

# **Daily Current Affairs** To The Point by Dhananjay Gautam

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**GS Paper 3** – Environment and Ecology

# Uniyala keralensis: Kerala's Botanical Gem

**Context:** Researchers have identified a **new plant species**, now officially named **Uniyala keralensis**, in honor of the **Indian state of Kerala**. This fascinating species belongs to the **Asteraceae family** and is found exclusively in the **southwestern region of India**.

#### **Unique Characteristics:**

Uniyala keralensis is a **versatile shrub**, varying in size from **one to three meters** in height. It stands out with its **delicate light purple florets**, adding charm to its natural surroundings. This species is distinguished by:

• Larger leaves, providing a unique texture



- Elongated petioles, the slender stalks attaching leaves to stems
- Fewer lateral veins, differentiating it from closely related species

#### Past, Presen<mark>t & Futur</mark>e:

- **Past**: The plant has likely existed for centuries, quietly thriving in the biodiverse landscapes of Kerala, unnoticed by science until recently.
- Present: The species currently flourishes in open landscapes along the western mountain slopes of the Agasthyamala Biosphere Reserve (ABR), at elevations between 700 and 1,400 meters. It blooms and bears fruit from August to April.
- **Future**: With ongoing **habitat changes and climate fluctuations**, further studies are required to assess its long-term survival. Conservation measures may be necessary to ensure its sustainability.

#### **Population & Conservation Status:**

The known population consists of around **5,000 individuals** spread across **four subpopulations**, covering an area of approximately **250 km<sup>2</sup>**. However, due to limited data, **Uniyala keralensis** has been classified as **Data Deficient (DD)** under the **IUCN Red List Criteria (2024)**.

This **exciting discovery** adds to the **rich biodiversity of Kerala**, reinforcing the importance of **botanical research and conservation**. With more scientific exploration, **Uniyala keralensis** could become a symbol of Kerala's **natural heritage and ecological significance**.



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Raisina Dialogue: Shaping the Future of Global Diplomacy

**Context:** The **Raisina Dialogue 2025** is set to bring together global leaders, including **New Zealand Prime Minister Christopher Luxon**, foreign ministers from **at least 18 nations**, top corporate executives, and foreign policy experts. This high-profile gathering will take place in **New Delhi**, reinforcing its status as a premier platform for global discussions.

#### What is the Raisina Dialogue?



The **Raisina Dialogue** is **India's leading conference on geopolitics and geo-economics**, dedicated to addressing the world's most pressing DIALOGUE 2025 challenges.

- Inspired by the Munich Security Conference and the Shangri-La Dialogue, it serves as a global forum for policy discussions.
- It has been held **annually since 2016** in **New Delhi**, growing in prominence each year.
- The dialogue is designed as a **multi-stakeholder platform**, bringing together **heads of state, cabinet ministers, government officials, business leaders, media professionals, and academics** for indepth discussions on global affairs.
- Hosted by the Observer Research Foundation (ORF) in collaboration with the Ministry of External Affairs, Government of India, the event is backed by numerous organizations committed to fostering meaningful international dialogue.

Past, Present & Future:

- **Past**: Since its inception in 2016, the Raisina Dialogue has evolved into a major diplomatic forum, attracting influential voices from around the world. Each year, it has tackled critical issues such as security, trade, technology, and sustainability.
- **Present**: The **2025 edition** will focus on the theme **"Kalachakra: People. Peace. Planet."**, highlighting the interconnectedness of humanity, global stability, and environmental sustainability.
- **Future**: With the world facing complex geopolitical shifts, climate challenges, and emerging technologies, the **Raisina Dialogue is expected to play an even greater role in shaping policies and fostering global cooperation** in the coming years.

This **prestigious conference** not only strengthens **India's diplomatic leadership** but also provides a **crucial platform for global dialogue**, ensuring that diverse perspectives contribute to the resolution of global challenges.



