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Conservation of Natural Resources to address Climate Change and International Solidarity

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ABSTRACT: The consequences of the phenomenon of climate change are presently being experienced on a global scale. The environmental concern of climate change is having far-reaching consequences that affect all aspects of life, including shelter, livelihood, and global harmony. Presently, adaptation to the impacts of climate change is an imperative for millions of the most impoverished people on the planet. The increased frequency of natural disasters, including but not limited to drought, intense storms, glacial outbursts, and flooding, is placing a greater burden on the most vulnerable population, particularly the impoverished, who are striving to improve their standard of living. Biosphere Reserves, Hotspots, and Hope Spots safeguard the environment and natural resources on an international scale. The special report on climate change and land, published by the Intergovernmental Panel on Climate Change (IPCC) in August 2019, reveals the correlation between climate change and land-use patterns while emphasising the impact of land-related activities on global warming. The purpose of this paper is to examine the connections between international solidarity and the environmental damage caused by the protection of natural resources on a global scale. The paper additionally examines the measures implemented by global organizations and associations to mitigate the impacts of climate change and preserve the natural resources that have been degraded as a result of this phenomenon. The paper additionally proposes strategies for mitigating climate-related issues and conserving natural resources across multiple scales.

KEYWORDS: - Climate Change, Biosphere Reserve, Biodiversity Hotspots; Hope spots, COVID 19 and Green Recovery, International Solidarity

I. INTRODUCTION

Land-based carbon sinks are not limitless, according to the IPCC's Special Report on Climate Change and Land (August 2019). The report highlights the vulnerability of any sequestration gains to "future loss (or sink reversal) precipitated by unsettling influences such as fire, flood, drought, or future poor management." Global warming has been substantially influenced by human activities since 1750, according to the IPCC integrated assessment (IPCC, 2007a). While over the past half-century, most anomalous weather changes, i.e. global warming, have been attributed to human activities (with a greater than 90% probability), this is primarily due to the emission of greenhouse gases caused by the human use of nonrenewable energy sources. The facts of global warming were unequivocally established in the fourth assessment report of the Intergovernmental Panel on Climate Change (IPCC), which also presented visible indications of climate change in diverse global locations. Scientific investigations, expert assessments, and practitioner observations are congruent with the report's conclusions: the most adverse impacts of climate change will be felt by the most impoverished nations on the planet. (De, M. & Dhote, M (2021) This is because temperate ecosystems are better able to adapt to changes in temperature and other aspects of climate variability, while tropical ecosystems resist such changes more readily. Developing nations will also bear the brunt of climate change's consequences due to their inadequate capacity to defend themselves and confront its consequences. Climate change is overshadowed in these nations by the preponderance of immediate concerns, such as poverty alleviation. (International Conference of Solidarity on Climate Change, 2007)

II. CLIMATE CHANGE AND IMPACT ON HUMAN SETTLEMENTS

Changes in solar input, volcanic emissions, slow-moving continents on shifting tectonic plates, large meteor impacts, and other factors have altered the planet's climate over the past 3.5 billion years. The atmosphere has undergone protracted phases of worldwide cooling and warming over the last 900,000 years. The glacial and interglacial periods refer to these cyclical patterns of cooling and recovering. The primary contributor to the

ongoing anthropogenic climate change is the escalating concentration of greenhouse gases, with carbon dioxide (CO₂) being the most significant.

The following are some of the repercussions of climate change:

- ✓ A gradual increase in sea level; • A rise in global temperature; • Warming ocean water; • Depletion of Greenland and Atlantic ice sheaths; • Thinning of Arctic sea ice; • Glacial melting; • Ocean acidification; • Coral mortality; • Seasonal variations in severity; • An increase in the frequency and intensity of climatic hazards.

