



IMPACT OF DEFORESTATION ON ANIMALS' PROTECTION: AN ANALYSIS IN LIGHT OF SUSTAINABLE DEVELOPMENT GOALS, INDIA'S G20 OBJECTIVES & BEYOND

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Abstract

Human beings are considered as the most developed species on the planet. Though all the species, zoological or botanical along with environment constitutes ecological system. The sustainable development depends on the right balance between all which invisible in this era of technological advancement and population explosion. On one side deforestation and on the other mining and industrialisation may be blamed for the same. More population needs more dwelling and more agriculture production, failure of the same results consumption of animals which creates conflicts between humans and animals, the one which is one of the main consequences of deforestation too. Consequently, the wild animals have little option but to infiltrate 'human settlements' in quest of food and to migrate since people are robbing them of more and more of their natural environment. This has led to an increase in fatalities, including those of humans as well as animals. Shifting agriculture, rotational felling, other biotic pressures, diverting forest areas for development purposes, etc. are the primary causes cited for the decline in forest cover. The country's microclimate, hydrological cycle, soil quality, biodiversity, etc. have all been harmed by on-going illegal tree cutting, making it more susceptible to any untoward incident. The country, India, offers a diverse ecosystem that includes magnificent tigers, elephants, and birds after thousands of the years of evolution. Unfortunately, deforestation, a problem that is only becoming worse, poses a threat to this irreplaceable natural resource. Wild animals require proper habitat or places where they may live in peace and comfort. These are the places they go to relax, sleep, eat, procreate, hide, and flee from predators. Animals lose access to vital supplies and are exposed to new dangers, which have not only resulted in tremendous impact on entire ecological system. Moreover, India has a significant chance to build a legacy of achievement in the face of such pressing issues during its G20 Presidency. Therefore, the paper will be an attempt to thoroughly analyse the problem of deforestation and its social, environmental and legal impact in light of Sustainable Development Goals and India's G20 objectives and also portray probable solutions in form of the suggestions.

Keywords: Constitution, Deforestation, Environment, Forest, G20 Presidency, Human-Animal conflict, Sustainable Development Goals.

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Introduction

Environment, a gift of nature, is what sustains life on Earth. It is everything that surrounds us, which is inclusive of both living and non-living objects like water, soil, plants, and animals that can adapt to their environment. It is crucial to both healthy living and the continuation of life on Earth. Different living species call Earth their home, and all living creatures rely on it for things like food, air, and water. Therefore, it is crucial for each one of us to preserve and safeguard our ecosystem. As, not only human beings look up to a safe and cleaner environment but alongside one should not forget that this Planet is home to millions and billions of flora and fauna, respectively.

However, since considerable period of time due to various human activities the environment is adversely deteriorating. One such evil is in the form of Deforestation. Despite how crucial forests are to the ecology and the economy, deforestation has a serious impact on many of our worldwide forests. One of the main contributors to climate change and species extinction is deforestation.

A tree is absolutely vital for the survival of practically the whole ecosystem. Without trees, people could not obtain oxygen to breathe, or shade on a hot day. The leaves and roots of trees also help to clean the air and water, and they also give people work. Generally speaking, the complete removal of trees or other vegetation from land is referred to as deforestation. It may be brought on by both natural calamities like forest fires and human activity like farming or logging. As a result of habitat loss and fragmentation, it has a detrimental effect on a variety of species. Animals experience several effects of deforestation. In addition to many other negative effects, it destroys habitats and raises predatory danger. Deforestation is indeed one of the primary reasons of their extinction.

The advantages of forests, however, go well beyond the fauna that calls them home. By balancing greenhouse gas emissions, improving the quality of the air in our atmosphere, and preventing climate change, they play a critical part in the global carbon cycle. The entire planet suffers as a result of businesses destroying more and more of our forests to create place for agriculture and industry. Every year, deforestation damages our ecosystem, has an influence on human life, and results in the deaths of millions of animals.

The bulk of plants and animals on earth are located in forests, which make about 31% of the planet's geographical area. Eighty percent of the terrestrial biodiversity on the planet is thought to reside in these varied habitats. Rainforests, are home to about 50% of all plant and animal species, have an unusually high species density¹.

