



AIR Discussions (June 3rd Week)

AIR SPOTLIGHT: PM'S ADDRESS AT UN HIGH-LEVEL DIALOGUE ON DESERTIFICATION, LAND DEGRADATION AND DROUGHT DEGRADATION AND DROUGHT

CONTEXT: Prime Minister delivered the keynote address at a United Nations high-level dialogue on Desertification, Land Degradation and Drought.

HIGHLIGHTS OF THE ADDRESS:

- PM spoke in his **capacity as the President of the 14th Session of the Conference of Parties of the United Nations Convention to Combat Desertification (UNCCD).**
- PM said India is on track to achieve its national commitment on land degradation neutrality, and that it's working to **restore 26 million hectares of degraded land by 2030.**
- This would contribute to India's commitment to **achieving an additional carbon sink of 2.5 to 3 billion tonnes of carbon dioxide equivalent.**
- **Land degradation affects over two-thirds of the world today.** If left unchecked, it will erode the very foundations of societies, economies, food security, health, safety and quality of life.
- The **Delhi Declaration of 2019 called for better access and stewardship over land, and emphasised gender-sensitive transformative projects.**
- **Around 3 million hectares of forest cover have been added in the last decade, enhancing the combined forest cover to almost one-fourth of the country's total area.**
- **A Centre of Excellence is being set up in India to promote a scientific approach towards land degradation issues.**
- New Delhi is also assisting fellow developing countries to develop land restoration strategies as part of South-South Cooperation.

Banni region in Rann of Kutch in Gujarat suffers from highly degraded land and receives very little rainfall. In that region, land restoration is done by developing grasslands, which helps in achieving land degradation neutrality. It also supports pastoral activities and livelihood by promoting animal husbandry. In the same spirit, we need to devise effective strategies for land restoration while promoting indigenous techniques.



DESERTIFICATION, LAND DEGRADATION AND DROUGHT-KEY POINTS:

GLOBAL SCENARIO:

- Globally, **one fifth of Earth's land area – more than 2 billion hectares – is degraded**, including more than half of all agricultural land.
- **Each year, more than 12 million hectares of land are lost** to desertification, land degradation and drought (DLDD).
- The **world loses 24 billion tons of fertile soil annually due to dryland degradation**, with significant negative impacts on food production and economic activity.
- **Land degradation affects some 3.2 billion people**, 70% of the world's land has been transformed by human activity.
- IPBES estimates that over 70 per cent of all natural, ice-free land has been transformed by human activity, devastating global biodiversity.
- Around a **quarter of greenhouse gas emissions coming from agriculture, forestry and other land uses**, according to the IPCC Special Report on Climate Change and Land.
- **Droughts and climate change are intensifying the incidence of wildfires that devastated roughly 30 million acres of land in the global north and south from 2018-2020 alone**, causing significant losses in livelihoods, health and biodiversity.
- **By 2025, two-thirds of the world could be living under water-stressed conditions**, with 1.8 billion people experiencing absolute water scarcity.
- Migration is likely to increase as a result of desertification, with estimates that it will be **responsible for the displacement of some 135 million people by 2045**.
- Unsustainable land-use change, including deforestation, has been identified as the **primary driver of emerging infectious diseases**.

INDIAN SCENARIO:

- **Nearly 30% of its land area**, as much as the area of Rajasthan, Madhya Pradesh and Maharashtra put together, has been degraded through deforestation, over-cultivation, soil erosion and depletion of wetlands.
- A 2016 report by the ISRO found that about **29% of India's land (in 2011-13) was degraded, this being a 0.57% increase from 2003-05**.
- In eight states—**Rajasthan, Delhi, Goa, Maharashtra, Jharkhand, Nagaland, Tripura and Himachal Pradesh**—around **40 to 70 per cent of land** has undergone desertification.
- **Loss of soil cover, mainly due to rainfall and surface runoff, is one of the biggest reasons for desertification**. It is responsible for 98 per cent of desertification in the country.
- This land loss is not only **whittling away India's gross domestic product by 2.5% every year** and affecting its crop yield, but also exacerbating climate change events in the country.
- **Over 600 million people risk the impact of climate change in India and if land degradation is not addressed, the problem could get more acute**.
- **India has lost 1.6 million hectare of forest cover over 18 years to 2018**. Degradation of India's forests is depriving the country of 1.4% of its GDP annually, according to TERI.
- Soil degradation in India led to **losses of Rs 72,000 crore- more than the agriculture budget of Rs 58,000 crore in 2018-19**--according TERI.
- Due to deforestation, climate change, water drainage, land encroachment and urban development **every year, 2-3% of total area of wetlands is being lost** across the country.



