

Editorial

Mangrove in the Sundarbans

The Sundarbans is the fundamental gift of nature to West Bengal where nature has bestowed everything except desert. Rightly therefore it was declared as the heritage site by the UNESCO. The mangrove in the Sundarbans is in peril as in some other regions of the world as in Indonesia, Colombia, Mexico and elsewhere. The mangrove forest is the home of Royal Bengal Tiger and other animals, flora and fauna.



Mangroves are a unique group of plant species found in marshy intertidal estuarine regions and survive a high degree of salinity through several adaptive mechanisms. They form a link between marine terrestrial ecosystems. They have the peculiar characteristics surviving in highly water-logged soil strata, can tolerate saline water but do not need any saline water for their survival. They have salt extraction property and have special root system. Some mangroves have slit roots which are arial having anchoring structure to withstand wave action. The tangles of slit roots help sedimentation thereby preventing erosion. Their intricate root system is covered with tiny pores that filter out salt from the water that surrounds them by the process of microfiltration. Mangrove genome have been decoded by a research team of Director Ajoy Parida at the Institute of Life Sciences, Bhubaneswar and Dr. Paranis Group of SRM, Institute of Science and Technology, Tamil Nadu as reported in the Statesman as one of the highly salt tolerant mangrove species *Avecennia marina* (Gray Mangroves).

Mangroves protect shorelines, provide habitat for a diverse array of terrestrial organisms. Many marine fish species rely exclusively on mangroves as their breeding, spawning and hatching grounds. Mangroves are the finest defender of biodiversity. They can arrest encroachment of silverline of the sea in the landmass preventing soil erosion.

As per observation of IPCC (Intergovernmental Panel for Climate Change) that Kolkata is slowly going to be a cyclone city. In that case mangroves can serve as very good guard wall against fierce cyclone for the city of Kolkata.

But mangroves are in peril. Apart from nature's fury the largest threat to mangroves is development. Nature's fury such as strong winds, wave action, cyclones, tornadoes; tsunami may cause damage to the mangroves. Mangroves are threatened around the world. From 1980 to 2005, 20% to 35% of the world's mangrove forests were lost according to UN Food & Agricultural Organizations. From 2000-2016, the rate of loss declined as governments and environmental groups spotlighted the problem but destruction continued and about 2% of world's remaining

mangrove forests disappeared according to NASA Satellite imagery.

In Global Climate Conference COP 26 at Glasgow in 2021, the Secretary General of UN calling the climate report Code Red for Humanity appealed to the world leaders to keep Global temperature rise to limit to 1.5°C as a result of air pollution due to greenhouse gas emission to save the world. India pledged to cut its carbon emission to net zero by 2070. India ranks third in carbon dioxide emission after the USA and China. But India sidelined on the major commitments at COP26, the Glasgow leaders' declaration on Forest & land use as per report. The declaration focuses on commitment to reduce deforestation.

West Bengal Govt has adopted an opencast coal mining project on 3400 acre of land. The mining activities will result in deforestation of nearly 360 acres of forests area, unless adequate measures are taken immediately i.e., forest area can be restored. This can be done by covering more land area where mangroves have been destroyed by anthropogenic activities in the Sundarbans due to ever increasing population apart from nature's fury.

There is continuously rising population in the Sundarbans and unplanned growth and settlement and illegal cutting down of mangrove trees to be used as fuel and improper land use there is destruction of mangrove forests. Upper middle class from urban mobile life and their lust for pleasure may be also for game look for respite in the Sundarbans. We do not hesitate to aggressively encroach upon the natural resources forest, water-bodies, wetlands, green fields and ruthlessly destroy whatever comes in course of our action creating imbalance in the existing ecological system. On the plea and excuse of inclusive growth and development we construct buildings, roads, resorts, parks, gardens, and aqua-cultural complex to attract tourists causing immense damage to the existing natural

resources. This is the case with the Sundarbans. Any further attempt to ecological change in the Sundarbans must be stopped at all costs and the natural treasures must be conserved and nurtured to initial conditions by stopping land degrading anthropogenic harmful activities of overexploitation of natural resources to satisfy our insatiable demand, fathomless greed and omnivorous consumerism.

The mangrove forest as a carbon sink must be protected at all costs to arrest greenhouse gas emission to help in keeping global temperature rise not to exceed the limit of 1.5°C as accepted in COP15 in Paris. It is not out of place to mention that the mangrove in the Sundarbans are the preserver of old history of Bengal and also the archeological evidence of civilizations in Bengal during the period from 7th century to the 13th century in the southern most regions of Bengal as per recent research report published in the newspaper.

It is learnt that our State is going to execute a slew of projects for the Sundarbans. The projects include construction of tourist road, research centre and bridges. The Sundarbans – a UNESCO World Heritage site is known for its mangrove forest, flora and fauna, home of Royal Bengal Tiger. Whatever may be the reason for the construction of roads, bridges, tourist centres for the economic growth, employment generation of the people, this must be sustainable ecofriendly without destroying ruthlessly the mangrove forest to make way for continuous increase of population as a consequence of development and the inflow of population migrating in the region must be contained seriously. Trees are the last warriors standing in mankind's war with climate change.

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