



OPINION ARTICLE



Effects and Causes of Deforestation and Forest Degradation

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Description

Deforestation, commonly referred to as forest clearance, is the removal of a forest or tree stand from a piece of land before it is used for something else. When forestland is used for urban, agricultural, or livestock purposes, it may result in deforestation. The highest rate of deforestation is found in tropical rainforests. Nowadays, trees cover 31% of the planet's land surface. One-third of the forest cover that existed before agriculture was developed has been lost, with the previous century accounting for half of that loss. Deforestation is defined by the Food and Agricultural Organization of the United Nations as the conversion of forest land to other uses. Deforestation is different from "forest area net change," which is the total of all forest losses and gains over a certain time period. So, depending on whether gains outweigh losses or vice versa, net change can be either positive or negative. Lack of replanting after tree removal has damaged habitats, reduced biodiversity, and increased aridity. According to current conditions and the fossil record from the past, deforestation results in extinction, climatic shifts, desertification, and population displacement. Moreover, the biosequestration of atmospheric carbon dioxide is decreased due to deforestation, increasing the negative feedback loops that contribute to global warming. By converting forests to agriculture and generally decreasing the amount of arable land available, global warming also increases the burden on people who want food security. Significant environmental consequences, such as harmful soil erosion and transformation into wasteland, are frequently experienced in deforested areas [1].

Biodiversity is linked to the resilience of human food systems and their capacity to adapt to future change, including dryland-adapted shrub and tree species that aid in the fight against desertification, insects that live in forests, bat and bird species that pollinate crops, trees with extensive root systems in mountain ecosystems that prevent soil erosion, and mangrove species that

provide resilience against flooding in coastal areas. The significance of trees in absorbing and storing carbon and reducing climate change is crucial for the agriculture sector as climate change increases the hazards to food systems [2,3].

Causes: Agriculture is the primary direct source of deforestation, according to the secretariat of the United Nations Framework Convention on Climate Change. 48% of deforestation is caused by subsistence farming, 32% by commercial agriculture, 14% by logging, and 5% by the removal of wood for fuel [4]. Some contend that because they have no other options, the poor are more prone to clear forest, while others contend that they are unable to pay for the supplies and labour required. Additional factors that contribute to current deforestation include urbanisation, inequality in income and power, population increase, and corrupt political institutions. There has been debate over how population increase affects deforestation. According to one study, population growth brought on by high birth rates accounted for just 8% of occurrences of tropical deforestation. The United Nations Food and Agriculture Organization found in 2000, stated that deforestation can be caused by "a combination of population pressure and stagnant economic, social, and technological conditions" and that "the role of population dynamics in a local setting may vary from decisive to negligible." Although there are instances when the effects of globalisation have facilitated localised forest regeneration, globalisation is frequently seen as another major factor contributing to deforestation. Climate change is another factor in deforestation. Wildfires are to be blamed for 23% of tree cover losses, and climate change will make them more frequent and powerful. Particularly in the Boreal forests, the rising temperatures create large-scale wildfires [5,6]. The makeup of the forest may alter, which is one potential result. Economic incentives that make forest conversion seem more profitable than forest protection have also

been linked to the degradation of forest ecosystems. The owners of the forests or the communities who depend on them for their well-being are unaware of the economic value of many significant forest services since there are no markets for them [7]. According to the poor world, the advantages of forests as carbon sinks or as biodiversity reserves mostly benefit wealthier developed countries, and there is insufficient payment for these services. According to developing nations, it is hypocritical to deny them the same opportunities as developed nations, that the poor shouldn't be forced to pay for preservation when the wealthy caused the issue, as some developed nations, like the United States of America, cut down their forests centuries ago and benefited financially from this deforestation [8]. Over the past 30 years, some critics have seen a change in the factors driving deforestation. Although subsistence activities and government-sponsored development initiatives like transmigration in nations were the main drivers of deforestation.

References

- [1] Betts MG, Yang Z, Hadley AS, Smith AC, Rousseau JS, Northrup JM, et al. Forest degradation drives widespread avian habitat and population declines. *Nat Ecol Evol* 2022;6:709-719.
- [2] Rehling F, Schlautmann J, Jaroszewicz B, Schabo DG, Farwig N. Forest degradation limits the complementarity and quality of animal seed dispersal. *Proc Biol Sci* 2022;289.
- [3] Drummond L, von Wallbrunn C, Buchhaupt M. Microbial Degradation of 2-Methylisoborneol in Forest Soil. *Chem Biodivers* 2022;19.
- [4] Romero-Uribe HM, López-Portillo J, Reverchon F, Hernández ME. Effect of degradation of a black mangrove forest on seasonal greenhouse gas emissions. *Environ Sci Pollut Res Int* 2022;29:11951-11965.
- [5] Li Y, Liu H, Zhu X, Yue Y, Xue J, Shi L. How permafrost degradation threatens boreal forest growth on its southern margin?. *Sci Total Environ* 2021;762.
- [6] Bowd EJ, Banks SC, Bissett A, May TW, Lindenmayer DB. Disturbance alters the forest soil microbiome. *Mol Ecol* 2022;31:419-447.
- [7] Morreale LL, Thompson JR, Tang X, Reinmann AB, Hutyra LR. Elevated growth and biomass along temperate forest edges. *Nat Commun* 2021;12:7181.
- [8] De Meester B, Vanholme R, Mota T, Boerjan W. Lignin engineering in forest trees: From gene discovery to field trials. *Plant Commun* 2022;3:100465.