

NEWS TODAY

Thriving Deep-Sea Ecosystems Discovered in Antarctica After Iceberg Detaches from George VI Ice Shelf

The discovery came from Challenger 150 initiative which is endorsed by UNESCO/ Intergovernmental Oceanographic Commission (IOC) as part of the Ocean Decade Action (2021-2030).






Key Findings

- **Flourishing Ecosystems:** At depths of up to 1,300 meters (**Mesopelagic Zone**), ecosystems were thriving, with large corals and sponges as well as supporting diverse animal. E.g., icefish & giant sea spiders.
 - ⊕ These ecosystems had been isolated under **150-meter-thick ice** for centuries, completely cut off from surface nutrients, **essential for deep-sea life**.
- **New Species Discovered:** Giant-sea spiders, Octopi, giant phantom jellyfish (can grow up to 1 meter wide), Vase-shaped sponge (possibly hundreds of years old).

About Deep-Sea Ecosystem

- **Definition:** Defined as the sea and seabed below 200m, the aphotic zone (**where light fades**) makes up **90% of Earth's marine environment**, representing the **planet's largest biome**.
- **Unique Deep-Sea Habitat and Biodiversity:**
 - ⊕ **Abyssal Plains:** Dark and muddy seafloor; Species rely on **marine snow for sustenance**. E.g., Sea cucumbers.
 - ◆ **Marine Snow:** Consists of **organic matter drifting down from ocean surface**; serve as **food & aid carbon sequestration**.
 - ⊕ **Hydrothermal Vents:** Hot, mineral-rich towers; Species rely on **chemosynthetic bacteria** for sustenance. E.g., Tubeworms and Yeti crabs
 - ⊕ **Whale Falls:** As whale carcass sinks, it creates a temporary ecosystem, supporting scavengers. E.g. Hagfish.

An Overview of Deep-Sea Ecosystem

Biodiversity's Adaptation	Significance
<div style="display: flex; align-items: center; margin-bottom: 10px;">  <div style="margin-left: 10px;"> <p>Bioluminescence:</p> <p>Species produce light to attract prey, mates, or confuse predators. E.g., Anglerfish & Ctenophores.</p> </div> </div> <hr/> <div style="display: flex; align-items: center; margin-bottom: 10px;">  <div style="margin-left: 10px;"> <p>Vertical Migrations</p> <p>Zooplankton and fish migrate daily, feeding at the surface and returns to deeper levels.</p> </div> </div> <hr/> <div style="display: flex; align-items: center;">  <div style="margin-left: 10px;"> <p>Slow Metabolism</p> <p>In food-scarce areas, animals survive with minimal energy. E.g., Sleeper shark.</p> </div> </div>	<div style="display: flex; align-items: center; margin-bottom: 10px;">  <div style="margin-left: 10px;"> <p>Climate Regulation</p> <p>Regulates Earth's temperature through thermohaline circulation (mixing warm and cold waters) which influences climate patterns.</p> </div> </div> <hr/> <div style="display: flex; align-items: center;">  <div style="margin-left: 10px;"> <p>Carbon Storage:</p> <p>Abyssal plains, with carbon-rich sediments up to 5km thick, play a key role in carbon sequestration.</p> </div> </div>
<p>Deep-sea ecosystems are vital for our planet's environmental balance</p>	

Social Media Company X Sues Union Government Over IT Act violations

X has challenged government's use of **Section 79(3)(b) of Information Technology Act, 2000 (IT Act)** to regulate & remove content on social media, arguing that it bypasses safeguards under **Section 69A**.

About Section 79 & 79(3)(b)

- **Section 79:** Grants **safe harbour protection** to intermediaries, shielding them from liability for user-generated content.
- **Section 79(3)(b): Removes safe harbour protection** if an intermediary fails to block/remove unlawful content upon government notification.

About Section 69A

- **Section 69A:** Allows government to issue orders blocking content only on grounds provided in Article 19(2) of Constitution which imposes '**reasonable restrictions**' on freedom of speech.
- **Shreya Singhal Judgment:** Content can only be censored through the process provided under Section 69A or a court order.

MeitY Directive (2023)

- It issued a directive to all ministries, state governments, and police saying that information blocking orders could be issued under Section 79(3)(b).
 - ⊕ In 2024, MeitY launched a '**Sahyog**' portal, where the aforementioned authorities could issue & upload blocking orders.

