RESTORING THE ECOSYSTEMS REJUVENATING THE EARTH

Science REPORTER

ECOLOGICAL degradation the world over has been a hard fact of life for far too long. Forests are vanishing, wetlands are disappearing, up to 90 per cent of coral reefs could be lost by 2050, and with shrinking natural habitats global biodiversity is threatened. In fact, shrinking habitats have even pushed pathogens – including the worldwide havoc-creating coronaviruses – into close proximity of humans.

It is these facets of ecological degradation that the World Environment Day 2021 seeks to shine a light on. Celebrated on 5th June every year, the theme for the World Environment Day 2021 is "Ecosystem Restoration". This year will also see the launch of the "UN Decade on Ecosystem Restoration".

Ecological restoration implies assisting the process of restoration of an ecosystem that has been degraded through various measures like reforestation, cleaning rivers, protecting natural habitats, preventing illegal poaching and when for some highly degraded ecosystems such measures are not enough creating a completely new artificial ecosystem to rejuvenate the ecology in the degraded ecosystem.

Of course, it is not all grim and dismal. Governments and citizens the world over have been acutely conscious of the deteriorating quality of the environment and the degrading ecology as amply demonstrated by some stellar efforts the world over at restoring the ecology of degraded ecosystems.

There are successful examples in India too. These include the Yamuna Biodiversity Park, a collaborative effort of the Delhi Development Authority and the Centre for Environmental Management of Degraded Ecosystems (CEMDE), University of Delhi. The project involved restoration of the Yamuna floodplains, lying barren due to sodic soils. After intensive restoration efforts, the Park now boasts of plants and trees and birds and animals, some of which existed 100 years ago and had gone extinct locally.

Another significant effort has been the restoration of the mangroves in Andhra Pradesh. Until 1972, the mangrove forests near the Godavari and Krishna rivers were being felled for firewood, fodder, house construction, and subjected to other stresses such as infrastructure development, establishment of factories, overfishing, and over extraction of water. Until in 1997, when the MS Swaminathan Research Foundation (MSSRF), with funding from the India-Canada Environment Facility, stepped in to undo the damage. By 2004, almost 520 ha of degraded land had been restored, the biodiversity had significantly improved and the mangrove forests had become naturally regenerating.

More recently, a study by scientists from the Nature Conservation Foundation, India and Columbia University, USA assessed the effectiveness of forest restoration in the Western Ghats and found significant recovery of tree cover and plant biodiversity. The scientists studied the restoration projects under way for over 20 years in Anamalai Hills, a biodiversity hotspot in the Western Ghats. Actively restored regions saw an increase of 82% in canopy cover, 69% in adult tree density, and 49% in species density.

It is expected that the World Environment Day 2021 and the "UN Decade on Ecosystem Restoration" will bring about renewed thrust on rejuvenating degraded ecosystems the world over.

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