There is plethora of reasons behind deforestation such as, in order to make room for farming or livestock grazing, forests are frequently chopped or burnt. As a result of commercial logging, forests are destroyed to make way for development. The main cause of deforestation in developing nations is a competitive global economy, where poorer countries sell their natural resources to pay their debts to wealthy ones. These nations' impoverished use the land for cultivation and subsistence, which puts more strain on the environment as population numbers rise. Forest ecosystems, particularly those in rainforests, can suffer greatly from clear-cutting. Because there are no trees left to hold the soil in place, clear-cut land is considerably more susceptible to soil erosion, which has a detrimental effect on the entire ecosystem.

Deforestation and its Eternal Consequences

Deforestation is a word which can bring turmoil on earth which may be in any form, be it in form of the climatically changes or ecological misbalance or draught or floods etc. The consequences are not limited in term of words still some of the apparent consequences of the deforestation are-

- One of the foremost causes of deforestation is **Loss of Habitat**. When a forest is cleared, wildlife leaves the region. Animals are now compelled to move to new homes by tree coverings. Most species cannot live in their new environments, while a few do. A significant loss of wildlife results from habitat destruction, which has a significant influence on the local animal population.

Therefore, the greatest detrimental effect of deforestation on animals is habitat loss. The main concern facing more than 80% of the world's species, according to the IUCN's red list, is habitat loss brought on by deforestation. For instance, in India, habitat degradation has almost led to the extinction of tigers and lions.²

¹GREENTUMBLE, <https://greentumble.com/how-does-deforestation-affect-animals>(last visited Jul. 2, 2023).

Eur. Chem. Bull. **2023**, 12(Special Issue 10), 4575–4582

²EARTH REMINDER, <https://www.earthreminder.com/how-does-deforestation-affect-wildlife> (last visited Jul. 2, 2023).

- Additionally, deforestation can lead to **animal starvation**. Particularly herbivores are no longer able to obtain food. As more wooded areas are destroyed, fewer plants and trees remain. Sadly, if animals can't locate another food source, they will start to perish. Carnivores and omnivores won't have any food once herbivores begin to perish. Thus, it will result into imbalanced nature cycle.
- **Endangerment or Extinction** is yet another prime result of deforestation. Animals in areas with significant deforestation risk becoming endangered or extinct. The habitats of orangutan, chimpanzee, gorilla, and panda species have been destroyed by illicit logging and unsustainable forestry methods, making them vulnerable to extinction. These creatures could soon be unable to breed, which would cause their extinction.³
- Another consequence is in terms of **Increasing Animal-Human Interaction**. Anytime wildlife and people interact, it might be reason for concern. Animals are often forced to look for new homes as a result of habitat loss brought on by deforestation. Urban areas may experience an influx of wildlife, to which people will likely want to find a method to put an end. Deforestation also makes animals more dispersed and exposed which not only raises the danger of poaching but may also end up severely injuring the general public and affecting day to day activities.
- Also, **Wildfires and droughts** are more likely to occur in areas where there are still trees following destruction. The more trees there are, the more the world will cool off; the fewer trees there are, the hotter the earth will get. Droughts and wildfires are more likely when there are no trees to regulate temperatures. When the area turns desert like, this frequently happens. In these circumstances, animals cannot live and either perishes or make an attempt to elude capture that results in further add up to climate change and global warming detrimental to human health.

In only the preceding ten years, India's forest cover has decreased by more than 1.5 million hectares, according to a new assessment by the World Wildlife Fund (WWF). Wildlife populations are currently battling to live in fragmented and

destroyed habitats as a result of this, which has had a tremendous influence on them.⁴

The Bengal tiger is one of the most conspicuous casualties of deforestation in India. He is a well-known representation of the nation's legacy of wildlife. Sadly, habitat loss and fragmentation brought on by deforestation are the main causes of its population fall in recent years. According to the most recent census data, India now only has a little over 2,200 wild tigers left, down from an estimated 3,600 in 2002.⁵ Due to decades-long continuous poaching for the animal's skin and other body parts, trophy shooting, and drastically limited habitat due to urban growth, the species is now considered endangered.

But the effects of deforestation in India go beyond only harming animals. The climate, water supply, and human populations are all negatively impacted by the removal of trees. As natural carbon sinks, forests naturally gather and store carbon dioxide, a substantial greenhouse gas that contributes to climate change. As a result, deforestation contributes significantly to climate change and global warming. Furthermore, trees are essential for controlling river flow, groundwater recharge, and rainfall patterns. These organic processes could be hampered by deforestation, which can cause water shortages, soil erosion, and other environmental issues.

