



COMPREHENSIVE REPORT
FOR THE ACTIVITIES AS A PART OF
WORLD ENVIRONMENT
DAY 2024






**CONSUMER EDUCATION AND RESEARCH CENTRE
ENVIRONMENT INFORMATION, AWARENESS, CAPACITY
BUILDING AND LIVELIHOOD PROGRAMME
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Competitions and Programs report by CERC-EIACP PC RP

Number of Infographics released: THREE

1


World Environment Day Land Restoration




AI generated image of a degraded land patch

Refers to the process of halting the degradation or rehabilitating degraded land, typically through activities like reforestation, soil conservation, and the protection of natural processes. A study by IIT Bombay revealed a dramatic rise in soil erosion within the Western Ghats, a world-renowned biodiversity hotspot. The findings show a staggering increase of nearly 94% since 1990. Let us go through what actions can be taken up to restore a patch of degraded Western Ghats.

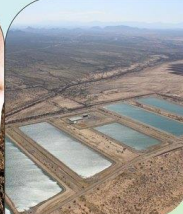
- **Location:** Tapi and Dang district, Gujarat (northernmost tip of Western Ghats)
- **Importance:** Faces the most severe erosion, with a staggering 119% increase. **Urgency for Restoration:**
- The high rate of erosion signifies a critical ecological imbalance.
- Timely intervention is crucial to prevent further degradation and potential ecosystem collapse.




Reforestation with local trees:
Since this part of Gujarat has moist deciduous forests, planting native species like teak, haldu, shisham, khai, and axlewood is ideal. These trees can be strategically planted along the edges of different ecosystems (ecotone), on the borders of farms, as well as the barren hill slopes for maximum benefit.




Ground water recharge
The slope gradients of this region present a hydrogeological challenge for groundwater recharge. Steep slopes promote rapid surface runoff, minimizing the infiltration of rainwater into the subsurface and consequently limiting groundwater recharge. However, farmlands & valley bottoms, can be strategically utilized as infiltration zones to capture and redirect surface runoff for recharge.



Minimal human and cattle intervention:
Activities like illegal logging, slash-and-burn farming, & excessive cattle grazing degrades the land. Patrolling can help stop illegal logging, but cameras and artificial intelligence can be used to keep a check on illegal activities. Additionally, educating the locals about the negative effects also helps.




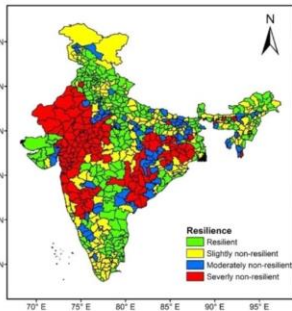
Sustainable farming practices:
Minimal usage of chemical pesticides and weedicides will ensure the integrity of the overall biodiversity and the land. Indigenous organic solutions like *Neemastra*, *Brahmastra* etc., can be used to replace the chemical pesticides.



source: Chinnasamy, Pennan & Honap, Vaisnavi. (2023). Spatiotemporal variations in soil loss across the biodiversity hotspots of Western Ghats Region, India. *Journal of Earth System Science*. 132. 10.1007/s12040-023-02098-4.

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World Environment Day

5th June 2024


Drought Resilience in India: Addressing Ecological and Economic Challenges

- ✦ Drought is a unique natural hazard.
- ✦ It causes damage to ecology and economy.
- ✦ The trend for the last many years shows that drought occurs almost every year, and leads to severe water-scarcity in many parts of India.
- ✦ Based on data from 2000 to 2014, only 241 (about 38%) districts in India were found to be resilient to drought or dry conditions.
- ✦ Some important measures be taken.




Water Conservation and Management:

Implementing efficient water conservation techniques such as rainwater harvesting, watershed management, and water recycling can help in reducing water scarcity during droughts




Improving Irrigation Infrastructure:

Upgrading irrigation infrastructure with modern technologies like drip irrigation and sprinkler systems can optimize water usage in agriculture, the sector that consumes the majority of India's water




Crop Diversification and Selection:

Encouraging farmers to diversify their crops and promoting drought-resistant crop varieties can mitigate the impact of drought on agriculture



Promoting Sustainable Agricultural Practices:

Adopting sustainable agricultural practices such as organic farming, agroforestry, and conservation agriculture can improve soil health and water retention, making farms more resilient to drought



Community Engagement and Awareness:

Educating and involving local communities in water conservation efforts through awareness campaigns, training programs, and participatory decision-making processes can enhance drought resilience at the grassroots level

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World Environment Day

5th June 2024

Desertification

is the degradation of land in drylands, eventually leading to desert-like conditions. It's driven by a combination of natural factors and human activities.

Key Causes

- Climate Change:** Rising temperatures and erratic rainfall patterns increase drought frequency and severity.
- Deforestation:** Removing trees reduces water retention and increases soil erosion.
- Overgrazing:** Excessive cattle grazing depletes vegetation and prevents healthy regrowth.
- Unsustainable farming:** Practices like excessive plowing and use of chemical fertilizers deplete soil nutrients and organic matter, leading to decreased fertility and increased erosion.