III. MAJOR MILESTONES IN ADDRESSING CLIMATE CONCERNS AT THE INTERNATIONAL LEVEL

Table 1: International Initiatives at Global level

Initiative	Description
1) Brundtland Commission report, 1987 – Our Common Future	The report provided a thorough analysis of environmental pollution concerns, including ozone layer depletion, biodiversity loss, and rising greenhouse gas concentrations. It advocated for the development of effective socioeconomic policies to achieve sustainability.
2) Rio Declaration on Environment and Development, 1992	It reaffirmed the declaration adopted at the United Nations Conference on the Human Environment in Stockholm on June 16, 1972. Agenda 21, an initiative of this conference, is alternatively referred to as the Earth Summit. The establishment of the United Nations Framework Convention on Climate Change (UNFCCC) was precipitated by the Earth Summit.
3) UNFCCC	The 1992 Earth Summit in Rio de Janeiro witnessed the adoption of the United Nations Framework Convention on Climate Change. 192 countries have ratified this treaty. It does not establish legally enforceable objectives for countries to reduce their emissions. Annual conferences of the parties to the convention have been known as conferences of parties (COP) since 1995.
4) Kyoto Protocol	The treaty was officially ratified at the Japan COP on December 11, 1997, as part of the UNFCCC procedure. As its name implies, the Kyoto Protocol entered into force in February 2005. In accordance with the protocol, thirty-nine industrialised nations (annexure I nations) pledged to reduce their emissions by 5.2% from 1990 levels by 2012. The protocol established carbon trading mechanisms.
5) IPCC	The United Nations and the World Meteorological Organisation collaborated to establish the Intergovernmental Panel on Climate Change (IPCC). Its inaugural session took place in 1998, with the purpose of deliberating on the scientific uncertainties surrounding climate change. In relation to the magnitude, timing, and regional patterns of climate change, the IPCC has delineated the uncertainties surrounding the climate.
6) Marrakesh Accord	The Marrakesh Accord of 2001 addresses the enhancement of the capabilities of developing country representatives in order to facilitate their efficient engagement with the Kyoto Protocol. It is the duty of developing nations to ascertain their own requirements and to work in tandem with other developing nations to achieve this objective (south-south cooperation).
7) Bali Action Plan	In December 2007, the UNFCCC was convened in Bali. The Bali action plan is a component of the Bali road map; it follows the UNFCCC's new negotiating procedure and aims to be finalized by 2009. Finance, technology, adaptation, and mitigation were the four fundamental components that comprised the Bali action plan.

8) Copenhagen Summit	The 2009 Copenhagen Accord acknowledged the necessity of limiting increases in average temperature to a maximum of 2 degrees Celsius. Also pledged to reduce emissions are non-annexure 1 countries. Further funding increases for developing countries are made possible by the accord.
9) Paris Agreement	As a result of the Durban Conference's multilateral diplomacy and four years of negotiations, the Paris Agreement of 2015 was established. Article 2 of the Paris Agreement stipulates that "by means of strengthening the execution of the Convention."

Source: - Adapted from Block 2, Global Climate – Past, Present and Future, MEV - 021, Introduction to Climate Change, IGNOU, compiled by author

IV. THE IMPACT OF CLIMATE CHANGE ON HABITAT DIVERSITY

The Intergovernmental Panel on Climate Change's Fourth Assessment Report (IPCC 2007a) unequivocally emphasized the prevailing trajectory of climate change. Changes in the quantity and distribution of precipitation, the climatic water balance, and the frequency of extreme events were among the future developments predicted to have profound consequences. The natural heritage that is safeguarded in nature reserves, national parks, biosphere reserves, or other protection categories will be imperiled by the effects of these alterations (IPCC 2007b). European policy has already acknowledged the following: "Within a few decades, climate change could potentially undermine our endeavors to preserve and utilize biodiversity in a sustainable manner." (Anders et al., 2014) The United Nations adopted a set of Sustainable Development Goals (SDG) on September 25, 2015. These goals aim to eradicate poverty, safeguard the environment, and promote universal prosperity. By means of specific targets, each SDG is intended to be accomplished within the subsequent 15 years. (Meggle, 2015)

Interconnections between biodiversity and climate change : A strong correlation exists between climate change and biodiversity. It is anticipated that climate change will be the primary cause of future biodiversity loss, and that it will have severe direct and indirect effects on biodiversity; furthermore, biodiversity loss exacerbates the negative consequences of climate change. Although habitat degradation/destruction and the introduction of invasive alien species to ecosystems are additional causes of biodiversity loss, the impacts of climate change will amplify these threats, which are therefore interconnected with the same issue. (Behera et al., 2018) Similarly, climate change mitigation and biodiversity protection are intricately intertwined and highly cooperative. Adapting to climate change and mitigating its negative effects will require the management and preservation of biodiversity; policies and actions designed to limit the effects of climate change will contribute to biodiversity protection.

