

2025 G7 Leaders' Summit in Kananaskis, Canada Concludes

India participated as an Outreach Country in 51st G7 Summit (2025) held in Kananaskis, Canada.

The 51st G7 Summit (2025) Summit Outcomes:

- **Kananaskis Wildfire Charter:** Aligns with commitments to halt and reverse deforestation and forest and land degradation by 2030 globally (**Glasgow Leaders' Declaration on Forests and Land Use, 2021**)

☉ The Charter was endorsed by India.

- **Launched G7 Critical Minerals Action Plan:** It builds on the Five-Point Plan for Critical Minerals Security established during Japan's G7 Presidency in 2023. (**Also, endorsed by India**).

☉ Also, G7 committed to strengthen World Bank-led **Resilient and Inclusive Supply Chain Enhancement (RISE) Partnership**.

- **G7 Condemned Transnational Repression (TNR):** TNR

is an aggressive form of foreign interference whereby states or their proxies attempt to intimidate, harass, harm or coerce individuals or communities outside their borders.

- **Commit to Prevent migrant smuggling:** Through the **G7 Coalition to Prevent and Counter the Smuggling of Migrants** and the **2024 G7 Action Plan to Prevent and Counter the Smuggling of Migrants**.

- **Canada as G7 presidency launched:** The G7 GovAI Grand Challenge and will host a series of "Rapid Solution Labs" to design innovative, scalable solutions addressing key barriers to AI adoption within the public sector.

☉ Intends to close digital divides in line with the **United Nations Global Digital Compact**.

Addressing the **G7 Outreach Session**, the Prime Minister put forth **pressing questions for the international community**:

- Will countries understand the **grave threat posed by terrorism** only when they **become a target**?
- How can **perpetrators of terror** and **its victims** be equated?
- Will **global institutions** be **mute spectators** to terrorism?

About G-7 Summit

- International forum **held annually** for the leaders of the **G7 member states - France, USA, United Kingdom, Germany, Japan, Italy, and Canada (in order of rotating presidency), and European Union (EU)**.

- **Genesis:** Formed in **1970s (during energy crisis)** to coordinate policies on macroeconomy, currency, trade, and energy.

Revised Mission Document of the National Mission for a Green India (or Green India Mission (GIM) unveiled

Ministry of Environment, Forest and Climate Change (MoEFCC) unveiled the document on the occasion of **World Day to Combat Desertification and Drought** (June 17).

About Green India Mission

- **Genesis:** Launched in 2011. It is one of the **eight missions** under the **National Action Plan on Climate Change (NAPCC)**.

➤ **Objectives:**

- ☉ Increase forest and tree cover on forest/non-forest lands (Afforestation over 24 million hectares will be taken up)
- ☉ Improve ecosystem services including carbon sequestration
- ☉ Creation of an additional **carbon sink** of 2.5 to 3.0 billion tonnes of CO₂ equivalent by 2030, etc.

➤ **Three Sub-Missions**

- ☉ Improve forest quality and ecosystem services
- ☉ Increase forest/tree cover and restore ecosystems
- ☉ Enhance and diversify incomes of forest-dependent communities.

- **Funding:** Part of the funding will come from Mission's allocation and the rest from the **National CAMPA (Compensatory Afforestation Fund Management and Planning Authority) Fund**.

- **Timeline:** 10 years (2021-2030)

- **Implementation:** Follows a **bottom-up model** with **Joint Forest Management Committees (JFMCs)** as key implementers.

Key Mission Strategies (linked to India's Nationally Determined Contribution (NDC) Commitments)

- **Adoption of Micro-Ecosystem Approach:** It will focus on highly **vulnerable** landscapes like **Aravallis, Western Ghats, Arid regions of North West India, Mangroves, Indian Himalayan Region (IHR)**, etc.
- **Private Sector Involvement:** E.g. Use **Corporate Social Responsibility (CSR)** funds for restoring critical areas or supporting villages through committed individuals.
- **Carbon Markets:** Use voluntary carbon markets to sell carbon credits from forestry and agroforestry plantations.
- **Pro-active Green India Force:** A cadre of willing, dedicated and trained youths, will help in implementation of the interventions and the upkeep and maintenance of the assets.