Issues Raised by X

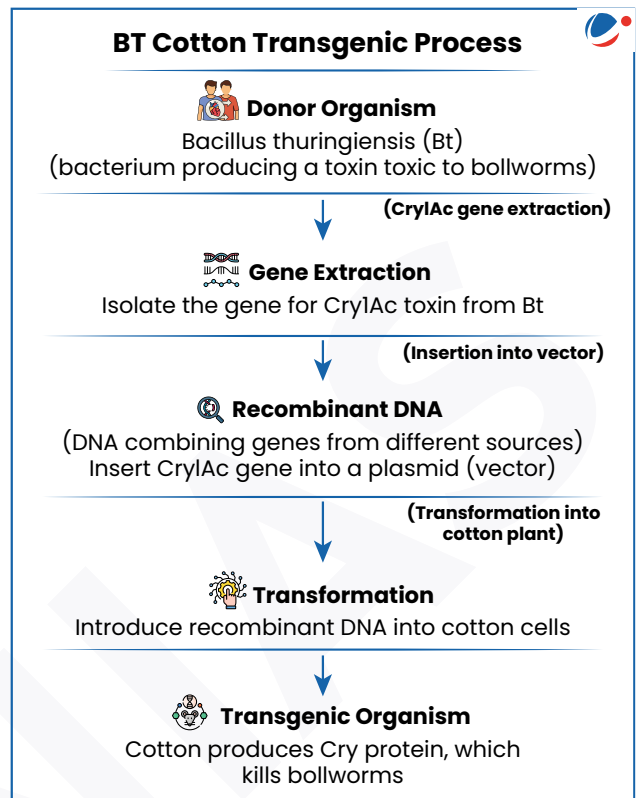
- **Misuse of Section 79(3) (b):** It does not give government direct blocking powers, but only outlines conditions under which an intermediary loses its 'safe harbour' protection.
- **Violation of Shreya Singhal judgment:** MeitY's directive **bypasses procedural safeguards** established by Supreme Court by treating **Section 79(3)(b) as a content-blocking tool**, instead of following **Section 69A**.

Transgenic Mice in Spotlight Following US President Misstatement on 'Transgender Mice' Funding

Transgenic refers to an organism or cell whose genome (entire set of DNA instructions found in a cell) has been altered by the introduction of one or more foreign DNA sequences from another species.

About Transgenic Organisms

- **Concept:** Transgenic organisms express new traits or proteins not native to their species, with 'trans' meaning from 'one to another' and 'genetic' referring to genes.
- **Transgenic Mouse:** key model for studying biological processes due to its **physiological, anatomical, and genomic similarities with humans.**
- **Purpose & Applications**
 - ⊕ **Understanding Normal Physiological Processes:** E.g., Transgenic mice created to study metabolism & blood cell production.
 - ⊕ **Modeling Human Diseases:** E.g., Transgenic pigs, used to model human diseases like Alzheimer's.
 - ⊕ **Developing New Treatments:** E.g., Transgenic zebrafish, accelerate drug testing & therapy development.
 - ⊕ **Production of Therapeutic Proteins:** E.g., Transgenic goats developed to produce **human antithrombin** (a blood-clotting protein).
 - ⊕ **Disease Resistance Crops:** E.g., Bt Cotton is genetically modified to be resistant to bollworms.
- **Challenges**
 - ⊕ **Ethical Concerns:** Related to animal welfare, and unintended consequences due to genetic modification.
 - ⊕ **Environmental Risks:** Potential for Transgenic organisms to disrupt ecosystems.
- **Regulation in India:** 'Rules, 1989' under the Environment (Protection) Act, 1986, Genetic Engineering Appraisal Committee (GEAC), etc.



Parliamentary Standing Committee on Agriculture Submits Report on Fisheries Sector

The report evaluates the government's response to recommendations aimed at improving the fisheries sector, enhancing employment opportunities, and increasing revenue generation.

- India is 3rd largest fish-producing country, accounting for approximately 8% of global fish production.
- Over the years, the sector's contribution to agricultural GVA has risen from around 4% to over 6.72%.

Key Highlights	
Issues Highlighted	Recommendation
Lack of a Dedicated Research Body: Fisheries research falls under ICAR, which lacks sector-specific focus.	Establish the Indian Council for Fishery and Aquaculture Research (ICFAR) .
Regulation of Juvenile Fish Harvesting: Harmful practices like bull trawling and LED fishing deplete fish stocks.	Enforce Minimum Legal Mesh Size (MLS) regulations uniformly and ban destructive fishing methods.
Interest-Free Loans for Fishers: Only some states offer 4% additional interest subvention under KCC.	Expand interest-free KCC loans nationwide.
Post-Harvest Losses & Infrastructure: 20-25% losses due to poor storage and processing facilities.	Strengthen cold storage, processing, and transport under PMMSY
Self-Sufficiency in Shrimp Broodstock: Heavy reliance on imported L. Vannamei shrimp broodstock.	Fast-track domestic broodstock development via ICAR.
Fish stock washed away due to dam gate openings and heavy rainfall.	Introduce insurance for dam fishers , similar to PMFBY.
Sanitary and Phytosanitary (SPS) barriers and lack of proper certification and traceability hinder exports.	Enhancing Export Competitiveness: Improve SPS compliance , certification, and traceability to boost exports.