Both the Convention on Biological Diversity and the United Nations Framework Convention on Climate Change (UNFCCC) have acknowledged the robust correlation between biodiversity loss and climate change. An Ad Hoc Technical Expert Group (AHTEG) on Biodiversity and Climate Change was established by the CBD in 2001 with the purpose of examining the potential adverse consequences of climate change on biodiversity and determining the contribution of biodiversity to the mitigation of climate change. (Behera et al., 2018). A report issued by the AHTEG at the conclusion of 2009 emphasized the following three key points: 1) Ecosystems and biodiversity that are interconnected are affected by climate change. 2) Climate change mitigation can be aided by biodiversity. 3) Human adaptation to climate change may be facilitated by biodiversity. As a result, Biosphere Reserves, Hotspots, and Hope Spots can contribute to the mitigation of climate change's negative effects on the planet.

Conservation of Biosphere Reserves : A common goal of COP21 was to hold the increase in the global average temperature to well below 2 °C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5 °C above pre-industrial levels; to promote low greenhouse gas emissions development; and to implement adaptation and resilience measures in response to climate change. This was in alignment with the spirit of SDG 13, which urges action to combat climate change and its impacts. The international community acknowledged that combating climate change is a primary challenge of the twenty-first century. The signature of the Paris Agreement by 177 heads of state at the United Nations headquarters in April 2016 was built on the strong political momentum generated in Paris. (Fig 1)



Fig 1: World Network of Biosphere Reserves
Source: - UNESCO Man and the Biosphere Programme

The aforementioned goals constitute the core of the Man and Biosphere Programme (MAB) of UNESCO. Initiated in 1971, the MAB is an Intergovernmental Scientific Programme whose mission is redefined by the MAB strategy for 2015-2025 and the Lima Action Plan for 2016-2025: to establish a scientific foundation for the enhancement of human-environment interactions. The MAB has established 701 "biosphere reserves" comprised of sustainable development and nature conservation zones where it conducts research, builds capacity, and mitigates biodiversity loss. By utilising biosphere reserves that include deserts, glaciers, tropical forests, and mountains, the MAB is able to assess the effects of climate change on an extensive array of natural habitats across 120 countries. (Meggle, 2015)



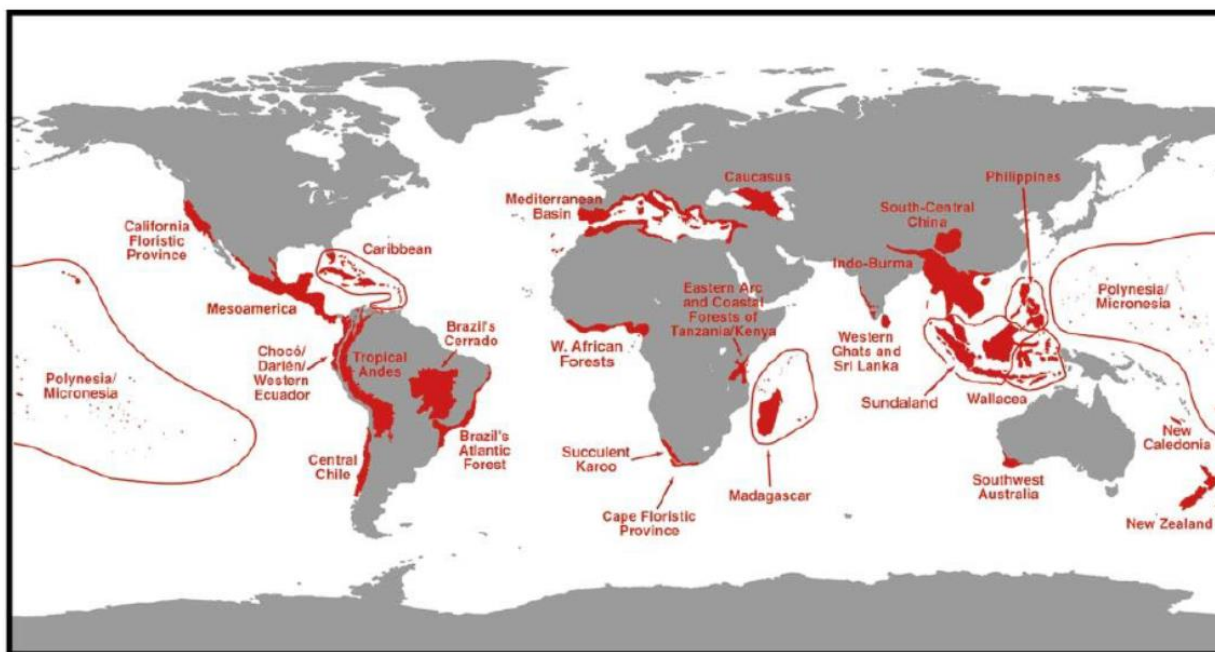
Fig 2: Biosphere Reserves in India
Source: - Biosphere Reserve of India, Maps of India