India is one of the most densely inhabited nations in the world; therefore it is not surprising that land development and human activity are both rising quickly. These are many threatened and desperately needed to be protected endangered species in India. To name a few which requires urgent attention are Bengal Tigers, comprising approximately half of all tigers in the world, with 70% of them living in India. Similarly, there are just 500–650 Asiatic lions remaining in the country, according to the International Union for Conservation of Nature (IUCN), which has listed the species as endangered since 2010. Other such endangered species includes, Snow Leopard. The snow leopard's survival has also been threatened by conflicts with isolated people, as well as by hydropower and mining projects that are reducing the leopard's native habitat. One Horned Rhinoceros, Blackbuck, Lion-tailed Macaque, Kashmiri Red Stag etc. are

³ENVIRONMENT, <https://environment.co/deforestations-effects-on-animals> (last visited Jul. 2, 2023).

⁴REDEARTH, <https://redearth.in/blog/2023/03/22/deforestation-and-wildlife-in-india> (last visited Jul. 2, 2023).

⁵*Id.* At 4.

yet other endangered species largely affected by Deforestation.⁶

A Brief Statistics of Forest Cover and Deforestation

India has 31.3 Mha of natural forest in 2010, covering more than 11% of its total land area. It lost 117 kha of natural forest in 2022, which is equal to 62.9 Mt of CO₂ emissions. Apart from it, India lost 2.19 Mha of tree cover between 2001 and 2022, or 5.6% less tree cover than in 2000, and 1.11 Gt of CO₂ emissions.⁷

According to a survey by UK-based Utility Bidder, India was rated second for the pace of deforestation after losing 668,400 hectares of forest cover in the past 30 years. Brazil and Indonesia came in first and third, with 1,695,700 hectares of deforestation in Brazil and 650,000 hectares in Indonesia, respectively. With a difference of 284,400 hectares in forestry loss between 1990 and 2020, India also topped the list for the largest rise in deforestation. To show the progression of deforestation in 98 countries, the study used data gathered between 1990 and 2000 and from 2015 to 2020 by the online data repository, *Our World In Data*⁸.

Moreover, even though it didn't begin disseminating its biennial State of Forest reports until 1987, the Forest Survey of India (FSI) has been surveying India's forest cover since the early 1980s. According to FSI's 17th biannual assessment of India's forests, which covered the years from 2007 to the present, the country's total land area is made up of around 23–25% of forests and tree cover. Agro-forests are a collective term for land-use systems and technologies where woody perennials (trees, shrubs, palms, bamboos, etc.) are purposefully used on the same land-management units as agricultural crops and/or animals. Of these, 18–19% are designated as natural forests, 2%–3% as protected areas (wildlife sanctuaries), and the remaining 7–15% are classified as other forest types.⁹

The FSI roughly divides the Indian forest cover into four classes: extremely thick forest, moderately dense forest, open forest, and mangrove. The division of the cover into thick and open forests is

based on categorization standards that have been formally approved globally.

Recently, in a written response to a question in the Lok Sabha, Minister of State for Environment, Forests, and Climate Change Shri Ashwini Kumar Choubey stated that since 1987, the India State of Forest Report (ISFR), published by the Forest Survey of India (FSI), Dehradun, and has conducted a biennial assessment of the country's forest cover. According to the most recent ISFR 2021, the country's total forest cover is 7, 13,789 square kilometres, or 21.72% of its total land area.¹⁰ In comparison to the previous assessment, ISFR 2019, the current assessment reveals that the country's total forest cover has increased by 1540 square kilometres, its tree cover by 721 square kilometres, and the total forest and tree cover has increased by 2261 square kilometres at the national level.

According to the written response, States/UTs engage in afforestation and tree-planting initiatives in order to improve ecosystems and enhance the country's forest cover. Under a number of centrally sponsored programmes, such as the Green India Mission, the Ministry offers financial support to States and Union Territories in order to complement and support their efforts. One of the eight Missions listed under the National Action Plan on Climate Change is the National Mission for a Green India (GIM). By engaging in planting initiatives in both forested and non-forested regions, it attempts to conserve, restore, and enhance India's forest cover and combat climate change. The Financial Year 2015–16 saw the beginning of GIM activity. Sixteen States and one union territory have received a total of Rs. 728.21 crores so far for afforestation projects covering a 1, 36,808 acre area¹¹.