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**GS Paper 2** – Governance and Social Justice

# PM-YUVA 3.0: Nurturing the Next Generation of Indian Authors

**Context:** The **Ministry of Education, Department of Higher Education** has recently launched **PM-YUVA 3.0** – the **Prime Minister's Scheme for Mentoring Young Authors**. This initiative is designed to **foster a culture of reading, writing, and literary excellence** among India's youth.

#### What is PM-YUVA 3.0?

PM-YUVA 3.0 is a prestigious mentorship program aimed at young and

**aspiring writers below the age of 30**. The scheme provides guidance and support to **budding authors**, helping them articulate their perspectives on **India's past**, **present**, **and future** through literary works.

#### **Key Objectives:**

- Develop a **new generation of Indian writers** who can contribute meaningful narratives.
- Encourage young minds to write on significant themes such as:
  - o The Contribution of the Indian Diaspora in Nation-Building
  - o Indian Knowledge Systems
  - Makers of Modern India (1950-2025)
- Offer a platform for emerging authors to express their ideas and showcase India's rich heritage and evolving identity.

## Past, Presen<mark>t & Futu</mark>re of PM-YUVA

- **Past**: The earlier editions, **PM-YUVA 1.0 and 2.0**, successfully mentored **talented young writers** and created a **vibrant literary movement**. The initiative has already given rise to impactful books on India's history, culture, and contemporary affairs.
- **Present**: The **PM-YUVA 3.0 edition** is set to be **bigger and better**, offering structured mentorship, **financial support**, and global exposure to selected writers.
- Future: By shaping India's literary landscape, this scheme aims to cultivate a strong intellectual foundation for the nation, ensuring future generations have access to insightful, well-researched works reflecting India's diversity and dynamism.

#### **Exciting Features of PM-YUVA 3.0:**

- Selection Process:
  - Participants must submit a **10,000-word book proposal**, including a **2,000-3,000 word synopsis**, a **chapter outline**, **sample chapters (7,000-8,000 words)**, and **references**.
  - A **panel of experts** appointed by **National Book Trust (NBT), India** will select **50 talented authors**.
  - **Previous PM-YUVA winners (1.0 & 2.0) are ineligible** for this edition.
- Mentorship & Exposure:
  - Selected writers will work with **renowned authors and literary experts**.
  - They will participate in **literary festivals**, fostering an exchange of ideas on national and global platforms.

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- The books will be **published by the National Book Trust, India** and **translated into multiple Indian languages** to promote **'Ek Bharat Shreshtha Bharat'**.
- A royalty of 10% will be granted upon successful publication.
- Financial Support:
  - Each selected author will receive a **monthly scholarship of 50,000 for six months**, totaling **3 lakh**.
  - Authors will be given **opportunities to promote their books**, encouraging a **reading and writing culture across India**.

## A Step Towards a Literate & Informed India:

PM-YUVA 3.0 is not just a **writing program**—it is a **nation-building initiative** that empowers **young storytellers to shape India's literary and intellectual future**. By fostering **original voices and diverse perspectives**, this scheme ensures that **India's rich heritage and progressive journey** continue to inspire generations to come.

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**GS Paper 3** – Science and Technology

#### Impact of Greenhouse Gas Emissions on Satellite Sustainability

**Context:** A groundbreaking study published in **Nature Sustainability** has revealed a critical link between **rising greenhouse gas (GHG) emissions** and the **long-term sustainability of satellites** in Earth's orbit. The study warns that increasing emissions could significantly **reduce the number of satellites that can safely operate in space**, posing a challenge for global communications, navigation, and scientific research.



#### How Greenhouse Gas Emissions Affect Earth's Upper Atmosphere:

The upper atmosphere comprises the mesosphere (50-85 km) and the thermosphere (85-600 km).

- **Rising GHG levels** cause more **infrared radiation** to escape into space, leading to **cooling and contraction** of the atmosphere.
- Atmospheric contraction reduces air density in Low Earth Orbit (LEO), which affects satellite movement.
- Lower air density leads to weaker atmospheric drag, allowing space debris to remain in orbit longer.
- The accumulation of **non-deorbiting debris increases the risk of satellite collisions**, worsening **space congestion** and making future satellite missions more challenging.

