of planting millions of mangrove trees which has significantly ameliorated the habitat for its species.

Another notable project is the COP28 that the United Arab Emirates is hosting starting November 30th 2023. As mentioned previously, COP conferences have multiple such as assessing the progress of countries involved towards a more sustainable future, creating agreements to protect land, habitats, biodiversity and ecosystems, but most importantly, to set new goals for each and every country to abide to in order to make sure that our biodiversity doesn't suffer as much as it is at the moment and to make sure that countries are providing a safe haven for their ecosystems and millions of fauna and flora species.

The United Arab Emirates is hosting the COP28 due to their commitment for a sustainable and fauna flora-friendly future. The country is engaged on different scales in combating climate change and habitat loss. With innovative techniques and their capacity for new infrastructure, it is without a doubt that the United Arab Emirates will quickly become an example for all other nations to follow when it comes to providing a safe environment for its ecosystems.

Development of Issue/Timeline

Date	Event	Outcome
1760-1840	The Industrial Revolution on a Global Scale.	The Industrial Revolution was a very positive innovation for

		<p>the world but it also has a set of devastating consequences for habitats, biodiversity and ecosystems. Through deforestation, urbanization, mining, pollution, infrastructure development and agricultural intensification, they have impacted the ecosystems and have also contributed to biodiversity loss. It also marked a period of significant environmental degradation which countries are still trying to save today.</p>
<p>1960</p>	<p>The Amazonian Forest Deforestation Process</p>	<p>In order to gather land for agriculture, the Amazon Forest since 1960 has been victim to deforestation. Large swaths of the Amazon rainforest have been slashed and burned to be used for intensive animal agriculture, crop production, mining and industrial development.. Burning away the Amazon resulted in millions of living species to</p>

		extinction and destroy their habitats.
1962	Beginning of Offshore Drilling in the Arctic.	The Arctic is a region where many resources are concentrated in one area. In order for countries such as China to be able to exploit these resources (e.g: oil), offshore drilling is the preferred method. However, this has direct repercussions on the fauna and flora found in the Arctic. Species that are undergoing immediate extinction due to offshore drilling are Bowhead Whales, Arctic Wolves ,The Arctic Fox, Beluga Whales , Polar Bears etc...
1980-2022	Bleaching of the Great Barrier Reef.	Pollution and climate change are two linked consequences of (mostly) human activities which are linked to the Bleaching of the Great Barrier Reef that started in the 1980s

		<p>but it is still happening today. Coral bleaching occurs when corals lose their vibrant colors and turn white which is due to stress from changes in water temperature, pollution, or other factors. The stress makes the corals expel tiny algae living in them, which gives them color and food. Without these algae, the corals turn white and can become weaker and more vulnerable. It's a sign that the coral is not healthy and needs help to recover but is still not dead.</p>
<p>24 August 2023</p>	<p>Radioactive water from the Fukushima Disaster released in the Pacific Sea.</p>	<p>On the 11th of March 2011. A major nuclear disaster happened: The Fukushima Incident. However, the remaining radioactive water and substances remained on the Japanese territory. This decision was made due to the lack of storage space for the rapidly accumulating contaminated water at the</p>

		Fukushima site which had been used to cool the damaged reactors. Dumping this water into the Pacific Ocean coil causes certain fish and marine species to disappear from the Pacific Ocean, but it also has a direct repercussion on the production of fish as a human food.
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Previous Attempts to Solve the Issue

Convention on Biological Diversity

The Convention of Biological Diversity (CBD) is the international legal instrument for the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of generic resources. At the 1992 Earth Summit in Rio de Janeiro, world leaders agreed on a comprehensive strategy for "sustainable development" and it was ratified by 196 nations.

The first goal of the CBD Convention is to maintain and most importantly conserve biological diversity by protecting and conserving all ecosystems, species and their genetic diversity. Its second goal is to ensure human activities are sustainable towards the ecosystems. Lastly, it strives for equitable sharing of benefits from generic resources and to foster international cooperations to promote fair distribution among stakeholders. All in all, the Convention's main objective is to preserve the world's biodiversity.

The Convention on Biological Diversity is home to many prosperous programmes but

the two most important ones are the establishment of the Conference of the Parties (COP) as well as the Aichi Biodiversity Targets.

The Conference of the Parties, also known as COP, are annual conferences organized under international agreements where representatives from member countries discuss environmental treaties in order to find resolutions to many ecological disasters on Earth.