The establishment of the biosphere reserve is intended to preserve in their natural habitats, in their entirety, all forms of life and their supporting ecosystems. This would enable the reserve to function as a resource system for assessing and monitoring alterations in natural ecosystems. Since the establishment of the initial biosphere reserve in 1979, the global network of biosphere reserves has grown to 610 locations in 117 countries. India is home to a total of eighteen reserves of the biosphere at the present time. (Fig 2) The Biosphere Reserve Programme is administered in accordance with the principles of the UNESCO Man and Biosphere (MAB) programme, which India endorses as a signatory to the landscape approach programme. The Government of India has been operating a programme known as Biosphere Reserve since 1986. This initiative provides financial aid in a 60:40 ratio to other states and a 90:10 ratio to the states of the Northeastern Region and three Himalayan states. The assistance is intended to be used for the development, improvement, and maintenance of specific items. The Central MAB Committee oversees and grants approval to the Management Action Plan formulated by the State Government.

V. BIODIVERSITY HOTSPOTS AND THEIR CONSERVATION

In addition to ecosystem services, biodiversity is necessary for the provision of direct benefits to humanity from nature. In contrast, the loss of biodiversity is accelerating due to anthropogenic activities and the adverse effects of climate change. There are numerous indications that all three components of biodiversity—ecosystems, species, and genes—are experiencing an ongoing decline. A total of 35 global biodiversity regions have been designated for conservation purposes, with the dual purpose of ensuring the protection of the species and ensuring continuous ecosystem services. Threatened with extinction is exclusively a biogeographic region containing substantial quantities of biodiversity. In addition to its rich endemism, the tropical island of Andaman and Nicobar is a component of a global biodiversity hotspot due to its abundant flora and fauna. (Jaisankar et al., 2018)

Biodiversity hotspots have been designated as expansive areas that harbour remarkable concentrations of plant endemism and are undergoing rapid rates of habitat degradation on a global scale. At present, thirty-five biodiversity hotspots have been identified, with tropical forests constituting the majority of these areas. Notwithstanding their small land area of 2.3% of the planet, these regions harbour an estimated 42% of all terrestrial vertebrates and 50% of the world's endemic plant species. In addition to being severely threatened by



extinctions caused by climate change, hotspots have lost an estimated 86% of their original habitat. (Jaisankar et al., 2018)

Fig 3: Biodiversity hotspots of the world

Source: Hotspots - An introduction and role in conservation, Central Island Agricultural Research Institute

India is home to an extensive variety of flora, fauna, and biodiversity. India ranks among the world's twelve most mega-diverse nations. The Eastern Himalayas and Western Ghats, two of India's most populous mountain ranges, have been named to the list of eighteen biodiversity "hotspots" worldwide. The plant kingdom of India is home to an estimated 15,000 species of vegetation. Alongside the magnificent fauna, the forests are densely forested with vegetation. (Fig 3) The evergreen forests found in the north-east and along the Western Ghats, the moist and dry deciduous forests found in the plains, the swampy marshes of Bengal and Madhya Pradesh, the pinewoods situated in the Himalayan foothills, and the estuaries and lagoons in the south, each provide habitat for distinct species of flora and fauna. India harbours a variety of renowned large mammals, such as the Asian Elephant, Bengal Tiger, Asiatic Lion, Leopard, and Indian Rhinoceros, which are frequently associated with deities in cultural and religious contexts. A significant assortment of flora and fauna inhabits each of the four biodiversity centres. The Western Ghats, the Himalayas, Burma, and Sri Lanka are them. (Fig 4)

