Committee: Special commission on climate change

Topic: The question of biodiversity

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Summary

Biological diversity is the variety of life on Earth and the natural patterns it forms. Our planet's biodiversity is the result of 4.5 billion years of evolution, which the ever-increased influence of humans has, and is, unfortunately having a hugely negative impact with devastating consequences. Humans are now integral to the survival of the planet's whole ecosystem.

Biodiversity is vital for healthy ecosystems, which are essential in providing clean air, water and food for us. Practices such as deforestation, pollution, climate change and overexploitation of natural resources have left Biodiversity at serious risk of being irreparably damaged. This leads to ecosystem collapse furthering the negative effects of climate change and negatively effecting humans' lively hoods and overall global stability.

We now know that species are disappearing at an alarming rate, up to a thousand times faster than the natural rate of extinction previously experienced and expected in our ecosystem. This extinction timebomb has been reported by the scientific community over the last 50 years, to all governments and to all communities with a clear message, we are now in a triple planetary crisis – 1) Climate Change, 2) Nature and Biodiversity loss, and 3) Pollution and Waste.

Over half the world's total GDP is dependent on nature, not only for food and clothing but also for the provision of medicine and social benefits.

The highest levels of terrestrial biodiversity are found in tropical forests, which host over 80 per cent of terrestrial species. Around 1.6 billion people depend on forests for their livelihood, and a quarter of all modern medicines come from tropical forest plants. Yet, deforestation is continuing at an alarming rate, particularly in tropical regions: 7 million hectares of forest, for comparison this is an area roughly the size of the Republic of Ireland, are destroyed every year, particularly in tropical regions.

The need to conserve biodiversity is not restricted to the terrestrial environment. Oceans also play a vital role in mitigating the climate crisis and are a source of protein for some 3 billion people. They also contain countless species, of which there is little information, that could be the source of novel medicines and materials.

Habitat destruction includes things such as deforestation, for uses such as, urbanisation and agriculture and logging which is the biggest cause of habitat destruction and the primary reason for loss of species extinction. Climate change, rising temperatures and altered weather patterns are disrupting ecosystems, leading to harsh pressures put on animals that are especially adapted to unique environments. Pollution chemical pollutants, plastic waste, and oil spills are contaminating natural habitats and leading harmful waste harming wildlife. Overexploitation including overfishing, hunting, and illegal wildlife trade are reducing populations of many species, pushing some to the brink of extinction.

The below facts are clear evidence of this and the protection of our planet's biodiversity is vital:

- Around 3.2 billion people, or 40 percent of the global population, are adversely affected by land degradation.
- Up to $577 billion in annual global crop production is at risk from pollinator loss.
- 25 percent of global greenhouse gas emissions are generated by land clearing, crop production and fertilization.
- Development is putting animals and humans in closer contact increasing the risk of diseases like COVID-19 to spread. About 60 percent of human infections are estimated to have an animal origin.
- 100-300 million people are at increased risk of floods and hurricanes because of coastal habitat loss.
- Declines in nature and biodiversity at current trajectories will undermine progress toward 35 out of 44 of the targets of SDGs related to poverty, hunger, health, water cities, climate, oceans and land.

Definition of Key Terms

Agriculture - the science or 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.

Agrobiodiversity – a diverse ecosystem where multiple species interact to create a diverse ecosystem, and positively affect all species in a symbiotic relationship, often leading to more environmentally friendly environment and better harvests and yields.

Biodiversity – the variety of plant and animal life in the world in a particular habitat, a high level of which is usually considered to be important and desirable.

Climate change – the long-term shifts in temperatures and weather patterns.

SDGs– Sustainable Development Goals, there are 17 in total

Decade of Action - 'calls for accelerating sustainable solutions to all the world's biggest challenges'

GDP - Gross domestic product is the standard measure of the value added created through the production of goods and services in a country during a certain period.

Conservation - prevention of wasteful use of a resource.

Deforestation - the purposeful clearing of forested land.

Terrestrial biodiversity - refers to the variety of lifeforms that exist in a particular place. It includes genetic, species and ecosystem diversity and all the interactions between them.

Ecosystem - a biological community of interacting organisms and their physical environment.

Extinction - the fact or process of a species, family, or other group of animals or plants dying, leaving no existing members.

Habitat - the natural home or environment of an animal, plant, or other organism.

Invasive species - an organism that is not indigenous, or native, to a particular area. Invasive species can cause great economic and environmental harm to the new area.

Pollution - the introduction of harmful materials into the environment.

Protected Areas (PAs) – Is a clearly defined geographical space, recognized, dedicated and managed through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values.

Urbanisation -the process of making an area more urban.

Background Information

With the earth's biodiversity threatened, this has further negative effects such as worsening the climate crisis and damagingly affecting wild and human life. It affects our ability to obtain water, food, fuel, building material, our air, the climate, the weather, our ability to grow crops, control of pets, our ability to keep livestock, and our ability to create medicine. This also affects animals and plant life in similar ways.

