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Deforestation: An environmental catastrophe

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Deforestation scenes from Cambodia. Image credit: Igor Sokolov / 123rf

"The emerging trends indicate that the rate of deforestation is likely to increase over the coming years. Major policy changes needed to reverse this trend are identified. They include increased commitment towards forest production and intensive agroforestry programmes."

Those words appeared in <u>a 1982 paper by B. Bowonder published</u> in the *International Journal of Environmental Studies*. They are prescient given how – in the intervening decades – deforestation has emerged as a leading threat to our environment, our climate, and to public health.

India has lost copious amounts of green space to deforestation in recent decades. Between 2001 and 2018 alone, <u>India lost more</u> than 1.625 million hectares of tree cover. In the same timeframe, northeast India alone accounted for more than seventy percent of the country's overall tree loss.

In 2016, *Scroll.in* <u>reported</u> that Indian forests covered a mere 21.34 percent of the country, translating to 701,673 sq km in comparison to 640,819 sq km 29 years before then.

"Over the last thirty years, forests nearly two-thirds the size of Haryana have been lost to encroachments (15,000 sq km) and 23,716 industrial projects (14,000 sq km)", the report said, citing statistics from the Government. It went on to cite T. V. Ramachandra of the Centre for Ecological Sciences at the Indian Institute of Science in Bengaluru, Karnataka. He said that the data proffered by the Government reflects "the tip of the iceberg...dense forest areas in northern, central and southern Western Ghats have decreased by 2.84 percent, 4.38 percent and 5.77 percent respectively over the last decade."

India has pledged to maintain forest cover of 33 percent but, <u>as</u> <u>reported in *Al Jazeera*</u>, the figure continues to hover in the 22 percent range as of the 2017 State of Forest report. As to the causes of deforestation, economic development looms large with both the *AI Jazeera* and *Scroll.in* reports pointing to the amount of land cleared each year to accommodate industry-led projects.

An article published last year <u>outlined</u> how commercial logging, agriculture, mining, population growth, urbanisation and industrialisation, the building of dam reservoirs, forest fires, and overgrazing have been among the factors driving the deforestation trend.



Scenes of flooding in Mumbai. Image credit: News Measurements Network Live from New Delhi, India [CC0]

However, deforestation incurs consequences as is widely known. India has witnessed flooding on a catastrophic scale in multiple instances in recent years, as was seen last year in Mumbai and the year before in Kerala. In addition to the heavy rainfall, deforestation contributes in part to the heightened damage as forest water retention is significantly higher than that of farmland. Food supply disruptions can also be a ramification because, as the article notes, "most of the area that has undergone deforestation is actually unsuitable for long-term agricultural use such as ranching and farming. Once deprived of their forest cover, the lands rapidly degrade in quality, losing their fertility and arability. The soil in many deforested areas is [sic] also unsuitable for supporting annual crops. Much of the grassy areas are also not as productive compared to more arable soils and are therefore not fit for longterm cattle grazing."

In addition, it notes, deforestation can adversely affect soil quality as "heavy rainfall and high sunlight quickly damage the topsoil in clearings of the tropical rain forests. In such [a] circumstance, the forest will take much longer to regenerate and the land will not be suitable for agricultural use for quite some time."

Loss of biodiversity is another consequence. This is especially true in the case of the Western Ghats. <u>As an article published in *The Conversation* noted, "the mountains are teeming with life. Though they cover only a small part of India's total land area, the Ghats are home to more than thirty percent of the country's species of plants, fish, reptiles, birds and mammals, including both wild elephants and tigers. Its combination of unique species and habitat loss means Unesco has recognised it as one of eight global "hottest hotspots" of biodiversity." Deforestation is a major threat to the Western Ghats retaining this status.</u>





A view of the Western Ghats. Image credit: SHRIHARI SHASTRY / 123rf

The impact of deforestation on public health may appear, on the surface, rudimentary. However, as <u>Health Issues India</u> has previously reported, "rates of zoonotic diseases — those spread by animals — have shown a correlation with those living in areas close to fragmented forests." That article spotlighted trends in countries such as the Democratic Republic of the Congo and the United States, where a link has been identified between deforestation and rates of diseases such as Lyme disease and Ebola, respectively.

India is not immune to this trend. As *Health Issues India* noted, "across the Western Ghats, deforestation is giving rise to higher rates of Kyasanur forest disease (KFD)...experts found through satellite imagery that areas prone to outbreaks coincided with those that were currently witnessing deforestation. This deforestation typically meant that human activity in the area increased, often bringing farm animals which could also potentially harbour the ticks."

Solutions are needed. "There is an urgent need to focus on the mitigative measures in order to prevent the distressing effects of deforestation in the near future," <u>read a paper published last year.</u> "In order to alleviate the problem of deforestation, the strategies should be based on the underlying causes of the same. Also, the strategies for mitigating the problem of deforestation require its effective implementation that needs the recognition of the roles of

national, state and municipal governments along with the pro-active role of the civil society and private society." It outlined a number of examples, whilst underscoring why such measures are imperative.

The world is experiencing a period of environmental instability. Deforestation is contributing to this in a way that cannot be overlooked. Today marks International Day of Forests, an opportunity to recognise the value forests have for our ecosystem, environment, and health – and how deforestation threatens it. It is an observance India in particular ought to take note of.