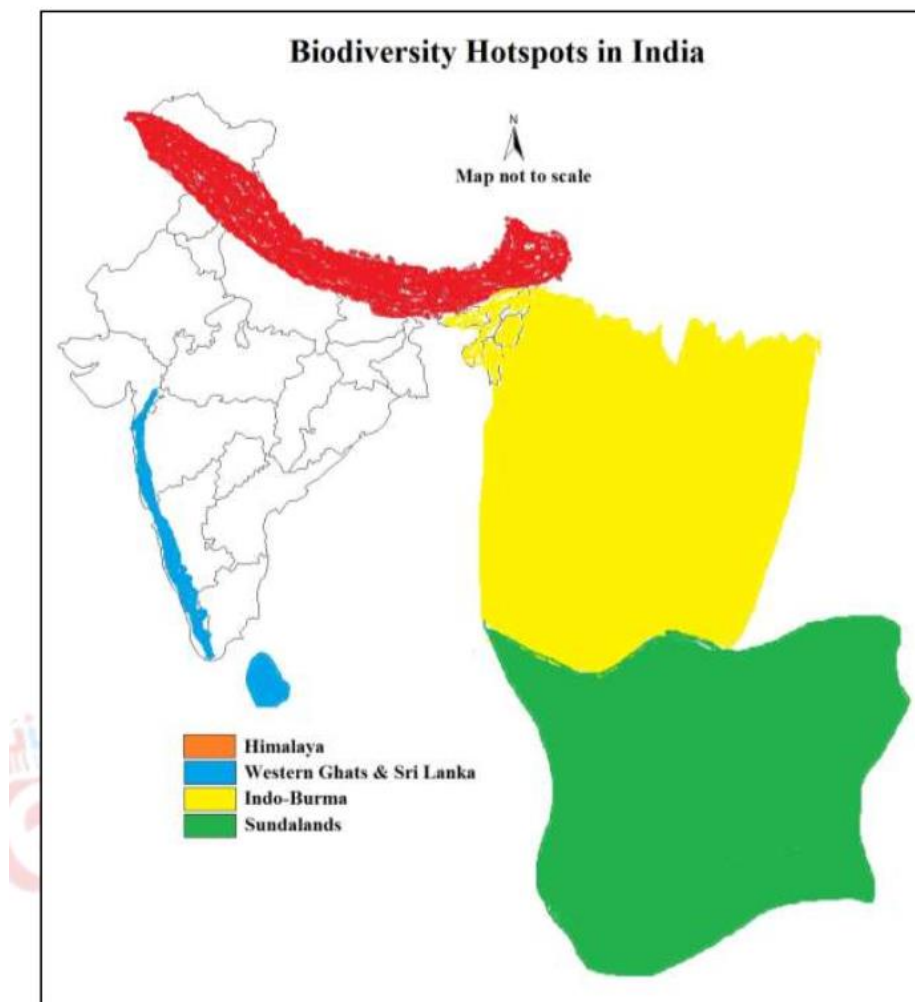


Fig 4: Biodiversity hotspots of India

Source: - EG-10, Biodiversity Hotspots and Hope Spots, Environmental Geography

Conservation of Biodiversity Hotspots : Conservation of biological diversity is now critical to the survival of humanity, as the rate of extinction of flora, fauna, and other species has risen steadily over the past few decades, including in India. In order to ensure the sustainability of food chains, the preservation of biological diversity ensures the preservation of vital ecological diversity. It is possible to conserve the genetic diversity of flora and animals. It guarantees that life support systems on Earth are utilised in a sustainable manner. It offers the scientific community an extensive repository of knowledge that may prove useful. By preserving a reservoir of wild flora and animals, it is possible to introduce them to the environment if necessary. Recreation and tourism are two applications of the immediate societal benefits of biological diversity. Conservation of biodiversity functions as a future-oriented insurance policy. (Jaisankar et al., 2018)

There are numerous pressures on the ecosystems of India and the tropical islands, including forests, grasslands, wetlands, mountains, deserts, and marine environments. Depletion of vegetative cover as a result of urbanisation and climate change has been a significant contributor to the decline in biological diversity. Mining and development initiatives in areas with abundant biodiversity, which are also prime locations for water impoundment and contain the greatest mineral wealth, have frequently resulted in habitat devastation. Biological diversity has been negatively impacted by poaching and the illicit traffic of wildlife products as well. (Jaisankar et al., 2018)

The biodiversity hotspots are tasked with the management of several significant threats to biodiversity, which are as follows:

- Preserving habitat is crucial for the survival of the biodiversity that inhabits it. Huge pressure from the exponential growth of the global population.
- Global climate change occurs when a modification in a biotic component of ecosystems induces biotic change.
- Habitat fragmentation occurs when human activities diminish the capacity of a habitat to sustain species.
- Introduction of detrimental chemicals and nutrient overloading with nitrate fertilizer are examples of pollutant release.
- Overexploitation encompasses activities such as illicit wildlife trade, excessive fishing, and the felling of tropical hardwoods, among others.
- Disease transmission is facilitated by habitat reductions that result in high population densities.