- 69% of the total geographical area is under dry lands that include arid, semi-arid and dry sub-humid stretches and 600 million people are facing extreme to high water stress

CASE STUDY- FACTORS RESPONSIBLE FOR DLDD IN MOST AFFECTED STATES:

- In Maharashtra, the timber mafia was eating into already thin forests, leading to soil erosion.
- Excessive mining in Jharkhand has triggered soil erosion and aggravated water scarcity in the state.
- Rampant mining and expanding urbanisation has taken a toll on Goa. Lack of planning could, further, degrade land in the state.
- In Nagaland, shifting cultivation, deforestation and rising population are to blame for desertification.
- In Andhra Pradesh, low rainfall and increased dependence on borewells have led to soil aridity, while less snow and more rainfall has deepened the desertification crisis in Himachal Pradesh.
- Overgrazing and encroachment of grassland for agricultural activities have affected Gujarat.
- On the other hand, in Rajasthan, canals, tubewell irrigation and shelterbelts have led to an increase in the green cover.

PROGRESS MADE:

- **UNITED NATIONS CONVENTION TO COMBAT DESERTIFICATION (UNCCD):** It was established in 1994, the sole legally binding international agreement linking environment and development to sustainable land management.
- **THE DELHI DECLARATION OF 2019**, signed by 14th CoP of the UNCCD, called for better access and stewardship over land, and emphasised gender-sensitive transformative projects.
- **THE BONN CHALLENGE:** To bring 150 million hectares of the world's deforested and degraded land into restoration by 2020, and 350 million hectares by 2030.
- **GREAT GREEN WALL:** Initiative by Global Environment Facility (GEF), where eleven countries in Sahel-Saharan Africa have focused efforts to fight against land degradation and revive native plant life to the landscape.
- One of the most impactful developments during the **UN DECADE FOR DESERTS AND THE FIGHT AGAINST DESERTIFICATION (2011-2020)** was the remarkable expansion of scientific knowledge about the drivers, processes and impacts of DLDD.
- Considerable technical progress was achieved in developing solutions to these challenges.
- The inclusion of a specific target under **SDG 15 ('LIFE ON LAND')**, to achieve land degradation neutrality by 2030, reflects the commitment of the international community to make progress on land restoration and reversing land degradation.
- Over 120 countries have already committed to setting voluntary targets to achieve land degradation neutrality.
- **PEACE FOREST INITIATIVE:** It is an initiative of South Korea to use ecological restoration as a peacebuilding process and aims at addressing the issue of land degradation in conflict-torn border areas.



- **INTERNATIONAL COALITION FOR ACTION ON SAND AND DUST STORMS (SDS):** SDS source base map will be developed with the goal of improving monitoring and response to these storms.
- **SUSTAINABILITY, STABILITY AND SECURITY (3S) INITIATIVE:** Launched by 14 African countries to address migration driven by land degradation.
- **STEPS TAKEN BY INDIA:**
 - India is on track to achieve its national commitment on **Land Degradation Neutrality (SDG target 15.3)**.
 - Working to restore 26 million hectares of degraded land by 2030. Over the last 10 years, around 3 million hectares of forest cover has been added.
 - **Initiatives:**
 - National Action Programme for combating desertification was prepared in 2001 to take appropriate action in addressing the problems of desertification.
 - Desertification and Land Degradation of Selected Districts of India, an atlas published by the Indian Space Research Organisation's Space Application Centre (SAC), Ahmedabad
 - Integrated Watershed Management Programme
 - National Afforestation Programme
 - National Mission for Green India
 - NREGA
 - Soil Conservation in the Catchment of River Valley Project
 - National Watershed Development Project for Rainfed Areas
 - Fodder and Feed Development Scheme
 - Command Area Development and Water Management programme
 - Soil Health Card Scheme

Land degradation refers to the loss of life supporting land resource through soil erosion, desertification, salinization, acidification, etc. Land degradation is caused by multiple forces, including extreme weather conditions, particularly drought. It is also caused by human activities that pollute or degrade the quality of soils and land utility.

Desertification is a consequence of severe land degradation and is defined as a process that creates arid, semi-arid and dry sub-humid areas. It accelerates climate change and biodiversity loss, and

WAY FORWARD:

- **Immediate impact steps** such as conservation of wetlands, rangelands and mangroves which absorb huge stocks of GHGs like CO₂ from the atmosphere.
- **Long-term steps:** Planting of trees, reforestation and afforestation.
- **Creation of windbreaks** through afforestation, tree planting and ecosystem restoration programmes that can function as "green walls" and "green dams" that reduce dust and sandstorms and sand dune movement.
- **Build forward better with land-centered solutions:** Investing in nature-based solutions, specifically land restoration, will allow us to build forward better, greener, healthier, stronger, and more sustainably.