According to a report, the National Compensatory Afforestation Fund (CAMPA) are being used by the Ministry of Environment, Forest, and Climate Change to implement the Nagar Van Yojana (NVY), which calls for the construction of 400 Nagar Vans and 200 Nagar Vatika across the nation between 2020 and 2024. The Nagar Van Yojana seeks to increase biological variety and green space in urban and peri-urban regions, as well as to benefit the environment and city residents' quality of life.

⁶EARTH.ORG, <https://earth.org/endangered-species-in-india>(last visited Jul. 5, 2023).

⁷GLOBALFORESTWATCH,<https://www.globalforestwatch.org/dashboards/country/IND/?category=undefined>, (last visited Jul. 4, 2023).

⁸THE HINDU, [https://www.thehindu.com/sci-tech/energy-and-environment/why-it-matter-india-](https://www.thehindu.com/sci-tech/energy-and-environment/why-it-matter-india-Eur. Chem. Bull. 2023, 12(Special Issue 10), 4575–4582)

has-lost-668400-ha-of-forest-cover-in-the-last-30-years/article66645294.ece(last visited Jul. 4, 2023).

⁹*Id.* at 8.

¹⁰PRESS INFORMATION BUREAU, <https://www.pib.gov.in/PressReleaseDetailm.aspx?PRID=1906388> (last visited Jun. 29, 2023).

¹¹*Id.* at 10.

The Ministry has so far given the go-ahead for 270 projects under the Nagar Van Yojana, totalling Rs. 238.64 crores¹².

According to the Compensatory Afforestation Fund Act of 2016 (CAF Act) and CAF Rules of 2018, States and UTs are using the Compensatory Afforestation Fund (CAMPA fund) to carry out compensatory afforestation in accordance with approved Annual Plans of Operations for compensating the loss of forest and tree cover due to the diversion of forest land for development projects. Additionally, area-specific procedures are included to lessen the effects of diverting forest lands, such as the creation of Catchment Area Treatment Plans, Wildlife Conservation Plans, Soil and Moisture Conservation Plans, etc.

The Mahatma Gandhi National Rural Employment Guarantee Scheme, the National Bamboo Mission, the Sub-Mission on Agro forestry, and other programmes and schemes of the line ministry, as well as programmes and schemes of the state government and UT administration through various departments, non-governmental organisations, civil society, corporate bodies, etc., are also involved in afforestation activities.¹³

India's G20 Objectives and Sustainable Development

During 15th leaders submit it was decided that during 2022 Indonesia, 2023 India and in 2024 Brazil will get the presidency of the summit¹⁴. Government has scheduled the G20 Climate and Environment Ministers' Meeting 2023 which will be one of the ministerial events scheduled prior to the G20 Leaders' Summit 2023, which will take place in India in September 2023. The "One Earth, One Family, One Future" theme will be the focus of the G20 summit in 2023, which will be hosted by India. The topic supports the significance of humans, animals, plants, and microorganisms as well as their interconnection on Earth and beyond the universe.¹⁵

Collaborative and inclusive talks have been undertaken throughout the last three ECSWG meetings as well as virtual sessions held in the months of May, June, and July on the three major subject areas highlighted by the Indian Presidency:

1. Slowing down the rate of land degradation, increasing biodiversity, and quickening ecosystem restoration
2. Fostering a blue economy that is resilient to climate change.
3. Circular economy and resource efficiency.

These discussions centred on developing international solutions that may aid in addressing the complex issue of climate change and environmental deterioration.¹⁶ Additionally, 12 foreign organisations have been in attendance at the event to share their knowledge and perspectives. The gathering is inclusive of well-known institutions among these groups, like the World Bank, UNCCD (United Nations Convention to Combat Desertification), and UNDP (United Nations Development Programme).¹⁷

It is well known that India is working to build a shared future for everyone in the world, as it assumes the G20 Presidency, focusing on the LiFE movement and the *Amrit Kaal Programme*, which aims to encourage ecologically responsible behaviour and a sustainable way of life. In this light, India seeks to advance a rule-based order, peace, and equitable progress for everyone with a defined strategy and a development-focused approach.¹⁸

The LiFE movement, which supports ecologically responsible behaviour and is founded on India's sustainable traditions, is introduced as envisioned by PM Modi. Mission LiFE is anticipated to be a massive worldwide movement headed by India that would encourage both individual and group action to safeguard and preserve the environment.¹⁹ Mission LiFE's slogan, "Lifestyle for Environment," links people's capacities for

¹²*Id.* at 11.

