

Agriculture without Deforestation: How Agriculture draws a Parallelism with Deforestation?

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The current world population is a booming 8 billion. It is imperative that each and every one of that 8 billion is nutritionally secure and secures a safe future for life on earth. The pressure is on to propel enough food to satiate the demands of the population. But at what cost? In 2020 about 4.2 million hectares of

humid tropical primary forest was gone from the face of earth, which is nearly the size of the Netherlands. According to the researchers from the Sustainability Consortium and the World Resources Institute, the credit for this depletion goes to food production and the other half to commodity crops. In the recent years, commodity crop production has fuelled up rates of forest loss to record levels. There are several pivotal points and factors that steer its way to forest loss. Shifting agriculture is primarily one of them, practiced within forests in Africa, central and South America by indigenous and subsistence farmers. Commodity crops have an even more profound influence as they are grown commercially and on an industrial scale and often traded internationally.

Out of the plethora of activities the humans have imprinted on earth, the most dominating is agriculture. Farming is the most dominating form of land use and management as of today. It is changing the trends and lifestyles. One of the driving forces is the ever growing demand for food. To provide food for the population, expanding the agricultural area makes sense. Due to the current crisis this might seem logical. But in the long run this will have a profound effect on the Earth. Around 3 quarters of the earth's land is under some form of human use. The amount of agricultural goods being exported and traded all over the globe has also grown and have replaced forests (Figure 1). Although the yields have increased due to intense agriculture, the forest land has limited resource and availability.

How to produce food without cutting down forests?

To balance the need for food and to prevent depletion of forest resources the focus has to be diverted into holistic and sustainable land use approaches, especially the current fields and land. Changing the diet to an overall healthy animal protein and plant intake, minimising food wastage are some solutions. Nitrogen, phosphorous, and water can be utilized more efficiently. This will result in reduced pressure on land. Use soilless methods of cultivation

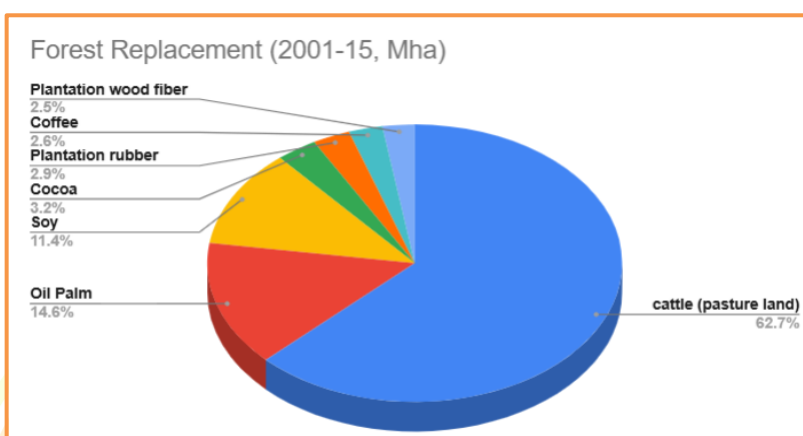


Figure 1. Forest replacement in terms of commodity produce

Source: World Resource institute, 2024

and technology integrated cultivation wherever possible. It is time to find new ways to feed the world and conserve forests. So how to produce food without converting forests to fields? What are the steps taken?

What can the farmers do?

Maybe it is time to switch to the indigenous traditional knowledge. Farmers can convert to sustainable farming measures and include good farming practices to increase their yield. Strengthening the knowledge of small-scale farmers to incorporate into agricultural planning is also an option. Some of the Global initiatives and private sector commitments to halt deforestation are as follows,

Global initiatives

- United Nations framework convention on climate change (UNFCCC) has come up with frameworks to mitigate deforestation and forest degradation and has begun preaching to follow sustainable management.
- REDD+ (Reducing Emissions from Deforestation and Forest Degradation), which is under UNFCCC is a voluntary process through which developing countries can contribute through specific interventions.
- The board of Consumers Goods Forum had taken an initiative to attain zero net Deforestation in the chief four commodity supply chain that contributes to deforestation - cattle (beef), soy, palm oil, pulp & paper. According to their **“Forest positive Approach”** they are encouraging their supply chain partners to adopt the commitments to make headway into being forest-positive.
- According to the New York declaration on forests, Civil society action and multistakeholder advocacy are important in reducing deforestation from producing agricultural commodities.
- The 2015 Paris agreement restated the duty of REDD+ in terms of agriculture's potential for climate change mitigation, and adaptation, and the risks imposed on food security.
- Global forest goals under the United Nations strategic plan for forest 2030 has also called for halting deforestation.
- At present, 26th conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC COP26), 28 governments of the forest, agriculture, and Commodity Trade issued a roadmap for action covering trade and market development, smallholder support, traceability and transparency. In addition, 45 countries have resolved to shift to more sustainable agriculture.