- **Regenerative agriculture and restoring natural systems** need a combination of traditional and modern practices, which offers great potential for job creation. Large-scale ecosystem restoration efforts have the potential to create up to 40 jobs for every 1 million dollars invested.
- **Green jobs strategy:** Green Jobs Coordination and Capacity Development, Green Jobs Skills Development , Green Enterprise Development and Access to Markets for Green Products, Green Enterprise Finance
- **Financing Land Restoration – Making The Stimulus Green:** requires coherent policy that aligns project planning, investment, subsidies and tax incentives directly towards these goals.
- **Land Governance – Strengthening Land Tenure:** Strengthening land tenure and rights is a major step to environmental security and includes securing land tenure rights for female farmers

<https://www.wionews.com/india-news/at-unga-pm-modi-highlights-indias-commitments-to-restore-degraded-land-391462>

<https://indianexpress.com/article/india/india-working-towards-restoring-2-6-crore-hectares-of-degraded-land-by-2030-pm-7359043/>

<https://www.unccd.int/high-level-dialogue-desertification-land-degradation-and-drought>

https://www.business-standard.com/article/current-affairs/as-india-hosts-desertification-meet-30-of-its-land-is-already-degraded-119090200088_1.html

<https://www.downtoearth.org.in/news/environment/desertification-setting-in-across-a-quarter-of-india-66407>



PRELIMS SPECIAL: NEWS IN BRIEF

Desertification and Land Degradation Atlas of India

- Government released the Desertification and Land Degradation Atlas of India.
- The Desertification and Land Degradation Atlas of India has **been published by ISRO's Space Application Centre, Ahmedabad.**
- This latest version of the Atlas provides **state wise area of degraded lands for the time frame 2018-19. It also provides the change analysis for the duration of 15 years, from 2003-05 to 2018-19.**
- The **World Day to Combat Desertification and Drought is observed on 17 June.**
- The **theme for 2021 is "Restoration. Land. Recovery. We build back better with healthy land".**

<https://newsonair.gov.in/News?title=World-Day-to-Combat-Desertification-and-Drought-being-observed-today&id=419833>

<http://newsonair.com/2021/06/14/pm-modi-to-deliver-a-keynote-address-at-un-conference-on-desertification-land-degradation-and-drought-today/>

Flag Satyagraha

- The Flag Satyagraha is a **campaign of peaceful civil disobedience during the Indian independence movement that focused on exercising the right and freedom to hoist the nationalist flag.**
- The movement was **largely held in Jabalpur and Nagpur in 1923** but it also spread to some other parts of the country.

<https://newsonair.gov.in/News?title=Azadi-Ka-Amrit-Mahotsav%3A-%26%2339%3BZenda-Satyagraha%26%2339%3B-programme-organised-to-mark-importance-of-National-Flag-in--Maharashtra&id=419956>

Biotech-KISAN Programme

- DBT issued a **Special Call under Biotech KISAN Programme** for improving Agriculture Productivity in the **North East Region.**
- It is a **farmer-centric scheme for farmers, developed by and with farmers under the Department of Biotechnology, Ministry of Science and Technology.**
- It is a pan-India program, **following a hub-and-spoke model and stimulates entrepreneurship and innovation in farmers and empowers women farmers.**
- The Biotech-KISAN hubs are expected to fulfil the technology required to generate agriculture and bio-resource related jobs and better livelihood ensuring biotechnological benefits to small and marginal farmers.

<https://newsonair.gov.in/News?title=DBT-issues-special-call-under-Biotech-KISAN-scheme-for-improving-agriculture-productivity-in-NE-Region&id=419982>



INS Trikand

- Naval Ship Trikand, a **mission deployed for Anti-Piracy Operations**, participated in the maiden IN - EUNAVFOR Joint Naval Exercise in the Gulf of Aden.
- The two-day exercise will see high tempo-naval operations at sea, including advanced air defence and anti-submarine exercises, cross deck helicopter operations, tactical manoeuvres, boarding operations, underway replenishment, Search and Rescue.
- **Operation Atalanta, formally European Union Naval Force (EU NAVFOR) Somalia, is a current counter-piracy military operation at sea off the Horn of Africa and in the Western Indian Ocean**, that is the first naval operation conducted by the European Union (EU).

<https://newsonair.gov.in/News?title=INS-Trikand%2c-mission-deployed-for-Anti-Piracy-Operations-participating-in-maiden-IN---EUNAVFOR-Joint-Naval-Exercise-in-Gulf-of-Aden&id=419917>