

WEEKLY NEWS

October 20-26, 2024

Offshore Areas Operating Right Rules



► *More Details in Page 11*

Digital Sequence Information




► *More Details in Page 31*

HIGHLIGHTS

- Kazan Declaration
- Rights of (RPwD)
- Volcanic Eruptions

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Misuse of Public Interest Litigation (PIL)

● Why in News?

- ➡ The Chief Justice of India (CJI) raised concerns about **the misuse of Public Interest Litigation (PIL)**, noting that many focus on policy issues, causing genuine public grievances to be overlooked.
- ➡ A PIL seeking the formation of an independent body to regulate OTT content was dismissed, reinforcing the need to curb frivolous petitions.

● About PIL

- ➡ **Definition:** A PIL is a legal action initiated by a person or group without a direct stake (locus standi) to protect public interest.
- ➡ **Genesis of PIL in India:**
 - Mumbai Kamgar Sabha v. Abdulbhai Faizullabhai (1976):** SC relaxed the principle of locus standi, enabling the introduction of PIL.
 - Hussainara Khaton v. State of Bihar:** The first PIL in India, addressing inhuman prison conditions.

● Significance of PIL

- ➡ Provides **justice to marginalized sections**, including the illiterate, poor, and socially unaware.
- ➡ **Ensures government accountability** and protection of public rights through judicial intervention.

● Concerns Over Misuse of PIL

- ➡ **Lack of Definition:** The absence of a legal framework regulating PILs has led to their misuse.
- ➡ **Private Motives:** Some PILs are filed for personal gain or political reasons rather than public interest.

● **SC Guidelines to Curb PIL Misuse**

➡ In the **State of Uttaranchal vs. Balwant Singh Chauhal & Ors (2010)** case, the Supreme Court issued directives to preserve the integrity of PILs:

Cost Imposition: Courts can impose exemplary costs to deter frivolous petitions.

Public Interest as Priority: PILs involving larger public interest and urgency should be prioritized.

Verification: Ensure that the petition is supported by correct and genuine content.

Scrutiny of Petitioners: Verify the credentials and intentions of the petitioners.

Formulation of Rules: High Courts to develop rules to encourage genuine PILs and discourage those filed with hidden motives.

● **Way Forward**

➡ Courts must be cautious while entertaining PILs, giving precedence to issues of **substantial public interest**.

➡ Stronger **screening mechanisms** are needed to filter out non-genuine PILs without discouraging activism.

➡ **Public awareness** campaigns could educate citizens about the appropriate use of PILs.

● **Conclusion**

➡ The judiciary must **strike a balance** between enabling public interest litigations and preventing misuse. **Safeguarding the original spirit of PIL** is essential to ensure justice for the vulnerable without allowing the platform to be exploited for personal or political agendas.



Section 479 BNSS

● Why in News?

- ➔ Ministry of Home Affairs (MHA) issued an advisory to all States and UTs on implementing Section 479 of Bharatiya Nagarik Suraksha Sanhita (BNSS).
- ➔ The advisory refers to a Supreme Court order ensuring BNSS applies to all under-trials, regardless of whether the case was filed before July 1, 2024, when BNSS came into effect.

● Key Bail Provisions under BNSS

➔ Regular Cases:

Under-trials to be released if **detention period reaches half** of the maximum specified imprisonment.

➔ First-Time Offenders:

Released if **detention reaches 1/3rd** of the maximum term.

Exceptions: Not applicable for crimes punishable with **life imprisonment or death penalty**.

● Under-trial Prisoners in India

- ➔ **Occupancy Rate:** Prisons operating at **131.4% capacity** (NCRB, 2022).
- ➔ **Under-trial Ratio:** Nearly **75% of inmates** are under-trials.
- ➔ **Definition:** An under-trial is a person in **judicial custody** while awaiting trial or conviction.

● Challenges Leading to High Under-trial Numbers

- ➔ **Indiscriminate arrests** by police.
- ➔ **Ignorance of legal rights** among detainees.
- ➔ **Delays in trials** due to slow judicial processes.
- ➔ **Courts reluctant** to grant bail in many cases.
- ➔ **Financial constraints** in meeting bail requirements or fines.



● **Measures to Address Under-trial Hardships**

- ➔ **Support to Poor Prisoners Scheme:** Offers relief to prisoners unable to pay fines or secure bail bonds.
- ➔ **E-prisons Portal:** Provides **real-time data** to quickly identify eligible prisoners for bail.
- ➔ **Model Prison Manual 2016:** Offers guidelines on **facilities and treatment** of under-trial inmates.
- ➔ **Legal Service Clinics in Jails:** Set up by **State Legal Services Authorities** to provide **free legal aid** to inmates.

● **Way Forward**

- ➔ **Strict implementation** of Section 479 BNSS to ensure timely release of eligible under-trials.
 - ➔ **Strengthen coordination** between courts, police, and prisons to reduce unnecessary arrests.
 - ➔ **Enhance access to legal aid** through expanded prison legal clinics.
 - ➔ Promote **awareness campaigns** on legal rights for under-trial prisoners.
- This initiative aims to reduce **overcrowding** in prisons and ensure **justice for detainees** through timely interventions and effective governance.



Rocket Emissions and Environmental Impact

● Why in News?