#### Projected Impact on Satellite Sustainability:

Researchers from **MIT Cambridge** analyzed different **emission scenarios**, using **greenhouse gas levels from the year 2000** as a baseline. Their findings indicate:

- Under the worst-case emission scenario (SSP5-8.5), the number of sustainable satellites in LEO could drop by 50-66% by 2100.
- Deorbiting rates of satellites and debris are expected to decline under moderate-to-high CO<sub>2</sub> emission scenarios, further exacerbating congestion in orbit.

#### Understanding the Shared Socio-economic Pathway (SSP5-8.5):

The SSP5-8.5 scenario is one of the five Shared Socioeconomic Pathways (SSPs) used in climate modeling by the Intergovernmental Panel on Climate Change (IPCC). It represents an extreme high-emission future with:

**Key Features:** 

✓ Severe Climate Impact

- CO<sub>2</sub> concentration rises drastically, leading to a **global temperature increase of 4-5°C by 2100**.
- More frequent **extreme weather events**, **rising sea levels**, and **biodiversity loss**.

#### ✓ Fossil Fuel Dependency

- Energy demand continues to be met by **coal**, **oil**, **and gas**.
- Minimal adoption of renewable energy, leading to worsening environmental conditions.

What Lies Ahead?

- If **GHG emissions** continue at current rates, the **space environment** will face unprecedented challenges:
- Increased risk of satellite collisions due to prolonged orbital debris lifespan.
- Higher costs and risks for future satellite launches and operations.
- Potential disruptions in global satellite-dependent systems, including GPS, climate monitoring, and communication networks.

#### **Urgent Action is Needed!**

• The study underscores the **need for sustainable space management**, reduced emissions, and better **debris mitigation strategies** to ensure **satellite sustainability for future generations**.

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GS Paper 2 – Tribal identity, Classification, and Policy reforms

Anthropologists Call for a New Framework to Identify Scheduled Tribes

**Context:** Experts and **anthropologists** are advocating for a **paradigm shift** in how **tribes** are identified in India. Instead of a **rigid binary classification**, they propose a **"spectrum of tribalness"** that assesses communities on multiple dimensions.

This demand gains significance amid **rising claims for Scheduled Tribe (ST) status**, including those by the **Meitei community in Manipur**.



## **Obsolete Criteria: A Need for Change**

Currently, the **Union government** follows the **Lokur Committee (1965) criteria**, which include:

- Primitive traits
- Distinctive culture
- Geographical isolation
- Shyness of contact with the larger community
- Backwardness

However, experts argue that these criteria are **outdated**, **condescending**, **and ineffective**. No community fully meets these definitions, making them unsuitable for modern **policy decisions**.

#### A New Approach: Spectrum-Based Classification:

Scholars propose **moving away from rigid criteria** and introducing a **matrix or spectrum-based system** with **weighted indicators** to determine a community's degree of tribalness.

Both the Anthropological Survey of India (AnSI) and the National Commission for Scheduled Tribes (NCST) are actively working on a systematic classification tool for better assessment.

## **Proposed Indicators for Tribal Identity:**

Experts suggest incorporating both **tangible and intangible** aspects, including:

- **Social institutions** Marriage patterns, kinship structures, classification of relatives
- Rituals and traditions
- Language and dialects
- Material culture Traditional headgear, weaponry, artifacts
- Self-identification by the community itself

A potential classification tool may include **over 150 indicators**, providing a **more holistic** approach than the **existing five criteria**.

## **Concept Note & Policy Impact:**

• A concept note highlights the challenges in defining tribes and emphasizes the need for a refined classification system. This tool will enable Tribal Research Institutions (TRIs) to prepare accurate ethnographic reports, aiding in policymaking and governance.

## **Rising Demands for ST Status & Social Conflicts:**

Currently, India recognizes 756 ST entries, including sub-entries. Since the 2011 Census, 27 new communities have been added. However, hundreds of communities continue to demand ST status, *Download Our Application*

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leading to inter-community tensions—for instance, the Meitei vs. Kuki-Zo & Naga tribes in Manipur.