Impacts of Desertification

- Loss of Biodiversity:** With the loss of habitat due to drying of land, the life suffers
- Food and water scarcity:** Decreased agricultural productivity and unreliable water supply
- Land degradation:** Loss of fertile land hampers agricultural productivity, and can also damage infrastructure during heavy rains

Fighting Desertification

- Sustainable land management:** Crop rotation, cover crops, decreased plastic pollution can help in combating desertification
- Reforestation programs:** Planting native trees helps in retaining moisture and ensures that other species of flora and fauna are not challenged for survival, which is often the case with foreign invasive species
- Water Conservation:** Sustainable usage of water with techniques like drip irrigation, rainwater harvesting, water treatment plants for reusing water should be encouraged in order to make wise use of water
- Community Education:** Raising awareness about desertification and promoting responsible land management practices

1. Loss of soil cover (11.01%), water erosion (10.98%), vegetation degradation (9.15%), and wind erosion (5.46%) are the main causes of the desertification in the country. (<https://www.drishtias.com/daily-news-analysis/land-degradation-and-desertification-in-india>)
 2. According to the Desertification and Land Degradation Atlas 2021, at least 30% of India's total geographical area is under the category of "degraded land". (<https://www.nextias.com/ca/current-affairs/04-10-2022/desertification-and-land-degradation>).

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Number of Posters released: ONE

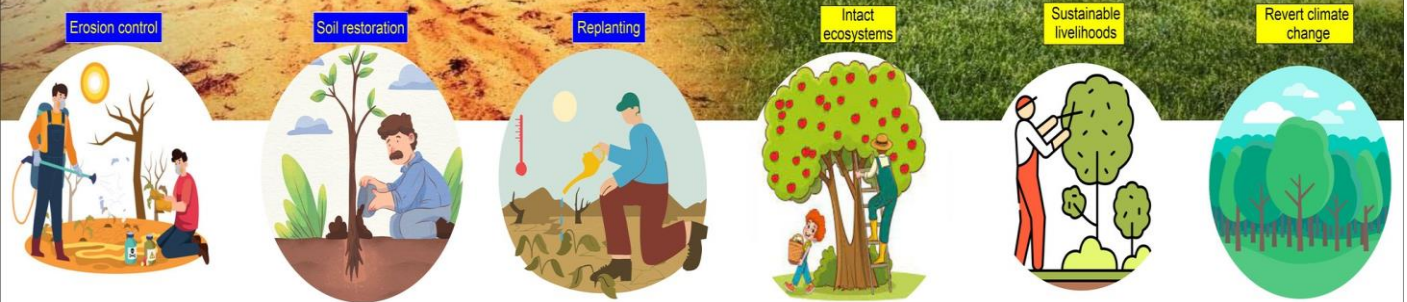
World Environment Day
05 JUNE 2024



CERC-ELACP
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ECOSYSTEM RESTORATION

restores soil and water cycles and
reverses desertification



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Number of Word Cloud released: ONE

Environment

is a sum total of all the living and non-living elements and their effects that influence life.



What's wrong with the Environment?

Clicking any word in the word cloud reveals related information



Ocean acidification **Plastic pollution**
Water and Food Insecurity **Deforestation**
Global warming **Biodiversity loss** **Textile waste**
Air pollution **Fast fashion** **Melting glacier**
Poor governance **Cobalt mining** **Soil degradation**
Unsustainable agriculture



India has several national organizations, missions, and programs that focus on environmental challenges.

Mission LIFE
National Green Hydrogen Mission
Mangrove Initiative for Shoreline Habitats & Tangible Incomes (MISHTI)
Swachh Bharat Mission
Long Term Ecological Observatories (LTEO)
Green Skill Development Programme (GSPDP)
Indian Green Building Council (IGBC)
National Solar Mission
National Mission for Sustaining the Himalayan Eco - system
National Mission for Sustainable Agriculture
National Mission on Strategic Knowledge for Climate Change
National Clean Air Programme (NCAP)

India participates in several international organizations, Missions, Programs that address environmental issues. These organizations work together to develop solutions, policies, and funding for environmental projects and activities.

Intergovernmental panel on climate change (IPCC)
United Nations Framework Convention on Climate Change (UNFCCC)
Convention on Biological Diversity (CBD)
International Carbon Action Partnership (ICAP)
International Council for Local Environmental Initiatives (ICLEI)
United Nations Environment programme (UNEP)
Global Biofuels Alliance (GBA)
International Solar Alliance (ISA)
Ramsar Convention on wetlands
International Union for Conservation of Nature (IUCN)
Global Environment facility (GEF)
Earth System Governance (ESG)
Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)
International Renewable Energy Agency (IRENA)
United Nations Convention to Combat Desertification (UNCCD)

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Number of Competitions: TWO

1. Online Quiz competition for Kids aged 6 to 15 years: A quiz competition for kids was aired using various social media platforms, on the theme of Environment.

Competition date: 29/5/23 to 6/6/23

Number of questions: 10

Number of participants: 65 (as on 5/6/24 12:00 pm)



The poster features a dark green background with a blurred image of a green plant. At the top, there are four logos: 'LiFE Lifestyle for Environment', the United Nations emblem, the Ministry of Environment, Forest and Climate Change emblem, and CERC (Central Pollution Control Board) emblem. The main text reads 'World Environment Day QUIZ 2024'. Below this, a message says 'Hey kids, welcome to the quiz competition! Get ready to have some fun and test your knowledge. Good luck to you!'. A QR code is located in the bottom right corner.

World Environment Day QUIZ 2024

Hey kids, welcome to the quiz competition!
Get ready to have some fun and test your knowledge.
Good luck to you!



2. AI-generated Art/Image competition: Invitation to participate in AI-generated art competition on the theme of Environment was aired through various social media platforms. The prize of INR 500 is also announced.

Competition date: 30/5/23 to 6/6/23

Number of entries: 3 (as on 5/6/24 12:00 pm)



Awareness session : ONE

Awareness session on World Environment Day to the students of Department of Food Science and Nutrition, Gujarat University and Department of Biotechnology, Gujarat Biotechnology University at CERC classroom. Total number of students: 8