By maintaining a biodiverse ecosystem, we can help prevent all these factors. However, maintaining a biodiverse ecosystem is difficult with the climate crisis taking place. Countries are trying to promote practices to tackle the climate crisis and promote biodiversity, but this is difficult with the overconsumption that takes place. Along with this, disproportionally, developing countries are most at risk of having their environments destroyed and struggle to fund their own preventative measures to tackle climate change.

Achieving the Sustainable Development Goals (SDGs) will require, globally, deep and urgent transformations in governance and economic systems. These transformations need to be adopted and put in place in the course of the Decade of Action to deliver the Global Goals.

While the primary biodiversity Goals (SDG 14 and 15) seek to conserve and sustainably use the marine and terrestrial environment, all of the 17 goals, ultimately depend on healthy ecosystems and biodiversity. The health of the planet ultimately underpins people's health and well-being.

It has been stated in the SDG 2022 report that progress towards these two goals is lagging behind others. As part of the deep transformative change required to achieve the SDGs, there is an urgent need to value and recognize the contribution that nature makes to human well-being.

The United Nations Environment Programme (UNEP) supports the protection of forests for social, economic and environmental benefits. Our partners support sustainable land

management and lead the Decade on Ecosystems Restoration 2021 -2023 The Decade aims to gather the science and best practices on ecosystem restoration and encourage action.

UNEP collaborates with biodiversity-related conventions and scientific bodies. The Convention on Biological Diversity is an international, legally binding treaty covering biodiversity at all levels: ecosystems, species and genetic resources. It also covers biotechnology through the Cartagena Protocol on Biosafety. The Convention recognizes that biological diversity is about more than plants, animals and micro-organisms and their ecosystems. It is about people and our need for food security, medicines, fresh air and water, shelter, and a clean and healthy environment in which to live. UNEP hosts the Secretariat of the Convention.

UNEP also works closely with, and hosts the Secretariats of the Convention on the Conservation of Migratory Species of Wild Animals and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and the Inter-governmental Panel on Biodiversity and Ecosystem Services.

Major Countries and Organizations Involved

There are 17 countries highlighted as Megadiverse countries. They comprise approximately 70% of the worlds biodiversity and have their own organization, the likeminded Megadiverse Countries

- Australia
- Brazil
- China
- Colombia
- Democratic Republic of the Congo
- Ecuador
- India
- Indonesia
- Madagascar
- Malaysia
- Mexico
- Papua New Guinea
- Peru
- Philippines
- South Africa
- United States of America
- Venezuela

The UN has 196 countries involved

Timeline of Events

- 1972 United Nations Conference on the Human Environment, in Stockholm, provided international biodiversity protection regulation with an additional stimulus.

- 1992 Convention of Biological Diversity developed
- 1985 United Nations Convention, Vienna, for the Protection of the Ozone Layer
- 1987 United Nations convention, Montreal Protocol on Substances that Deplete the Ozone Layer
- 1989 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal
- 1992, United Nations Conference on Environment and Development, Rio de Janeiro, Brazil: a general view of the Conference.
- 1992 Convention on Biological Diversity, Earth Summit
- 2000 Cartagena Protocol on Biosafety to the Convention on Biological Diversity
- 1994 United Nations Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, particularly in Africa
- 1997 Kyoto Protocol to the United Nations Framework Convention on Climate Change
- 1997 Convention on the Law of the Non-Navigational Uses of International Watercourses
- 2001 Articles on Prevention of Transboundary Harm from Hazardous Activities
- 2006 Principles on the Allocation of Loss in the Case of Transboundary Harm Arising Out of Hazardous Activities
- 2008 Articles on the Law of Transboundary Aquifers
- 2016 - Paris Agreement on Climate Change
- 2022 – Montreal 19th December, 23 countries and organisations led by Colombia and supported by Germany, launched a partnership to accelerate country led implementation of the Kunming-Montreal Global Biodiversity framework
- 2023– Most recent COP conference

Relevant UN Treaties and Events

The international Whaling Commission (IWC) (1946) provides proper conservation of whale stocks and thus make possible the orderly development of the whaling industry and has 88 Contracting parties.

The International Plant Protection convention (IPPC) (1951) aims to secure coordinated, effective action to prevent and to control the introduction and spread of pests of plans and plant products and has 185 contracting parties.

The Ramsar Convention on wetlands (Ramser Convention) (1971) provides the framework for the conservation and wise use of wetlands and their resources and has 172 contracting parties.

The World Heritage Convention (WHC) (1972) defines the kind of natural or cultural sites which can be considered for inscription on the World Heritage List and how to protect and care for them and has 196 contracting parties.

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (1975) aims to ensure that internation trade in specimens of wild animals and plants does not threaten the survival of the species and has 184 contracting parties.

The Convention on Conservation of Migratory Species of Wild Animals (CMS) (Bonn Convention, 1979) aims to provide a global platform for the conservation and sustainable use of terrestrial, aquatic and avian migratory animals and their habitats and has 133 contracting parties.

The Convention on Biological Diversity (CBD) (1993) focuses on conserving biodiversity and promoting sustainability and has 196 contracting parties.