¹³PRESS INFORMATION BUREAU, <https://www.pib.gov.in/PressReleaseDetail.aspx?PRID=1906388> (last visited Feb. 4, 2022).

¹⁴PRESSINFORMATIONBUREAU https://mea.gov.in/press-releases.htm?dtl/33229/15th_G20_Leaders_Summit (last visited Dec. 29, 2022)

¹⁵SDGKNOWLEDGEHUB, <https://sdg.iisd.org/events/g20-climate-and-environment-ministers-meeting-2023/#:~:text=The%20G20%20Climate%20and%20Environment,One%20Family%2C%20One%20Future> (last visited Jun. 4, 2023).

¹⁶G20.ORG, <https://www.g20.org/en/media-resources/press-releases/july-2023/ecswg-july> (last visited Jul. 01, 2023).

¹⁷NEWSONAIR, <https://newsonair.com/2023/07/26/4th-ecswg-environment-climate-ministers-meeting-begins-in-chennai> (last visited Jun. 27, 2023).

¹⁸MINISTRY OF EARTH SCIENCES, https://moes.gov.in/g20-india-2023/moes-g20?language_content_entity=en (last visited Jul. 1, 2023).

¹⁹MINT, <https://www.livemint.com/news/india/pm-modi-launches-mission-life-lifestyle-for->

environmental protection and teaches them how to utilise the world more wisely. Mission LIFE makes it possible for everyone to take part in the fight against climate change to the best of their ability by democratising it. It motivates us to take all necessary steps in our daily lives to safeguard the environment. It holds that altering our way of life may help safeguard the environment. Pro Planet People, the P3 model's guiding principle, is strengthened by the mission, which "Mission Life, unites the people of the earth as pro planet people, uniting them all in their thoughts." It operates according to the fundamental tenet "Lifestyle of the planet, for the planet, and by the planet."²⁰ India aims to give the following subjects top priority during its G20 Presidency²¹:

- 1) Sustainable development, climate finance, and LIFE
- 2) Growth that is accelerated, inclusive, and resilient
- 3) Quickening SDG Progress
- 4) Digital Public Infrastructure and Technological Change
- 5) 21st-century multilateral institutions
- 6) Development headed by women

With the Sustainable Development Goals (SDGs) that must be achieved by 2030 as a backdrop, the topics of sustainable growth and inclusion is a priority area. In the context of a changing climate, forest and brush fires are widespread which often leads to massive deforestation. Viz., devastating fire incidents have occurred in Australia, Indonesia, and the Brazilian Amazonian forests. These were brought about by factors including warming temperatures, the impact of El Nino, and human land use changes. Around 20% of India's forests are vulnerable to flames, according to the Forest Survey of India's State of Forests Report 2021, which suggests the scale of international climate cooperation under Indian leadership. As small drops create the great ocean, each and every initiative is important for SDG13 (climate action) and SDG15 (life on land).²²

While deliberating upon *G20 High Level Principles on Harnessing Data for Development (D4D) to*

environment-11666254588768.html (last visited Jul. 1, 2023).

²⁰*Id* at 18.

²¹MINT, <https://www.livemint.com/news/india/g20-summit-in-india-green-development-climate-finance-among-key-issues-on-agenda-11693366003308.html> (last visited Jul. 1, 2023).

²²*Id* at 20.

Accelerate Progress on the SDGs, at Varanasi, Uttar Pradesh on 12 June 2023, the panel pledge to recognise, reduce, and mitigate the potential environmental impact of investments in data infrastructure, especially at the national level, due to land use, energy use, GHG emissions, water use, deforestation, habitat loss, etc. by implementing circular economy approaches to the design, development, deployment, and use of devices and infrastructure required for the production, processing, transmission, and storage of relevant data while taking into account the significance of apps²³.