VI. HOPE SPOTS AND INTERNATIONAL SOLIDARITY

Scientifically designated as "Hope Spots" are locations of exceptional ecological significance that are vital to the ocean's health. The International Union for the Conservation of Nature (IUCN) and Mission Blue, an organisation dedicated to the study of oceans, bestowed this honour. In contrast to the 12% protection level of land, which is significantly higher than the 6% protection level of the ocean, Dr. Sylvia Earle introduced the notion of a "Hope Spot." In contrast to existing marine protected areas (MPAs), which function similarly to terrestrial national parks in that they impose limitations on exploitative activities such as deep-sea mining and fisheries, Hope Spots enable us to strategize for the future. Hope Spots can be extant MPAs where additional action is required, or they can be regions that require new protection. A site that inspires hope may be nominated by any individual as a momentous location. The primary goal is to spark a worldwide surge of community solidarity for ocean conservation that policymakers and leaders cannot disregard when we come together in solidarity.

They can be large, they can be small, but they all provide hope due to (Mission Blue).

- The presence of an exceptional abundance or diversity of species, habitats, or ecosystems that are unusual or representative of species
- Rare, endangered, or endemic species populations
- A location capable of mitigating the detrimental effects of human activities
- The presence of natural processes such as significant migration corridors or spawning grounds
- Significant historical, cultural, or spiritual values
- Economic importance to the community.

Hope spots in the world : As an initial enquiry, one might contemplate the necessity of identifying "hope spots" for the purpose of conserving and managing marine life in an ocean of such immense size. Humans have historically considered the ocean's natural resources to be infinite, which is where the solution can be found. During the 20th century, factory trawlers replaced artisan fishing by simultaneously harvesting thousands of pounds of marine life. The consequences of industrial trawling became readily apparent in recent decades. (Pathshala, Biodiversity Hopespot) According to the United Nations, sixty percent of the world's most significant marine ecosystems have undergone degradation or are being utilised in an unsustainable manner. In comparison to historical averages, Pacific blue fin tuna populations have decreased by more than 97 percent. We are both depleting the oceans beyond their capacity to sustain human interests and desires, and we are discharged with an excessive amount of waste into it. In order to substantially enhance the standard of marine protection deemed essential for a sustainable future, Mission Blue and IUCN unveiled 31 additional Mission Blue Hope Spots Marine Protected Areas worldwide during the 3rd International Marine Protected Areas Congress (IMPAC 3), 2013. As of September 9, 2016, 76 Hope Spots have been established across the globe. Three nominations have been deferred in addition to the twenty-two nominations presently being evaluated for Hope Spots. (Fig 5)

Hope spots include the following: a) the Coral Triangle in the Indo-Pacific; b) the Sargasso Sea in the Atlantic Ocean; c) the Abrolhos region in the Atlantic; and d) Malpelo Island, among others.