The International Treaty on Plant Genetic Resources for Food and Agriculture (2004) aims are the conservation and sustainable use of all plant genetic resources for food and agriculture and the fair and equitable sharing of the benefits arising out of their use, in harmony with the Convention on Biological Diversity, for sustainable agriculture and food security and has 152 contracting parties.

Sustainable Development Goals (SDGs) (2012) are 17 goals suggested and adopted by all United Member states in 2015, they provide a blueprint for sustainable progress for all nations and has 191 contracting parties.

Conference of the Parties (COP) (1995 -) Annual conferences by the UN to tackle climate change. Aim is to prevent dangerous human interference with the climate and has 197 countries that have ratified the Convention.

Previous Attempts to solve the Issue

In the COP15 conference, countries agreed to protect 30% of Earth's land and seas and "halt and reverse" biodiversity's decline by 2030. This is through increased conservation of ecosystems and species and increased financial support for biodiversity protection. Governments and private organisations are pledging to give at least $200bn (£161bn) per year by 2030 to aiding biodiversity. However, this is not legally binding.

Currently 17% of the allotted 30% of land has been protected and around 8% of marine areas are protected.

To try and tackle the issue of developing nations, which are the countries with the most fragile ecosystems and most under threat from the climate crisis, as they are not able to properly fund their own measures to ensure biodiversity, major countries have pledged to increase funding to developing to countries.

This increased funding will be spent on Protected Areas (PAs) and increasing the number and size of PAs, increasing agrobiodiversity and more environmentally friendly farming practices, strengthening government frameworks, supporting market transformations, fast-tracking national biodiversity strategy-setting and implementation, promoting wildlife conservation, and helping to stop the spread of invasive / alien species.

SDGs are 17 goals which the United Nations have stated as the blueprint to achieving a better and more sustainable future for all. Within these goals, the global challenges currently faced, include those related to poverty, inequality, climate change, environmental degradation, peace and justice.

1. No Poverty
2. Zero Hunger
3. Good Health and Wellbeing
4. Quality Education
5. Gender Equality
6. Clean Water and Sanitation
7. Affordable and Clean Energy
8. Decent Work and Economic Growth
9. Industry, Innovation and Infrastructure
10. Reduced Inequalities
11. Sustainable Cities and Communities

12. Responsible Consumption and Production
13. Climate Action
14. Life Below Water
15. Life on Land
16. Peace, Justice and Strong Institutions
17. Partnerships for the Goals

Possible Solutions

It is essential all countries and individuals understand there is a need for large scale change in our behaviour, policies and measures to protect biodiversity, we must all play our part in the change. We fundamentally must change the human thought process for the compulsion to over consume and start to make conscious choices about the food we eat, products we buy and the services we use.

Cooperation and understanding are essential in tackling the biodiversity crisis. All levels of society will play a part in the changes required for our planet's healthy ecosystem and long-term survival in a form as we know it. Intergovernmental, government agreements, local community action and individuals must cooperate and play their part in creating the institutions and electing leaders who can help to safeguard biodiversity. We must reconnect with nature and encourage others to do the same. This will support understanding in local ecosystems and build a respect and an understanding into its value, hopefully we will then learn to treasure them.

Human consumption has an impact through what they buy and use in our day to day lives across the globe. Certain products such as cotton have a disproportionate effect on biodiversity. There is also overconsumption of high environmental footprint meat, especially beef, in many parts of the world. It is not just for large corporations to make a difference, we can all do it even by our savings and pensions, we can chose to invest in ways that promote rather than harm biodiversity.

Reducing what we waste and throw away can play a part in lowering pollution levels and the over exploitation of natural resources. Huge amounts of food are wasted annually, even though humans starve to death on a daily basis. Electrical items are thrown away as we have been conditioned to replacing goods instead of repairing, getting more use out of the clothes we already own are all ways to reduce our overconsumption and can be ways consumers can have a positive effect on biodiversity that could also save us money. By educating consumers about the environmental impact of their consumption choices, this will empower people to created better choices. New rules introduced in 2021 in the EU requires manufacturers of electrical goods such as fridges, washing machines and televisions to make them easier to repair - the "right to repair".

Spending more time in nature can help improve our relationship with it and attach greater value to the habitats around us. Educating children about wildlife and local ecosystems can help to make our connection to the natural world clearer and bring about long-term behavioural changes in future generations.

Working together, we must set stricter regulations for governments to meet their climate goals.

- All major corporations must have clear workable environment policies and measures which they adhere to. Their responsibility for their effect on the climate must be at the forefront of their design and product
- Better monitoring of wildlife, prioritising endangered species
- Introduce harsher measures on illegal practices that affect wildlife such as logging and overfishing.
- Improve international cooperation between nations and organisations including sharing of information and sharing of resources
- Improve research into the climate crisis and how biodiversity can better be protected and improved
- Improve knowledge, education and funding into environmentally friendly farming
- Improved donations and aid to those countries most effected by loss of biodiversity

Bibliography

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Upcoming COP conference (Nov, 2024) https://unfccc.int/cop29

Most recent COP conference https://unfccc.int/cop28