

International Day for Biodiversity: The Sooner We See the Web of Life, the Better

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The world has been witnessing a series of virus spillovers from wild species to humans. The spate of infectious diseases in recent decades – Chikungunya, Ebola, yellow fever, swine flu, bird flu, SARS, Nipah, Zika – all can be traced to biodiversity loss and the subsequent close interactions between wild species and human beings. Data reveals that infectious diseases have, in fact, tripled every decade since the 1980s, with nearly 60% of these originating in wild animals.

As we ring in yet another International Day for Biological Diversity, it's time to acknowledge that the web of life is intricately entwined, and that every callous human action can have far-reaching implications – for other species, the planet, and us.

Age of humans

Anthropocene, or the epoch of humans – which began with the detonation of the first nuclear bomb in 1945 – has been particularly harsh and unkind on the ecosystem. Human activities including industrialisation, urbanisation, agriculture and deforestation have harmed the earth and its climate, snuffing the life out of many species, and putting our own survival at stake.

A biomass census report published in the Proceedings of the National Academy of Sciences highlights the damage wreaked by humans on the planet that we call home. The report reveals that while human beings account for a meagre 0.01% of all biomass on the earth, we are to be blamed for the extinction of 83 per cent of wild animals and nearly 50 per cent of plant life, painting a grim picture of the kind of impact our actions have on the planet.

Pollution, deforestation, and climate change have all contributed to an unprecedented rise in the number of species facing extinction in recent times. Scientists warn that unless strong measures are taken to preserve biodiversity, half of all the species on earth could well face extinction by 2100. A new study in the journal Biological Conservation notes that all endemic species in islands and four out of five endemic species in mountains are at high risk of extinction due to climate change alone. It further adds that a rise in temperature by 3° C, above the 2° C identified by the Paris Agreement, could put a third of endemic species on land and almost half of endemic species in the sea in danger. Endemic species are more at risk because they are unique to a particular habitat, and any change in the habitat, including temperature rise, puts them in peril. In short, climate change is happening much too fast for most species to adapt and survive.

Biodiversity matters

All forms of life – plants, animals, fungi and the other microorganisms, and the ecosystems they form – have their own place in the grand scheme of things. While the air that we breathe comes from trees, the food on our table is the handiwork of pollinators. Similarly, scavengers are the natural sanitary workers keeping rotting carcasses and diseases at bay, while mangroves protect coastlines and keep flooding in check.

It is estimated that over 75% of the crops and vegetation in India owe their origin to the humble bees, so much so that their extinction could trigger a food crisis. The bees are not the only ones at the receiving end of mindless human exploits. According to WWF's Living Planet Report 2020, India has lost 12% of mammals, 19% of amphibians and 3 per cent of birds since 1970. The sharp decline in the population of the diminutive house sparrow is a perfect case study. The lack of nesting spots in urbanscapes teeming with multistoried buildings and the absence of green spaces have been driving them away into oblivion. Many species unique to the Indian subcontinent – Indian vulture, great Indian bustard, Bengal tigers, river dolphins, snow leopards, Kashmiri red stag, Nilgiri tahr, blackbucks, gharials, Indian red panda, Malabar civets and one-horned rhinoceroses – are similarly hanging by a thread.

Rebuilding biodiversity may involve restoration of natural habitats, protection of ecosystems, organic ways of life, and regenerative agricultural practices to repair soil biodiversity and improve the water cycle.

What's the worth?

According to the World Economic Forum, if one were to put a price on the goods and services provided by ecosystems, it would amount to \$33 trillion annually, which is almost 15 times the GDP of India and close to the combined GDP of the US and China. Thus, the financial implications of biodiversity loss are also grave, though not as monumental as the existential implications.

If we don't want the snow leopard, the river dolphin and the gharial to end up as pictures in textbooks, next to dinosaurs, dodo birds and woolly mammoths, we need to be part of the solution a.s.a.p.

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