Let us 'bring back the forest'

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Published online: 22 July 2019

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The monthly average concentration of carbon dioxide at the Mauna Loa Observatory was reported to be 413.92 ppm for June 2019 (National Oceanic and Atmospheric Administration 2019). If you check the same just a year back (i.e. June 2018), it was 410.79 (National Oceanic and Atmospheric Administration 2019). Concentration of carbon dioxide in the atmosphere is increasing at a steady rate (approximately 3 ppm per year) with the addition of ~40 gigaton of carbon dioxide every year. We are hurrying towards a 'threshold' concentration of carbon dioxide, a point of no return. Beyond this threshold, there may be severe disruption of the entire ecosystem and biodiversity through permanent climate change (Steffen et al. 2018), and the doomsday cannot be far away.

Significant work is going on to conserve and recycle various resources. Use of lower-carbon-intensive technologies, including proper management of different resources, can arrest this rapid growth of atmospheric carbon dioxide. However, the question is whether we can avoid reaching the threshold. These technologies can reduce the growth of concentration of carbon dioxide in the air, but cannot altogether avoid the fatal calamity. However, we can delay significantly in reaching this threshold. We need negative emission technologies to reduce the concentration of atmospheric carbon dioxide and turnaround the path. Negative emission technologies may help to accelerate natural processes to capture atmospheric carbon dioxide. Increasing stocks of organic carbons in soils and ocean, increasing green cover through afforestation, enhanced and accelerated weathering via natural rocks, etc., are different examples of negative emission technologies. Negative emission technologies also include methods for directly capturing carbon dioxide from the fuels and combustion products and then storing it in some safe place or using it for another useful purpose. For most

of these technologies, the theoretical potential to capture atmospheric carbon dioxide is exceptionally high. However, the technical acceptance and economic feasibilities of most of these technologies are still questionable.

Out of all these negative emission technologies, photosynthesis seems to be most promising. Issues related to land use, the requirement of nutrient, forest fire, illegal logging, etc., are still to be addressed. However, if implemented keeping the local biodiversity into account, the technical feasibility of this method is significant. Recently, Bastin et al. (2019) estimated the tree restoration potential of the entire world. Afforestation, reforestation, and restoration of the forests are the way forward for our survival, combining with other low-carbon and negative emission technologies. Let us participate in this green movement, simply by planting a sapling and taking care of it till it grows to a tree. As practiced by some of the older communities, we should plant and take care of a tree when a baby is born. We should make it a global tradition for the present generation. Then and only then, we can fulfil the dream of the Bengali poet Rabindranath Tagore, the first non-European to win the Nobel Prize in Literature in 1913, 'Dao phire se aaranya ... (Bring back the forest ...)'.

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