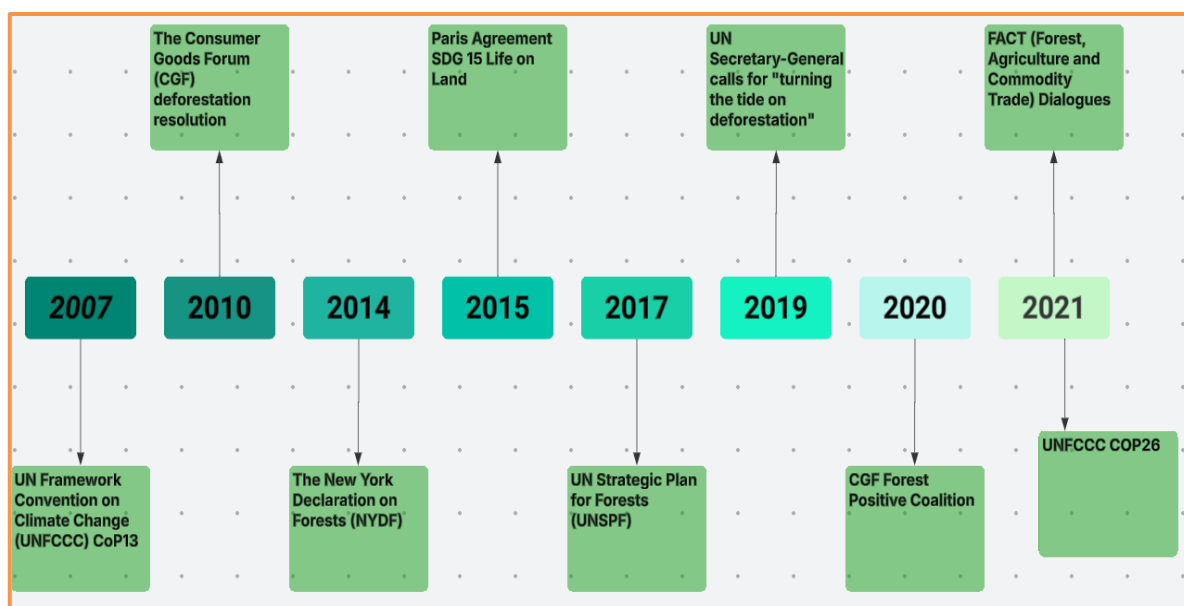


Figure 2. Overview of Global Initiatives
Source : Author's Compilation

Consumer countries

- They can set up standards for import of agricultural goods as the majority of the commodities are produced to feed the demand in other countries which is a direct association with international trade.
- The Amsterdam Declarations aligned to Sustainable Development Goals (SDGs), New York Declaration of Forests (NYDF) and private sector consist of goals that aims to eliminate deforestation from global supply chains.
- France's National strategy against Imported Deforestation 2018-2030 outlines on how to take action to reduce a consumer country's deforestation footprint
- The European Green Deal raises awareness on reducing the environmental and climate footprint of the European Union's food system.

Producer countries

- They have come up with strategies regarding land use planning, forest positive farming practices, payments for ecosystem services. REDD+ supports many producer countries to put a stop to deforestation, to obtain significant results, to augment transformational change. REDD+ allowed more than 60 countries to get in touch with technical help and funding to reach enabling conditions. These include refining their production models, creating an enabling environment, providing specific technical and financial support.
- Greater coordination is needed between Producer and consumer countries so that they can come up with truly reframing agri-food systems that can simultaneously produce more food without putting the forest resources at stake.

Future Prospects

The government can develop guidelines to educate farmers, producers, and companies on "sustainable sourcing". Governments across the globe can provide coordination so that the variety of stakeholders and sectors at all levels international, national, regional, local can work and move towards shared goals. They should also generate legislative frameworks and give financing and market conditions that favour approaches based on the alliance of forestry and agriculture. The private sector has promised to erase deforestation from their supply chains through the New York declaration on forests 2014. Since then, the goal for net zero deforestation footprint has been the concern and industry standards, certifications systems have been put in place for products like beef, palm oil, soy, and coffee. More than 90 companies have declared their interest and aim to become nature positive by 2030. The COP26 commitments to accomplish sustainable agriculture and stop forest loss will also contribute to fulfilling the 2021 United Nations(UN) Food systems Summit coalition goal of halting deforestation and conversion from agricultural commodities.

Conclusion

Feeding the world doesn't have to mean sacrificing the forests. It doesn't necessarily have to come at the expense of forest degradation. In the era where climate change has a powerful impact, these forests provide a helping hand to mitigate climate change and biodiversity loss. But they can do so only when they are allowed to grow and exist. Harvesting young trees for timber, clearing up forest lands for agricultural production may seem like a rational option at the moment due to the increased pressure for food production, but in the long term it will deprive the future generation of a healthy environment and resource to sustain and live in. Deforestation must be put to a halt, otherwise the effect only accelerates from here forth. The world has lost a billion hectares of forest up till now. Currently, most of these lands are used for row crop cultivation and cattle ranching. Agricultural activities and practices like ploughing also release half a billion tonnes of carbon dioxide into the atmosphere from the soils. But at the same time, it is possible to put these tonnes of carbon back into the land through forest restorations and tree planting. Plant based diet, eating less red meat also helps in reducing deforestation.

Agriculture must grow, but the primary focus is to eliminate the negative side effects. Agricultural expansion doesn't have to come with a price. Conserving the earth's forest

reserve is a must. It is imperative to find the balance between feeding the world population while at the same time protect the forests from transforming into fields. Every challenge is an opportunity for growth , and this makes us look into solutions to make agriculture and forests mutually beneficial to each other and not exclusive. This is humanity's one and only earth. It is time to innovate and strategize to use the land the way it rightfully should be used.

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