**Civilizational vs. Evolutionary Approach:** 

• Experts recommend shifting from an **evolutionary model** (used in **Australia and China**) to a **civilizational or historical model**. This ensures that communities are understood **as they perceive themselves**, rather than being categorized **as the "other" by external observers**.

**Conclusion: Towards a Fair and Inclusive System** 

A revised classification framework will enable better governance, equitable distribution of benefits, and conflict resolution. The focus should be on cultural identity, historical factors, and self-identification, rather than relying on outdated colonial-era definitions.

This **progressive approach** will help ensure that **tribal communities receive the recognition and support they truly deserve**.

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**GS Paper 3** – Environment and Ecology

## Deep-Sea Creatures Rising to the Surface: A Warning from the Ocean?

**Context:** In recent months, **deep-sea creatures** like the **anglerfish** and **oarfish**, typically found in the ocean's darkest depths, have been appearing near the surface in various locations. This unusual phenomenon has sparked **scientific inquiry** and **public concern**, with some linking it to **climate change**, **seismic activity**, and **oceanic disruptions**.

The Black Sea Devil: A Rare Surface Encounter:

One of the most **astonishing sightings** occurred in **February 2025**, when the **Black Sea Devil anglerfish** was filmed alive near the surface off the coast of **Tenerife**.

#### **Unique Features of the Anglerfish:**

- Resides in the **bathypelagic zone** (Midnight Zone), where sunlight never reaches.
- Uses a **bioluminescent lure** to attract prey.
- Has **razor-sharp teeth** and an expandable stomach to consume prey **twice its size**.
- Exhibits extreme sexual dimorphism—males, significantly smaller, attach to females as permanent parasites.

## The Oarfish: A Harbinger of Disaster?

The **oarfish**, a **long, ribbon-like deep-sea fish**, has been linked to **earthquake predictions** in folklore.

#### Myth vs. Science

- In Japanese folklore, the oarfish is called **Ryūgū no Tsukai** or **"Messenger of the Sea God"**.
- Sightings occurred before the **2011 Fukushima earthquake**, fueling beliefs that they **predict seismic activity**.
- **Recent sightings** in **Baja California and the Canary Islands** have reignited similar fears.

## Scientific Facts about Oarfish:

- Typically found at depths of **200 to 1,000 meters**.
- Holds the title of longest bony fish, reaching up to 36 feet (11 meters).
- Swims using **amiiform movement**, undulating its dorsal fin while keeping its body straight.
- Feeds on zooplankton, shrimp, jellyfish, and small fish.

# Scientific Explanations: Why Are Deep-Sea Creatures Rising?

While folklore suggests these sightings **foretell disasters**, scientists offer **logical explanations**:

## 1. Climate Change & Warming Oceans:

- The ocean absorbs nearly 90% of excess heat from global warming, affecting marine currents and oxygen levels.
- Deep-sea creatures may be forced into **shallower, cooler waters** to **survive**.

## 2. Underwater Seismic Activity:

• Some researchers believe **seismic shifts** release **gas bubbles**, **electrostatic charges**, **or toxic compounds** like hydrogen peroxide.

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These disturbances could **disorient deep-sea species**, causing them to surface.

## 3. El Niño & La Niña Effects:

These climate cycles alter temperature and ocean currents, leading to unpredictable marine movements.

#### 4. Increased Human Observation:

With **advancements in technology** and **social media**, rare deep-sea sightings are now **more widely documented**, giving the **impression** that they are happening more frequently than before.

## **Conclusion: A Wake-Up Call from the Ocean?**

The rise of deep-sea creatures to the surface is a rare but growing phenomenon. Whether it signals ecological distress, climate change impacts, or simply an increase in human awareness, it underscores the need for deeper oceanic research.

While **folklore and myths** add an element of mystery, science provides **critical insights**—suggesting that these creatures may be revealing **hidden changes** in the planet's most uncharted realm: the **deep sea**.

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