

Let's work for Mother Nature

पर्यावरण PERSPECTIVE

June-July 2021 # 8
Not For Sale



Campaign for Saving
Stepwells in Maharashtra

08

पर्यावरण की अकुलाहट

05

मकई की भूसी का ईको
फ्रेंडली पेन

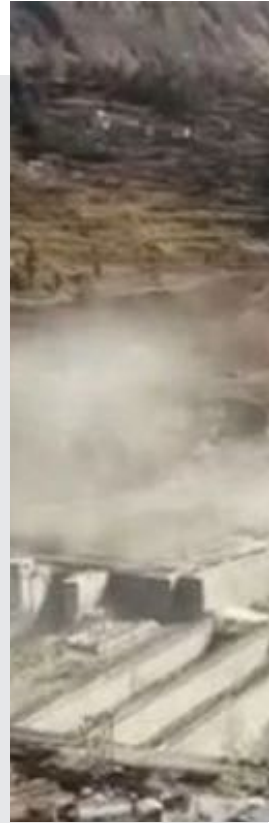
30

Environment Catch them
young

15

CONTENTS

सच्ची पर्यावरण संरक्षक 'गृहिणी'	4
पर्यावरण की अकुलाहट	5
कैच द रेन : आओ, मिलकर करें तालाबों की चिंता	6
चमोली हादसा : प्रकृति के सामने हमेशा बौने रहेंगे हम	7
मकई की भूसी का ईको फ्रेंडली पेन	8
छानीबड़ी में फिर से नाच उठे 'मोर'	9
पंढरीनाथ कुंड को स्वयंसेवकों ने दिया पुनर्जीवन	10
धरती को दें साँसें	11
Campaign for Saving Stepwells in Maharashtra	12
Masks: Saving Humans, Overburdening Ecosystem	14
Ecological Restoration : A case study	16
Climate Change: An opportunity for India	18
Environment: Catch them young	20
Prevent, Halt and Restore Ecosystems	21
Kadha: An essential prescription	23
Plantation: Save for Oxygen	24
Kalor: Truly novel	25
Groasis Waterbox: A technological marvel!	26
Wasteland: Will is all that matters	27
Ponds' Rejuvenation: Standing for a cause	29
Yogic Farming: A philosophical vision into Practical Farming	30
Wetlands: A must for bio-diversity	32
Wasteland: Restore to Rejuvenate	34
Sarthak's Bhopal Model: Towards Sustainable Environment	36





Prevent, Halt and Restore Ecosystems

By Dr Avilash Roul

Ecosystem Restoration is the theme of this World Environment Day which is being celebrated across the world on 5th June. While Pakistan is the global host of this year's world environment day, the United Nations has launched the UN Decade on Ecosystem Restoration 2021-2030. The dedicated UN decade would likely to bring the focus of world governments in preventing, halting and reversing the degradation of ecosystems in their respective sovereign control as well as beyond. Since 1972 United Nations sponsored Conference of Human Environment (UNCHE) at Stockholm, international community- governments, non-government organisations, citizens, youth and children have been celebrating June 5th as World Environment Day.

Through the civilizational progress, it's the anthropocentrism which has either directly or indirectly and knowingly or unknowingly diminished the value and sense of ecocentrism- a vital component of survival of humankind. The Pandemic of the century that has already caused loss of million lives is an effect of large scale unstoppable ecosystem degradation. As humankind continues unabated to encroach on fragile ecosystems, emergence of zoonotic diseases will threaten lives of millions. The modern humankind considers services provided by ecosystems only in terms of limited and narrow economic cost. The result is overexploitation of nature and natural resources. Human activity has altered almost 75 per cent of the earth's surface, cornering wildlife and nature to a smaller area of the planet. Almost 1 million flora and fauna species are threatened with extinction. Land degradation has reduced the productivity of 23% of the global land surface. Nearly 100-300 million people are at increased risk of floods and cyclones due to loss of coastal habitats and protection. The Global Assessment Report of Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) alerts to the world that nature's dangerous decline 'unprecedented'; species extinction rates 'accelerating' than never before.

Ecosystems support all life on Earth as web of life. The UN sponsored Millennium Ecosystem Assessment (MA) identified four major categories of ecosystem services: provisioning (food, fresh water, fuel, fiber, and other goods), regulating (climate, water,

disease regulation as well as pollination), cultural (educational, aesthetic, and cultural heritage values as well as recreation and tourism) and supporting services (soil formation and nutrient cycling). Therefore, the Earth needs urgent healing. Ten more years are now with humankind to restore, or at least to minimise the pace of degradation of the planet.

The healthier the ecosystems are, the healthier the planet - and its people. According to 'State of Finance for Nature' Report (2021), authored by UN Environment Program, World Economic Forum and Economic and Land Degradation Initiative, the World needs 8.1 trillion USD investment in nature by 2050 to tackle multiple but interlinked planetary crisis of ending poverty, combating climate change, preventing mass extinction and land degradation.

