

## World Environment Day

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# Cover Story

**Theme: Land restoration,  
desertification and drought  
resilience**

**Host: The Kingdom of Saudi  
Arabia**

The Kingdom of Saudi Arabia will host World Environment Day 2024 with a focus on land restoration, desertification and drought resilience. Land restoration is a key pillar of the UN Decade on Ecosystem Restoration (2021-2030), a rallying call for the protection and revival of ecosystems all around the world, which is critical to achieve the Sustainable Development Goals.

According to the UN Convention to Combat Desertification, up to 40 per cent of the planet's land is degraded, directly affecting half of the world's population and threatening roughly half of global GDP (US\$44 trillion). The number and duration of droughts has increased by 29 per cent since 2000 – without urgent action, droughts may affect over three-quarters of the world's population by 2050. Land restoration is a key pillar of the UN Decade on Ecosystem Restoration (2021-2030), a rallying call for the protection and revival of ecosystems all around the world, which is critical to achieve the Sustainable Development Goals. 2024 will mark the 30<sup>th</sup> anniversary of the UN Convention to Combat Desertification. The sixteenth session of the Conference of the Parties (COP 16) to the United Nations Convention to Combat Desertification (UNCCD) will be held in the Saudi capital, Riyadh, from 2 to 13 December 2024.

Land restoration, combating desertification, and building drought resilience are crucial aspects of environmental stewardship and sustainable development. Here's an overview of each:

1. **Land Restoration:** Land degradation is a significant global challenge, with about one-

third of the Earth's land already degraded. Land restoration involves reversing this process through various techniques such as reforestation, afforestation, soil conservation, and sustainable land management practices. These efforts aim to improve soil health, enhance biodiversity, mitigate erosion, and restore ecosystems' functionality.



**Fig. 1 Youth participation in Soil Health Programme at Faculty of Horticulture, Division of Soil Science, SKUAST-K, Shalimar (photo credit: Subhash Chand)**

2. **Desertification:** Desertification refers to the degradation of land in arid, semi-arid, and dry sub-humid areas primarily due to human activities and climatic variations. Desertification leads to the expansion of deserts, loss of vegetation cover, soil erosion, and reduced agricultural productivity. To combat desertification, strategies include sustainable land management, water conservation, agro-forestry, and community-based initiatives aimed at restoring degraded land and promoting resilience in vulnerable ecosystems.
3. **Drought Resilience:** Droughts, prolonged periods of below-average precipitation, pose significant challenges to water resources,

agriculture, ecosystems, and human populations. Building drought resilience involves a multi-faceted approach that includes water conservation, efficient irrigation methods, drought-tolerant crop varieties, early warning systems, drought preparedness plans, and community empowerment. Investing in water infrastructure, such as dams and reservoirs, can also help mitigate the impacts of drought by storing water during periods of abundance for use during dry spells.

Integrated approaches that address land restoration, desertification, and drought resilience are essential for sustainable land management and ensuring the well-being of ecosystems and communities. Collaboration between governments, local communities, NGOs, researchers, and international organizations is critical to implementing effective strategies and achieving long-term success in these areas. Overcoming land degradation, desertification, and drought requires a combination of strategies that address both the root causes and the symptoms of these environmental challenges. Here are some key approaches:

#### **Sustainable Land Management (SLM)**

- Implementing sustainable land management practices such as conservation agriculture, agro-forestry, and rotational grazing to improve soil health, enhance water retention, and prevent erosion.
- Promoting the use of organic fertilizers and natural soil amendments to maintain soil fertility without degrading the land.
- Encouraging sustainable land-use planning to prevent land overexploitation and minimize habitat destruction.

#### **Afforestation and Reforestation**

- Planting trees and restoring natural vegetation cover in degraded areas to stabilize soil, increase biodiversity, and mitigate desertification.
- Implementing agro-forestry systems that integrate trees with crops or livestock, providing multiple benefits including improved soil fertility,

enhanced water retention, and increased resilience to drought.

#### **Water Conservation and Management**

- Implementing water-saving technologies such as drip irrigation, rainwater harvesting, and efficient irrigation systems to optimize water use in agriculture and minimize water wastage.
- Investing in water infrastructure such as dams, reservoirs, and water recycling systems to enhance water availability and resilience to drought.

#### **Climate Change Adaptation**

- Developing and implementing climate-resilient agricultural practices that are adapted to changing climatic conditions, including drought-tolerant crop varieties and diversified cropping systems.
- Integrating climate change considerations into land-use planning and natural resource management to anticipate and mitigate the impacts of climate change on land degradation, desertification, and drought.

#### **Community Engagement and Empowerment:**

- Engaging local communities, indigenous peoples, and stakeholders in decision-making processes and empowering them to actively participate in land restoration and conservation efforts.
- Supporting community-based initiatives that promote sustainable land management practices, traditional knowledge, and indigenous land stewardship approaches.

#### **Policy and Governance**

- Enacting and enforcing policies and regulations that promote sustainable land management, prevent land degradation, and protect ecosystems.
- Strengthening land tenure rights, land-use planning mechanisms, and governance structures to ensure equitable access to land resources and prevent land grabbing and overexploitation.

#### **Education and Awareness**

- Raising awareness about the importance of land conservation, desertification prevention, and drought resilience among policymakers, land users, and the general public.
- Providing education and training on sustainable land management practices, climate change adaptation, and water conservation to build

capacity and empower individuals and communities to take action.

By implementing integrated and holistic approaches that combine these strategies, we can effectively overcome land degradation, combat desertification, and build resilience to drought, ultimately contributing to the long-term sustainability of ecosystems and livelihoods.

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