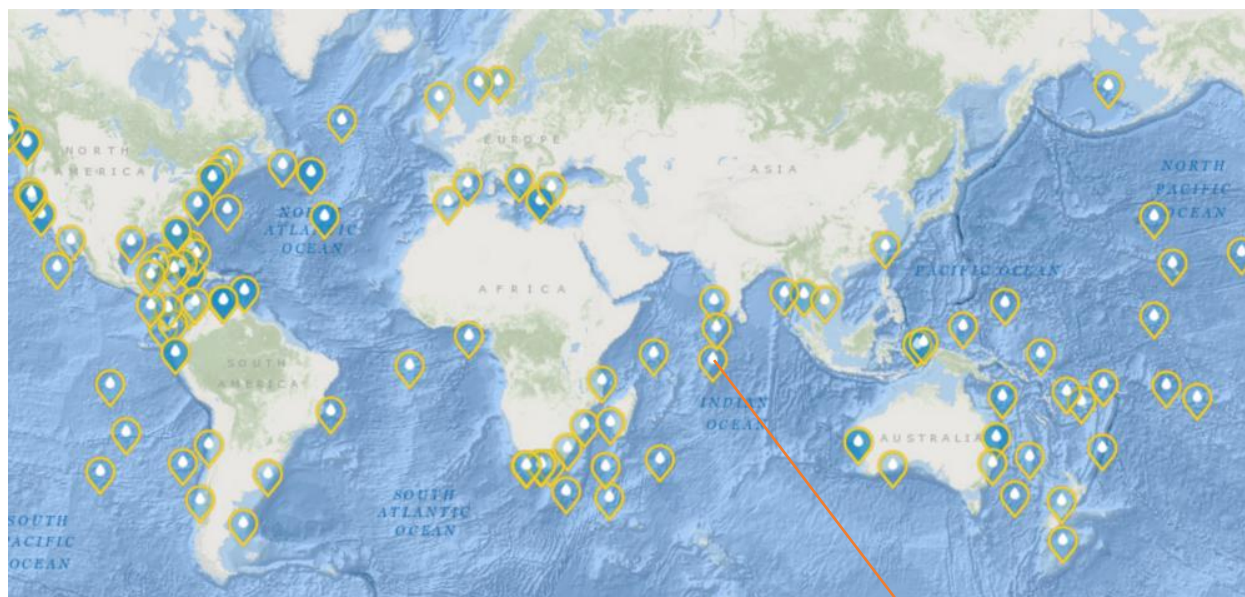


Fig 5: Biodiversity Hope spots of World

Andaman and Nicobar Islands, Lakshadweep Islands

Source: - EG-10, Biodiversity Hotspots and Hope Spots, Environmental Geography

Hope Spots in India : "Hope spots" are the Andaman and Nicobar Islands and Lakshadweep Islands, according to the International Union for Conservation of Nature (IUCN) and Mission Blue, an ocean research organisation. Being the first locations in India to be included on the list, these two groupings of islands are renowned for their exceptional marine biodiversity. With 556 islets, the Andaman and Nicobar contain distinct flora and fauna. With 86% of the islands covered in primary tropical rainforests, the Andaman and Nicobar Islands are home to some of the most diverse species of flora and fauna. One-third or more of the more than 2,000 plant species that flourish on the islands are unique and do not occur on the Indian mainland. On these two islands, there are approximately 270 species and subspecies of birds, of which 106 are considered endemic. The State Bird, State Tree, and State Animal designations have been bestowed upon the Andaman Woodpigeon, Andaman Padauk, and Dugong, accordingly. The islands contain as much as one biosphere reserve, nine national parks, and 96 wildlife sanctuaries. The Andaman and Nicobar Islands have been dubbed a "hope spot" due to the presence of extraordinary flora and fauna from around the globe. Preserving the coral reefs in Lakshadweep is imperative due to their extreme sensitivity to the marine environment. IUCN has designated these regions as areas of hope for the reasons. Unique flora and fauna that contribute to the aesthetic appeal of this archipelago reside in Lakshadweep. Despite this, the scant research conducted in these waters suggests that these ecosystems may constitute the most diverse marine environments in the nation. Among the most expansive and possibly least disturbed mangrove forests in India are those found in the Andaman Islands. The highly endangered dugong inhabits the expansive sea grass meadows in the north, which may be the most viable location in the subcontinent to preserve the species.

VII. CONTEMPORARY ISSUES

Climate change continues to be a significant concern. Prior to a few years ago, the climate youth movement and a sense of urgency dominated news headlines. COVID-19, however, has diverted that interest and consciousness. Indeed, both crises are characterized by shared causes and are experiencing converging effects. Both the climate emergency and the zoonotic disease COVID-19 are the result of environmental degradation caused by human activity. The climate emergency and the zoonotic pandemic were both unanticipated occurrences. (Lancet, 2021) By means of delayed, inadequate, or erroneous actions, both have resulted in avoidable loss of life. Conversely, by harmonizing reactions, a prospect arises to enhance public health, establish a sustainable economic trajectory, and more effectively safeguard the planet's scarce natural resources and biodiversity. It is generally acknowledged that health and climate change are intricately linked, and there is substantial evidence to support this. Over forty global indicators measuring the health consequences of climate change have been monitored and reported by the Lancet Countdown on Health and Climate Change for the past

five years. The 2020 report, encompasses innovative metrics pertaining to mortality caused by heat, population displacement and migration, the impact of extreme heat on labour capacity, urban natural spaces, and low-carbon diets. Scientific knowledge regarding the impact of climate on health and the strain it places on health systems has been significantly expanded by the scope of indicators. (Lancet, 2021) Preventing the resurgence of zoonotic diseases, which are facilitated by human encroachment into wildlife habitats, international trade of exotic animals, and intensive farming, would be possible by addressing the drivers of climate change. These factors collectively increase the probability of human-zoonotic disease contact. The proliferation of zoonotic diseases into the human population is facilitated by increased urbanization and international travel, which results in a greater population density. Additionally, these environmental determinants of health play a significant influence in climate change. (Lancet, 2021) The poorest and most marginalized members of society, including migrant and refugee communities, are invariably the most susceptible to disruptions, as both COVID-19 and the climate crisis have clarified. Extremely affected regions have historically made minimal contributions to the underlying causes of climate change crises. Every indicator in the 2020 Countdown report by Lancet demonstrates a deteriorating trend, indicating that no nation is impervious to preventable loss of life due to widening inequalities.