In addition to it, forest conservation is strategically important to the G20. According to the Food and Agriculture Organisation of the United Nations, eight of the G20 nations have the top 10 greatest forest areas. The G20 made a commitment in 2021 to stop and reverse biodiversity loss by 2030.²⁴

At COP26, 17 G20 nations signed the 2021 Glasgow Leaders' Declaration on Forests and Land Use as a statement of their resolve to stop and reverse forest loss and advance food security while protecting forests. However, the G20 still has to do more to solidify this commitment. In one of the most recent G20 announcements from Rome (2021) and Riyadh (2020) considering the pivotal role in ecology the word "forest" was specifically used. It will be possible to strengthen the G20's commitment to fully using forests' potential for food security, climate mitigation, and resilient pandemic recovery during the forthcoming G20 Summit in Indonesia in October 2022.²⁵ On similar patterns, this year Indian Presidency of G20 will foster environmental care with special reference to forest conservation and animal protection.

The whole wording, which was approved by every G20 delegation present at the Chennai G20 Environment and Climate Ministers' Meeting, is contained in an Outcome Document. It reaffirms the significance of achieving the goals of the three Rio Conventions and urges us to urgently speed up our responses to environmental crises and challenges, such as climate change, biodiversity loss, pollution, desertification, deforestation, in this

²³G20.ORG, https://www.g20.org/content/dam/gtwenty/gtwenty_new/document/G20%202023%20Action%20Plan%20for%20SDG.pdf (last visited Jun. 30, 2023).

²⁴WORLD RESOURCES INSTITUTE, <https://www.wri.org/insights/6-ways-g20-can-maximize-role-forests-climate-action> (last visited Jun. 20, 2023).

²⁵*Id* at 23.

regard. They also acknowledged that the destruction of peatlands, mangroves, coral reefs, grasslands, forests, and other ecosystems contributes to climate change, biodiversity loss, and land degradation. They agreed to step up efforts to protect, conserve, sustainably use, and sustainably manage all ecosystems. To achieve land degradation neutrality by 2030, it is also necessary to stop and reverse biodiversity loss, fight deforestation, desertification, land degradation, and drought, as well as restore damaged land.²⁶

Various others Governmental Measures to address the Issue

In order to preserve the forest resources, the Indian government has consistently made major efforts. In addition to taking steps to preserve the country's current forest cover; they have also started a number of initiatives to expand its forest and tree cover. In India, the sustainable management of the country's forest resources is under the combined jurisdiction of the National and State governments. To preserve India's forest cover, several measures, regulations, and laws have been introduced and put into effect. To name a few the government has come up with The Indian Forest Act, 1927, Forest Conservation Act, 1980, Wildlife Protection Act, 1972, steps by the Indian government to guarantee compensatory afforestation, crucial environmental safeguards, sustainable use, maintenance, restoration, and development of forest areas was the formation of the National Forest Policy. Apart from it, The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, The Ministry of Environment, Forests, and Climate Change has also created Forest Survey of India (FSI), a group whose main task is to gather and assess the nation's forest riches through a survey of all forest areas across the country. The Government of India established another council in 2009 called the Compensatory Afforestation Fund Management and Planning Authority (CAMPA) as a National Advisory Council under the leadership of the Union Minister of Environment, Forests, and Climate Change for the purpose of overseeing, providing technical support for, and assessing compensatory afforestation activities. In order to make up for forest land that was diverted to non-forest uses, this was specifically designed to encourage afforestation and regeneration operations.²⁷

The Government of India also launched a number of other missions and programmes, including the National Mission for a Green India (NMGI) and the National Afforestation Programme (NAP). The primary goals of the NMGI were to restore the quality of five million hectares of degraded forests and to cover an additional five million hectares of non-forested land with trees through social and farm forestry. On the other side, the NAP was started with the intention of developing the forest resources with the help of the populace, with an emphasis on enhancing the life of the communities living along the forest border, particularly the underprivileged.²⁸

Conclusion & Future Perspective

The human populations along with wildlife conservation, whose means of subsistence, depend on forests are likewise impacted by deforestation. For many indigenous and tribal tribes, India's forests constitute a key source of food, medicine, and other resources. When forests are lost or destroyed, these people lose access to these resources as well as their traditional knowledge and ways of life in the similar manner as animals lose their habitat and shed.