Fertilizers Committee Warns Against Under-Funding of Nutrient Subsidy Schemes (NBS)

The Committee observed that while Department of Fertilizers had projected an outlay of ~₹ 1.84 lakh crore for its various schemes in 2025-26, the Ministry of Finance had reduced this allocation by ~7%.

➤ The reduction has been made in both the Nutrient-Based Subsidy (NBS) Scheme and the Urea Subsidy Scheme.

Other Key Observations of the Report

- **Strengthening Fertilizer Security:** Geopolitical disruptions and price volatility have led to shortages of critical fertilizers. E.g., DAP.
- **Technological Advancements and Mining:** Lack of initiatives to secure mining leases for essential raw materials like phosphates and potash.
- **Revision in Grades of NPKS (nitrogen-phosphorus-potassium-sulphur) Fertilizers:** Soil-specific fertilizer grades are not always available, leading to additional costs for farmers.
- **Direct Benefit Transfer (DBT):** DBT system lacks a mechanism to verify genuine beneficiaries, leading to misuse.
- **Nano Fertilizers:** Nano Urea and Nano DAP show promise in improving crop yields but require further research.

Recommendations

- **Supply Compliance and Balanced Distribution:** Enforce supply compliance with penalties, prioritize balanced fertilizer distribution based on soil requirements.
- **Fertilizer Crisis Early Warning System:** Establish FCEWS to predict shortages and maintain strategic reserves.
- **Integrate Aadhaar authentication** with the Farmer's Registry for better targeting and dynamic purchase caps based on landholding size.
- **Promote Urea Gold** to improve soil health, crop yield, and reduce reliance on conventional urea.

Nutrient-Based Subsidy (NBS) Policy

- **Subsidy Rates:** Fixed per nutrient for Nitrogen (N), Phosphate (P), Potash (K), and Sulphur (S), reviewed annually or bi-annually.
- **Coverage:** Includes 28 grades of P&K fertilizers such as Di-Ammonium Phosphate (DAP), Mono Ammonium Phosphate (MAP), and Muriate of Potash (MOP).
- **MRP Flexibility:** Manufacturers set MRPs, checked by the government to ensure affordability.
- **Additional Subsidies:** Separate subsidies for micronutrients like Boron and Zinc.

Urea Subsidy Scheme

- **Objective:** Ensures affordable Urea for farmers, crucial for food security.
- **Production Focus:** Aims for self-sufficiency in Urea production, with a focus on maximizing indigenous production.



Also In News

NeVA platform

Delhi joins National E-Vidhan Application Platform.

➤ About NeVA platform

- ⊕ **Concept:** NeVA is a work-flow system deployed on MeghRaj which helps the Chair of the House to conduct the proceedings of the House smoothly.
 - ◆ Members can carry out their duties in the House efficiently in a Paperless manner.
- ⊕ **Ministry:** Developed by the Ministry of Parliamentary Affairs (MoPA).
- **Key Features:**
 - ⊕ **Device-Agnostic:** Accessible to legislators anytime, anywhere, on smartphones, tablets, laptops, etc.
 - ⊕ **Secure Digital Repository:** Protects the confidentiality and integrity of legislative data.
 - ⊕ **Multilingual Support:** Provides access in multiple languages to cater to India's linguistic diversity.



Organometallic molecule

Scientists have discovered the berkelocene, the first organometallic molecule to be characterized containing the heavy element berkelium.

About Organometallic molecule

- Molecules which contain a **carbon-metal bond** are known as organometallic compounds.
- They are unique because they combine the properties of both metals and organic (carbon-containing) molecules.
- **Properties:**
 - ⊕ They are **sensitive and can degrade** when exposed to air or moisture.
 - ⊕ These compounds can be **stable under heat**, but the exact temperature tolerance varies widely.
 - ⊕ Some can **conduct electricity**, which is useful in electronic applications.
 - ⊕ They often serve as **catalysts, speeding up** chemical reactions without being consumed in the process.



Sheathia rosemalayensis

Researchers identified a new species of freshwater algae named 'Sheathia rosemalayensis'.

About Sheathia rosemalayensis

- It was discovered in **Rosemala**, located in western ghats of Kerala, and has been **named after the place** where it was found.
- Sheathia species are extremely rare in India.** Before this, only one other species was reported from the Himalayas.