A New Landmark Study Has Pinpointed the Location of the Universe's "missing" Ordinary Matter

Harvard & Smithsonian (CfA) and Caltech, **for the first time**, detected the universe's **missing ordinary matter** using powerful **cosmic signals known as Fast Radio Bursts (FRBs)**.

➤ Previously, scientists have known that at least half of the universe's ordinary, or baryonic matter was unaccounted for.

Distribution of Ordinary Matter Across the Universe

- **76% in intergalactic medium (IGM)** (the thin gas between galaxies).
- **15% in galaxy halos** (outer regions surrounding galaxies)
- **9% within galaxies** (consist of stars, planets, and vast clouds of gas and dust, all bound together by gravity).

About Fast Radio Bursts (FRBs)

➤ **Definition:** FRBs are blasts of **electromagnetic radiation** in the form of **radio waves** usually emanating from **galaxies beyond our own (The Milky Way)**.

- ⊕ FRBs have durations ranging **from milliseconds to just a few seconds**.

How Fast Radio Bursts (FRBs) Helped Solve the Mystery?

- FRBs acted as **"cosmic flashlights"**. As FRBs travel through space, they:
 - ⊕ **Disperse into different wavelengths**, like a prism spreading sunlight.
 - ⊕ **The degree of dispersion** reveals the **amount of matter** in their path.
- FRBs provided the **first direct measurement** of matter distribution across the **cosmic web** & established themselves as a reliable **cosmological probe**.

Ordinary Matter (baryonic matter) Vs. Dark Matter

- **Ordinary Matter includes:** Gas, Dust, Stars, Planets & Everyday substances (like water), **that does interact** with electromagnetic radiation (i.e., **light**).
 - ⊕ It constitutes **~15% of all matter** in the universe.
 - ⊕ Unlike dark matter, ordinary matter is composed of **baryons** (include protons, neutrons)
- **Dark Matter:** It's a mysterious substance that accounts for around 85% of the material universe but remains invisible because **it doesn't interact with light**.
 - ⊕ Dark matter interacts **very weakly or almost not at all** with the ordinary matter.
- **Similarities:**
 - ⊕ Both are matter, meaning they have **mass and take up space**.
 - ⊕ Both **exert gravitational force**.

India marks 50 years of its Crocodile Conservation Project in 2025

On the eve of World Crocodile Day (June 17) India is celebrating 50 years of its Crocodile Conservation Project

About Crocodile Conservation Project:

- **Project Launch (1st April, 1975):** Based on **H.R. Bustard's** recommendations, the Crocodile Conservation Project was formally launched across various States.
- **Objective:** Protect Crocodile's natural habitats and rebuild the population quickly through captive breeding.
- **Technical and financial support:** from UNDP/FAO through the Government of India.

Crocodile Conservation Success in India

- **Odisha's Unique Role:** The **only** state in India with conservation centres for all three native crocodilian species:
 - ⊕ **Tikarpada (Satkosia)** for gharials; **Dangamal (Bhitarkanika)** for saltwater crocodiles; **Ramatirtha (Similipal)** for mugger crocodiles.
- **Saltwater Crocodile & Mugger Recovery:**
 - ⊕ **Saltwater crocodile population** has recovered to around **2,500 individuals**, with Bhitarkanika in Odisha hosting the largest share. Also found in Andaman & Nicobar Islands and Sundarbans (West Bengal)
 - ⊕ **Mugger crocodile population** has rebounded to **8,000–10,000 individuals**, reclaiming most of its historical range (i.e., Ganga River drainage).
- **Gharial Conservation:** 400+ gharial nests recorded annually across **National Chambal Sanctuary** (spanning 3 States), **Katarnia Ghat Wildlife Sanctuary**, **Gandak River**, **Corbett Tiger Reserve**, and **Son Gharial Sanctuary**.
 - ⊕ India now holds **80% of the global wild gharial population**.