Given the extensive impacts of deforestation in India, immediate action is must to protect the forests and wildlife. Governments, businesses, and civil society organisations must all collaborate on this. As a responsible resort, everyone must be committed to minimising the impact on the environment and promoting sustainable practises. This may include using renewable energy sources, cut down on waste and pollution, and support local conservation initiatives.

For the development and preservation of a community, it is believed that sustainable tourism may be a powerful tool. By promoting ethical tourism, one can support the local economy and population while simultaneously protecting India's natural heritage by protecting its wildlife and natural ecology. It is noteworthy that deforestation and the extinction of wildlife in India are serious environmental issues that require immediate attention. In addition to the extinction of wildlife and trees, deforestation has an impact on human populations, water resources, the environment, and the climate. Forests provide a vast array of purposes and have enormous value. The effects of

²⁶G20.ORG,[https://www.g20.org/content/dam/gtwenty/gtwenty_new/document/ECMM%20Outcome%20document%20and%20Chair%20Summary%20\(July%2028\)%20FINAL.pdf](https://www.g20.org/content/dam/gtwenty/gtwenty_new/document/ECMM%20Outcome%20document%20and%20Chair%20Summary%20(July%2028)%20FINAL.pdf)(last visited Jul. 1, 2023).

²⁷G20.ORG,[https://www.g20.org/content/dam/gtwenty/gtwenty_new/document/ECMM%20Outcome%20document%20and%20Chair%20Summary%20\(July%2028\)%20FINAL.pdf](https://www.g20.org/content/dam/gtwenty/gtwenty_new/document/ECMM%20Outcome%20document%20and%20Chair%20Summary%20(July%2028)%20FINAL.pdf) (last visited Jul. 4, 2023).

²⁸*Id.* at 26.

deforestation are quite widespread and affect the entire forest community. The lack of adequate and accurate data is a key barrier to understanding the actual effects of desertification on forests.

Deforestation is a significant environmental issue that has existed in the past and is becoming worse right now. In order to stop the upsetting impacts of deforestation in the near future, it is urgently necessary to concentrate on mitigating measures. The techniques used to address the issue of deforestation should be based on what is causing it in the first place. Additionally, successful implementation of deforestation mitigation techniques necessitates acknowledging the responsibilities of national, state, and local governments as well as the proactive actions of civil society and private society.

By increasing the agricultural and forestry outputs for the shifting farmers, alternatives to slash-and-burn agriculture can be used as a technique to reduce deforestation. The sustainable alternatives to slash-and-burn farming will help the underprivileged farmers improve their standard of living without damaging more trees. The sustainability of shifting cultivation systems will be aided by public policies and legislation that provide better security, accessibility to the minimal inputs needed to maintain or improve food production, and a chance for the growers to market their produce. Agro-pastoral production methods, sustainable logging, and sustainable agro forestry are some more tactics that may be used to reduce the pace of deforestation.²⁹

The strain on forests for housing and other land uses has increased as a result of the ongoing rise in human population, especially in emerging nations. Reducing the pace of population expansion is essential to stopping the practise of deforestation.

Apart from what government may do for the aforesaid cause, one may support initiatives to reduce deforestation at home and at work by adopting minimal measures too. Few such strategies to lessen or stop deforestation which may be carried at individual level with minimum efforts may include reducing your use of paper and embracing paperless theme at work. This may comprise refusing to printing emails and documents and rather choosing to transmit them online. Buying recycled wood and paper items must be considered

by general public. Also, whenever it is possible, one may plant trees. This may be in neighbourhood or at work or schools, or as a mandatory part of festivals, etc.

Moreover, Products that are dedicated to eliminating deforestation should be supported. One must also inform others about deforestation, its long lasting impact on the environment, human beings and animals and speak out against it. One such target group may be youth of India that can spread awareness in this regard. It is also necessary to sensitize people around as education plays a vital role and may help the wildlife impacted by deforestation at a large scale. Apart from it, Environmental Science should not only be a theoretical subject at school or colleges but must be of some substantial practical skill adding. People must be aware of their fundamental duties too, which will embrace their appreciation towards the environment and living creatures. One should not forget that all have common amongst them is the planet Earth, which is more important for animals that are responsible for LiFE.

²⁹INTECHOPEN,
<https://www.intechopen.com/chapters/66710>(last visited Jul. 4, 2023).