VIII. RECOMMENDATIONS

Political indifference and the imperative to address the immediate challenges posed by COVID-19 have resulted in climate issues declining in prominence on the global agenda. (De, M. & Dhote, M, 2022) Taking advantage of the opportunity to refocus attention towards sustainability five years after the Paris Agreement would also safeguard our planet's systems, environment, and future health. As nations initiate economic recovery strategies in the aftermath of the COVID-19 pandemic, justifiable attention is being devoted to a green recovery that addresses climate change and equity. An urgent worldwide shift towards sustainable energy sources is required to break free from the suffocation of fossil fuels. Presently, decisions must address both crises concurrently to guarantee the most efficacious response to each. In light of shifting climatic conditions, it is advisable to identify potential hazards arising from land use and climate change in order to safeguard ecosystems, habitats, species, and the benefits they provide to society (Anders et al., 2014).

- Develop a model to assess the potential consequences of regional climate change on protected areas.
- Assess the current state of management practices.
- Develop a collection of indicators that accurately represent the impacts of climate change at the local scale.
- Formulate monitoring principles using ground truthing and earth observation data.
- Evaluate the vulnerability of habitats to potential impacts
- Conduct an analysis of the current legal framework governing adaptive management in protected areas.
- Modify management plans, strategies, and metrics pertaining to protected areas in response to the impacts of climate change.
- Encourage public awareness of the policy, stakeholders, and the need for adaptive management, in addition to putting the findings into practice with the assistance of local experts.
- Establish national and transnational guidelines for the adaptation of protected areas to climate change.

IX. CONCLUSION

The Emissions Gap Report 2020, published by the United Nations Environment Programme (UNEP) on December 9th, 2020, indicates that notwithstanding a temporary decrease in worldwide carbon dioxide emissions due to the coronavirus pandemic, the Earth continues to be on course for a temperature increase exceeding 3 degrees Celsius by the end of this century. As part of the recovery from COVID-19, the report emphasised the critical nature of immediate investments in climate action to bring the global community closer to the Paris Agreement's target of a maximum temperature increase of 2 degrees Celsius. A genuinely environmentally sustainable recovery from the pandemic has the potential to significantly reduce greenhouse gas emissions and decelerate the rate of climate change. (Green Recovery' from COVID-19, UN Environment Report)

According to the report, the green recovery could reduce anticipated emissions in 2030 by as much as 25% and increase the likelihood of limiting temperature increases to below 2% Celsius by as much as 66%. Prioritize initiatives that support infrastructure and technologies with zero emissions, reduce subsidies for fossil fuels, halt the construction of new coal plants, and promote nature-based solutions, including large-scale landscape restoration and reforestation. Additionally, the report identifies as a "significant and encouraging development" the increasing number of nations committing to net-zero emissions by mid-century. As of now, 126 nations, accounting for 51% of global greenhouse gas emissions, have adopted, announced, or are contemplating a net-zero pledge. Fuel efficiency can be increased through advancements in shipping and aviation operations and

technology, according to the report. In addition, as demand rises, these sectors must accelerate their transition away from fossil fuels in order to attain complete reductions in carbon dioxide emissions. Additionally, the report validated that the aggregate emissions of the wealthiest one percent of the world's population are over twofold greater than those of the impoverished fifty percent. In accordance with the targets set forth in the Paris Agreement, the highest stratum must decrease their combined environmental impact by a factor of thirty. Hence, modifications in global consumption patterns—particularly among the private sector and individuals—could bolster efforts to combat climate change. These modifications could take the form of substituting short-haul domestic flights with rail travel, encouraging car-sharing and cycling, enhancing the energy efficiency of housing, and minimizing food waste. In summary, this discourse on natural resources and international solidarity can contribute to the mitigation of climate change's adverse effects.

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