Ongoing Conservation Efforts:

- In **2025**, India announced a new **Gharial Conservation Project**, aiming to expand gharial populations across the **Ganges**, **Brahmaputra**, and **Indus** rivers, as well as **Mahanadi** in Odisha.
- **Madras Crocodile Bank:** Breeding crocodiles and supporting reintroduction programmes.

Indian Crocodile Species

Conservation Status



Saltwater Crocodile
Estuarine Crocodile, Saltie
IUCN: LEAST CONCERN
WPA: Schedule I
CITES: Appendix I



Marsh Crocodile
Mugger, Broad-snouted Crocodile
IUCN: VULNERABLE
WPA: Schedule I
CITES: Appendix I



Gharial
Fish Eating Crocodile, Indian Gavial, Long Nosed Crocodile
IUCN: CRITICALLY ENDANGERED
WPA: Schedule I
CITES: Appendix I

IUCN: International Union for Conservation of Nature
WPA: Wildlife Protection Act (India)

CITES: Convention on International Trade in Endangered Species

About Crocodiles

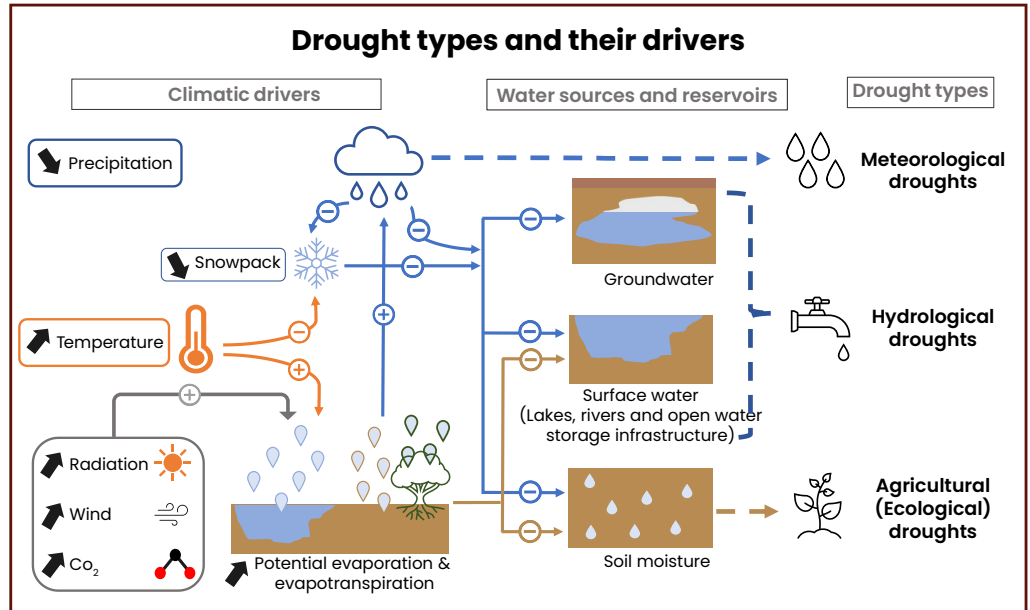
- **Diversity:** There are 13 different crocodile species, including the Nile crocodile, the saltwater crocodile, etc.
 - ⊕ Of these **three native species** of crocodilians are found in India (refer table).
- **Largest living reptile:** The saltwater crocodile is the largest crocodile and Earth's largest living vertebrate class reptile.
- **Characteristics:** Nocturnal animals; and are poikilothermic (regulate their body temperature only to a limited degree).

Global Drought Outlook, 2025 released

The report has been released by the **Organisation for Economic Co-operation and Development (OECD)**.