All kinds of ecosystems- farmlands, forests, lakes and rivers, grasslands and savannahs, mountains, oceans and coasts, wetlands, and cities- require sustenance by each and every one from governments and development agencies to businesses, communities and individuals. The UN estimates that by 2030, the restoration of 350 million hectares of degraded terrestrial and aquatic ecosystems could generate 9 trillion USD in ecosystem services. Restoration could also remove 13 to 26 gigatons of greenhouse gases (GHG) - gases causing climate change - from the atmosphere, which would complement efforts under Paris Agreement on Climate Change. The economic benefits of such interventions in ecosystem restoration is nine times greater instead of inaction or business as usual practices. While restoration of a small ecosystem can protect and improve the livelihoods of people depending on that, the large restoration can provide security of states and nations. It helps to regulate disease and reduce the risk of natural disasters. In fact, restoration of ecosystems can help achieve all of the Sustainable Development Goals (SDGs) as most of its 17 Goals are interlinked.

Restoring Marine Ecosystems

Marine ecosystems are under direct attack from pollution, climate change and overexploitation. The oceans play an important role in supporting life on earth while covering more than 70 per cent of the surface of the planet. Having most diverse and important ecosystem, oceans contribute to global and regional elemental cycling, and regulating the climate. The ocean provides natural resources including food, materials, substances, and energy. Marine resources are particularly important for 40 percent of world population living in coastal communities. Meanwhile, oceans help regulate the global ecosystem by absorbing heat and carbon dioxide (CO₂) from the atmosphere

However, oceans and coastal areas are extremely vulnerable to environmental degradation, overfishing, climate change and pollution. In 2015, 33% of marine fish stocks were being harvested at unsustainable levels and 60% were maximally sustainably fished. Plastic pollution has increased tenfold since 1980, 300-400 million tons of heavy metals, solvents, toxic sludge and other wastes from industrial facilities are dumped annually into the world's waters, and fertilizers entering coastal ecosystems have produced more than 400 ocean 'dead zones'. Also, under the present ocean (non)governance, free for one country in sovereign water and Exclusive Economic Zone (EEZ) to free for all beyond EEZs, both notions have depleted the Ocean by competing demands with increasing disputes among countries.

The Indian Ocean, according to the Indian Ocean Experiment (INDOEX), has been gravely polluted by plastic debris and chemical runoff. It has documented widespread pollution covering about 10 million square kilometre (3.86 million square miles). According to World Wide Fund for Nature (WWF), more than 80% of marine pollution is caused by land-based activities that cause oil spills, fertilizers and toxic chemical runoff and the discharge of untreated sewage. Additionally, it bears the brunt of oil transits thereby further risking oil spills and dangers due to heavy traffic.

Last month (May 20) fire incident of Singapore-registered ship MV X-Press Pearl, carrying chemicals and plastic, and subsequent

explosion, have registered serious ecological hazards due to oil spill and spreading of tiny plastic pearls along the Sri Lankan coast by threatening fragile marine ecosystem. The ship which was carrying 350 tonnes of oil in its fuel tank will be disastrous to the coastal ecosystem despite Island country's Marine Environment Protection Authority (MEPA) would be able to handle that. This incident is not less than the Tory Canyon oil spill in UK coast in 1966-67, which was a major ecological disaster. The MV X-Press Pearl case must ignite the environmental consciousness not only in Sri Lanka but in South Asia.

To avoid such high risk incidents and to protect, conserve and manage ocean ecosystems in sustainable manner, the littoral countries must come together at the earliest to forge a long-term agreement. The ongoing negotiation to produce a legally binding instrument for the conservation and sustainable use of 'Marine Biodiversity beyond National Jurisdiction' (MBBNJ) under the UN Convention on the Law of the Seas (UNCLOS) is a step in right direction. The SDG -14 calls upon the governments to conserve and sustainably use the oceans, seas and marine resources for sustainable development. On a regional scale, it is imperative for India to take the stewardship in ocean conservation with other littoral countries. The UN Ecosystem Restoration Decade has provided the opportunity to India and other littoral countries to begin a dialogue for a long-term agreement at least on the eastern side as a proposed Bay of Bengal Initiative on Restoring Marine Ecosystems (BBIRME).

The slogan for this world environment day is '*reimagine, recreate and restore*' ecosystems for healing the planet. To add and furthering the objectives in spirit and letter, the slogan shall be with *co-reimagine, co-recreate and co-restore* by emphasising the informed participation of communities, citizens and stakeholders who are depending on the specific ecosystems for their livelihood as priority.

(The author is Guest Professor/ Principal Scientist at IIT Madras, Chennai)