Algae

- Algae** are a diverse group of **photosynthetic organisms** found in aquatic and moist environments.
- They range from microscopic **phytoplankton** to large seaweeds like **kelp**.
- Algae play a crucial role in ecosystems, producing oxygen and serving as the base of the aquatic **food chain**.



AI Washing

Venture capitalists are concerned about **AI washing used by startups** to secure funding.

About AI Washing

- AI washing is the **practice of overstating or misrepresenting the use of AI** in products, services or business strategies.
- AI washing takes its name from **greenwashing**, which is when companies make false or misleading claims about positive impact they have on the environment.
- Examples of AI Washing:** Mislabelling automation as AI, Superficial AI claims, Using buzzwords phrases like "AI-driven" etc.



Shaheed Diwas

The nation pays tributes to **Bhagat Singh, Rajguru, and Sukhdev** on Shaheed Diwas.

About Shaheed Diwas

- March 23** is observed as Shaheed Diwas, or Martyr's Day.
- The day commemorates the execution of three revolutionaries in 1931 for the murder of British police officer John Saunders.

Bhagat Singh

- He drew inspiration from **Marx, Lenin, Trotsky, and Bakunin**.
- He founded the **Naujawan Bharat Sabha** (Youth Society of India)

Sukhdev Thapar

- Sukhdev was a member of the **HSRA (Hindustan Socialist Republican Association)**.
- He organized revolutionary cells in parts of Northern India.

Rajguru

- Shivaram Hari Rajguru** was a key member of the HSRA.



Anti-dumping Duties

India has imposed anti-dumping duties on multiple Chinese goods.

About Anti-dumping Duties

- Definition:** WTO defines **anti-dumping duties** as tariffs imposed by a domestic government on foreign imports that are **priced below fair market value, a practice known as "dumping."**
- Objective:** To prevent **unfair competition, protect domestic industries & ensure fair trade practices by discouraging predatory pricing.**
- WTO Rules on Anti-Dumping**
 - Allowed under **Article VI of General Agreement on Tariffs and Trade (GATT) 1994.**
 - Investigation must **prove dumping, injury, and causal link** before duties are imposed.
 - Measures should be **temporary** and reviewed periodically.



Jnanpith Award

Vinod Kumar Shukla is selected for 59th Jnanpith Award. It is recognized as the highest literary award in India.

About Jnanpith Award

- The Jnanpith Award has been presented annually by **Bharatiya Jnanpith since 1965** for outstanding contributions to Indian literature.
 - Bharatiya Jnanpith**, established in **1944**, is one of the **premier literary organizations.**
- Jnanpith Award, **considered the highest literary award in India**, given annually for the best creative literary output to writers in any of the **22 languages recognized by the Constitution of India.**
 - From 2013, works in English language were also considered
- Eligibility for the award is restricted to Indian citizens.



Anthurium

APEDA facilitated first-ever export of **Anthurium Flowers** from Mizoram to Singapore.

About Anthurium

- It is a vast group of beautiful blooming plants available in a wide range of colors. It is native to **tropical America.**
- In India it is one of the most important flowers cultivated in **Mizoram.**
- NASA has placed it in the list of **air purifier plants** as it **purify the surrounding air and remove harmful airborne chemicals** like formaldehyde, ammonia, toluene, xylene, and allergens.
- Mizoram organizes the annual **"Anthurium Festival,"** which promotes tourism and highlights the flower's beauty and ornamental value.

Personality in News



Dr. Ram Manohar Lohia (1910 – 1967)

Recently, the birth anniversary of Dr. Ram Manohar Lohia is observed.

About Dr. Ram Manohar Lohia

- Dr. Lohia was born in Akbarpur, Uttar Pradesh.
- He was a visionary leader, freedom fighter, and champion of social justice.

Key Contributions

- Freedom Struggle:** Participated in **Quit India Movement (1942)**; imprisoned multiple times.
 - He protested against the Portuguese rule in Goa.
- Social:** Lohia envisioned **eliminating inequalities** across caste, class, and gender through economic democracy.
- Political:** Lohia presented a six-point plan for new Socialism, calling for maximum attainable equality, a global standard of living, a world government etc.
- Literary Works:** The Caste System, Wheel of History, Marx, Gandhi and Socialism etc.

Key Values

- Justice, Equality, Selflessness, non-violence etc.



AHMEDABAD



BENGALURU



BHOPAL



CHANDIGARH



DELHI



GUWAHATI



HYDERABAD



JAIPUR



JODHPUR



LUCKNOW



PRAYAGRAJ



PUNE



RANCHI