Key findings

- **Increase in severity:** 40% of the world's land area faces increasingly frequent and severe droughts.
 - ⊕ Some of the recent examples of major droughts include **Europe (2022), California (2021), Horn of Africa & Somalia, etc.**
- **Economic impact:** 3% - 7.5% annual increase in the economic cost of an average drought episode.
 - ⊕ Countries like India, Australia, etc. may face water-related disruptions in the operations of hydroelectric power stations.
 - ⊕ Inland water transport is impacted (E.g. recent drought in panama canal).
 - ⊕ Crop yields can **decline by up to 22%.**
- **Ecological:**
 - ⊕ **Reduction in soil moisture:** Since 1980, 37% of global land has experienced significant soil moisture decline.
 - ⊕ **Groundwater decline:** Groundwater levels are falling globally, with 62% of monitored aquifers in decline.
- **Other:**
 - ⊕ Droughts are responsible for 34% of **disaster-related deaths** (World Meteorological Organization (WMO), 2021) and exacerbate **poverty, inequality** and **displacement**.



Key Initiatives for prevention of Droughts

- **Global**
 - ⊕ **United Nations Convention to Combat Desertification (UNCCD)'s Drought Initiative**
 - ⊕ **International Drought Management Program**, jointly led by the **World Meteorological Organization** and the **Global Water Partnership**.
- **India:** National Agricultural Drought Assessment and Monitoring System (NADAMS), **Watershed Development** (Component of Pradhan Mantri Krishi Sinchai Yojana (WDC-PMKSY)), **Atal Bhujal Yojana**, etc.

Also In News



SCIAP

Under **Swachh Bharat Mission-Urban (SBM-U)**, certain cities are integrating electric vehicles (EVs) into household waste collection.

- This is supported by the **Sustainable Cities Integrated Pilot Approach (SCIAP) Project**.

About SCIAP (2016)

- The project aims to address **UN-Habitat's commitments** to support India in promoting sustainable urban planning and management.
- It is **funded by Global Environment Facility (GEF)** and executed by **United Nations Industrial Development Organization (UNIDO)** and **UN-Habitat** in collaboration with **Ministry of Housing and Urban Affairs (MoHUA)**.
- Project is underway in **five pilot cities** – Bhopal, Guntur, Mysore, Vijayawada, and Jaipur.



Nonia Rebellion

Union Minister for Agriculture paid tributes to freedom fighter **Buddhu Nonia** at his centenary celebrations and hailed nonia community for **Nonia Rebellion in 1770s**.

- Responding to Gandhi ji's call during the Salt Satyagraha, **Buddhu Nonia** took part in making salt. He was deceitfully arrested and killed.

About Nonia rebellion

- **Around 1770, two major uprisings took place:** the Sanyasi Rebellion and the Nonia Rebellion (**continued for 30 years around 1750**).
- **Aim:** To drive out the British.
- **Epicentre:** Hajipur, Tirhut, Saran and Purnia of Bihar by the Lonia community.
 - ⊕ The word Lonia is derived from the Sanskrit word for **salt – lavan**.
 - ⊕ The community was associated with making **saltpetre, acid and sulfur**.



Synthetic Aperture Radar

NASA-ISRO SAR (Synthetic Aperture Radar) mission has arrived at ISRO's spaceport in Sriharikota for its launch.

- NISAR will scan nearly all of earth's land and ice surfaces twice every 12 days.

About the Synthetic Aperture Radar

- It is a way to make sharp pictures even when it's dark or cloudy using a radar system.
- **Working:** Instead of using visible light like a regular camera, SAR systems send out pulse of energy (e.g., microwave) and record the echoes that bounce back from the ground, ocean, etc.
- **It can collect data 24/7**, since microwaves penetrate clouds, smoke, and even light rainfall.



Exercise Shakti

The exercise will be conducted at Camp Larzac, La Cavalerie, France
About Exercise Shakti (Army)

- **Type:** Biennial joint military exercise between India and France.
- **Other Joint Exercises with France:** Exercise Varuna (Navy) & Exercise Garuda (Airforce).