These conferences are in partnership with not only CBD but also the United Nations

Framework on Climate Change. There are now 198 Parties (197 countries plus the European Union) to the Convention, constituting near universal membership.

The COP Conferences are still in action and the next edition is the COP28, held in the United Arab Emirates. The UAE's hosting of COP28 builds on the country's track record of action to meet the global climate challenge. The UAE is a global hub for logistics, transportation and green technology and is at the crossroads of business, commerce and tourism. The country is therefore uniquely positioned to build bridges and foster consensus to accelerate inclusive climate progress.

The UAE is the first country in the region to ratify the Paris Agreement, the first to commit to an economy-wide reduction in emissions, and the first to announce a Net Zero by 2050 strategic initiative, proving its commitment to raising ambition for climate Action.

Ramsar Convention on Wetlands.

The Ramsar Convention on Wetlands is an international treaty with the goal to promote the conservation and sustainable use of wetlands worldwide. A wetland is a watery area where special species of plants and animals live. It helps absorb water and is very important for the well-being of nature on Earth such as mangroves or lakes.

Adopted in 1971 in Ramsar, Iran, the convention was the first ever international treaty

to protect such specific yet important environments and ecosystems from human activities. Its main objective is to protect the wetlands to ensure the diversity of species that are currently living in those ecosystems. The convention also emphasizes the importance of wetlands being one of the crucial ecosystems that supports biodiversity as a whole.

The Ramsar Convention on Wetlands highly encourages its 170 member states to manage and supervise the wetlands of their respective countries to ensure no human activity damages them and to ensure their sustainable use while safeguarding their ecological integrity.

Agenda 21

Agenda 21 is an action plan adopted by the United Nations Conference on Environment Development (UNCED) was held in Rio de Janeiro in 1992. It is a global initiative aimed at promoting sustainable development by addressing environmental and social issues at both local and international levels.

The Agenda covers a wide range of topics including biodiversity, protecting ecosystems but most importantly to protect our land from human degradation. It encourages active collaboration among governments, local communities and Non-Governmental Organizations (NGOs) to build a sustainable future for the generations to come.

Even though Agenda 21 covers many different topics, “Chapter 17” focuses on the importance of maintaining a safe environment for species and to protect them from human activities. By monitoring and encouraging sustainable development of coastal areas including exclusive economic zones, to protect marine ecosystems, to ensure that

marine living resources are protected and used in a monitored manner and most importantly to create sanctions for member states to those who do not respect those few rules, Agenda 21 truly values the preservation of biodiversity.

Possible Solutions

Policy and Legal Framework Enhancement

Policy and Legal Framework Enhancement is a crucial strategy for the overall protection of habitats and to avoid degradation due to human activities. It is imperative for countries to adopt strict legislations and effective policies to ensure the protection of ecosystems and their habitats.

On a local scale, taking the United States as an example, the Endangered Species Act (ESA) is a notable example of a very important legislation aimed at habitat protection. This law provides protection of species that are endangered and threatened as always the conservation of their habitats. Under this Act, critical habitats are recognized and any activities, especially those influenced by humans, are regulated to minimize their negative impact on the environment.

On a larger and international scale, the Convention on Biological Diversity still stands as a prominent example; which emphasizes the importance of policy frameworks to combat habitat loss globally. The CBD's Strategic Plan for Biodiversity founded in the years 2011 sets policy action which focuses on protecting at least 17% of terrestrial and inland

water areas through effectively and equitably managed protected areas.

Habitat Restoration and Rehabilitation

Habitat Restoration and Rehabilitation is a very important project to directly impose a positive impact on habitats that have been threatened by human activities. By restoring habitats, we not only enhance biodiversity but also ensure the provision of ecosystem services which are also crucial for human survival.

In China, the “Loess Plateau” is one of the most damaged places on earth due to human activities such as overgrazing and deforestation, and is currently undergoing a government implemented plan called “Grain for Green” which aims to restore vegetation and flora as well as reduce soil erosion. This program has successfully restored parts of habitats by planting trees which has also improved soil quality and therefore enhanced the water retention in the region.

Furthermore, in the United States, the Comprehensive Everglades Restoration Plan is a wetland restoration program which concerns those territories that have suffered habitat loss due to urbanization, agriculture and altered water flow and quality. The CERP focuses on restoring natural water flow and improving habitat conditions to protect the habitat and ecosystems found in the large American state of Florida.

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