Nothopegia

Researchers have discovered 24–23-million-year-old fossilized leaves.
Key Findings

- **Discovery:**
 - ⊕ Fossil leaves identified as belonging to the genus **Nothopegia** (now found only in the **Western Ghats**).
 - ⊕ **Oldest known fossil record** of this genus.
- **Migration & Extinction:** Nothopegia disappeared from Northeast India due to:
 - ⊕ Himalayan uplift led to cooling of Climate.
 - ⊕ Changes in rainfall, wind patterns.
 - ⊕ Survived in Western Ghats due to stable tropical conditions.

About Nothopegia genus

- **Distribution:** Restricted to India, Bangladesh, and Sri Lanka.
- **Species:** The genus has 10–11 known species, with 8 found in India, mostly in the Western Ghats and southwestern regions.



Shipki La pass

Himachal Pradesh (HP) has opened the Shipki La pass, a motorable mountain pass in the Kinnaur district, to domestic tourists.

- It was closed after **Doklam standoff**, 2020.

About Shipki La Pass

- **Connects India and Tibet (China).**
 - ⊕ The old name of Shipki La was Pema La, or Shared Gate but Indo-Tibetan Border Police named it Shipki La.
- **Sutlej River** (known as Langqen Zangbo in Tibet) enters India through Shipki La.

Other important passes in Himachal Pradesh: **Baralacha La** (Lahul and Spiti with Ladakh), **Rohtang La** (Kullu valley to Lahaul and Spiti), **Shingo La/ Shinku La** (HP to Ladakh), and **Borasu Pass** (HP to Uttarakhand).



River Dhansiri

Researchers developed policy proposals to **revive Dhansiri** after studying its **pollution status**.

About Dhansiri river

- **Origin:** Originates from **Laisang peak of Nagaland**.
 - ⊕ **Course:** Flowing as the boundary between **Karbi Anglong and Nagaland**.
 - ⊕ **Sub- tributaries:** Kakodonga & Bhogdoi.
- **Confluence:** Joining **Brahmaputra** on its south bank.
- **Support wildlife:** Flanked by **Dhansiri Reserved Forest** and **Intangkli National Park**.



Barak Magen

Barak Magen (the Hebrew name of Lightning Shield) is Israel's Shield against Iranian drones.

About Barak Magen

- It is an **advanced naval air defense system** developed by **Israel Aerospace Industries (IAI)**.
- **Designed to counter a broad spectrum of threats** including UAVs (drones); Cruise missiles; High-trajectory projectiles; Shore-to-sea missiles.

Other Major defence systems of Israel: Iron Dome, David's Sling, Arrow System, Laser Iron Beam, etc.

- For David's Sling and Arrow System Israel collaborated with US.

Place in News



Iran (Capital: Tehran)

The IAEA confirmed damage to uranium enrichment halls at **Iran's Natanz site** from Israeli airstrikes during **Operation Rising Lion**, using satellite images.

- **Other Key Nuclear Facilities of Iran:** **Fordow** enrichment facility, **Bushehr** nuclear power plant, **Isfahan Nuclear Technology Center**, etc.

Political Features:

- **Location:** Middle East, borders Gulf of Oman and Persian Gulf (South) Caspian Sea (North).
- **Bordering Countries:** Armenia, Azerbaijan (North) Iraq (West) Turkey (Northwest), Afghanistan & Pakistan (East) & Turkmenistan (North and Northeast).

Geographical Features:

- **Landform:** Dominated by the Iranian Plateau, with deserts (**Dasht-e Kavir**, **Dasht-e Lut**).
- **Major Mountains:** Zagros Mountains (West) and Alborz Mountains (North).



AHMEDABAD



BENGALURU



BHOPAL



CHANDIGARH



DELHI



GUWAHATI



HYDERABAD



JAIPUR



JODHPUR



LUCKNOW



PRAYAGRAJ



PUNE



RANCHI