- ➡ **Increase in rocket launches:** The number of annual rocket launches has **tripled in 15 years**.
- ➡ **Satellites in orbit:** The total number of satellites orbiting Earth has grown 10 times during the same period.
- ➡ **Rising space debris:** The frequency of **debris re-entry** has doubled over the last decade, releasing toxic emissions into the atmosphere.

● Atmospheric Impact of Rocket Launches

➡ Warming Effects

Alumina (Al_2O_3) and **black carbon (soot)** absorb long-wave radiation, contributing to **global warming**.

Warmer stratosphere accelerates ozone depletion through faster chemical reactions.

➡ Ozone Depletion

Rocket plumes release alumina, chlorine, and nitrogen oxides, which deplete the ozone layer.

Montreal Protocol (which governs ozone protection) **excludes rocket emissions** from its framework.

➡ Carbon Emissions

Each rocket launch emits **50-75 tonnes of CO_2 per passenger**, far exceeding the **1-3 tonnes** emitted by air travel.

➡ Pollution at Higher Altitudes

Around **2/3rd of propellant exhaust** is released into the **stratosphere (12-50 km)** and **mesosphere (50-85 km)**, where it remains for **2-3 years**.

Even "**green rockets**" powered by liquid hydrogen release water vapor, a potent greenhouse gas at high altitudes.

➡ Metallic Ash Impact

Metallic particles from rocket emissions can **disrupt Earth's magnetic field**, exposing the surface to more **cosmic radiation**.



● **Measures to Control Pollution**

⇒ **Horizontal Launch Systems**

Small satellite launches from aircraft (e.g., Boeing 747) use **1/20th of the fuel** compared to ground-launched rockets.

⇒ **Re-entry Trajectory Control**

New approaches aim to **burn satellites at lower altitudes** (12-18 miles) so that metal oxides settle back to Earth more quickly.

⇒ **Alternative Fuels and Reusable Systems**

Exploration of **bio-propane** and reusable launch systems to reduce emissions and waste.

● **Way Forward**

⇒ **Develop eco-friendly technologies** for rockets to minimize emissions.

⇒ **Incorporate rocket emissions** into international frameworks like the **Montreal Protocol**.

⇒ Promote **reusable rockets** to reduce launch-related waste and pollution.

⇒ Strengthen **regulations on space debris re-entry** to mitigate atmospheric pollution.

● This shift towards sustainable space activities is crucial for maintaining the **Earth's environmental balance** while continuing the exploration of space.



India's Solar Imports: Projected Growth and Challenges

● Why in News?

- ➔ **Projected Growth:** India's solar imports could reach **\$30 billion annually by 2030**, according to the **Global Trade Research Initiative (GTRI)** report.
- ➔ **China's Dominance:** China currently controls over **80% of global solar production and exports**, impacting local manufacturing in India and other countries.

● Challenges in India's Solar Manufacturing Sector

- ➔ **High Dependency on Imports:** Overreliance on Chinese imports limits India's domestic manufacturing capacity for solar products.
- ➔ **Limited Raw Material Supply:** India lacks the ability to produce **high-purity polysilicon and wafers**, which are essential for solar manufacturing.
- ➔ **Gaps in R&D and Technology:** The country is lagging in adopting the latest solar cell technologies, such as **PERC (Passivated Emitter Rear Contact)**, **bifacial**, and **thin-film technologies**.
- ➔ **High Capital Costs:** Significant financial barriers hinder investment in solar manufacturing.

● Recommendations

- ➔ **Expand PLI Scheme:** Extend the **Production Linked Incentive (PLI)** scheme to include early-stage solar manufacturing and focus on upstream production to enhance local capabilities.
- ➔ **Invest in R&D:** Prioritize investment in research and development, as well as advanced manufacturing technologies, to create a fully integrated solar supply chain.
- ➔ **Reassess Import Duties:** Review current import duties on solar modules and cells to foster local manufacturing.
- ➔ **International Collaboration:** Partner with countries like the **US, EU, and Japan** to reduce dependency on Chinese solar imports.



● **India's Initiatives to Boost Solar Manufacturing**

- ➔ **Approved List of Models and Manufacturers (ALMM):** Government-backed initiatives require the use of solar PV modules that meet **Bureau of Indian Standards (BIS)** regulations.
- ➔ **Production Linked Incentive (PLI) Scheme:** Support for fully integrated solar PV manufacturing units and solar PV production.
- ➔ **PM-KUSUM Scheme:** Mandates the use of domestically sourced solar cells and modules for government projects.

● **Way Forward**

- ➔ **Strengthen Local Production:** Enhance domestic manufacturing capabilities to reduce reliance on imports.
 - ➔ **Innovate Technologies:** Foster innovation in solar technology to keep pace with global advancements.
 - ➔ **Increase Investments:** Encourage investments in solar manufacturing infrastructure and technology development.
 - ➔ **Build International Partnerships:** Form alliances with global partners to leverage technology and resources for solar manufacturing growth.
- India's proactive approach to overcoming these challenges is crucial for establishing a sustainable and self-reliant solar manufacturing ecosystem.



India-China Agreement on LAC Patrolling Arrangements

● Why in News?

- ⇒ India and China reached an agreement to ease tensions along the **Line of Actual Control (LAC)**, aiming to resolve the military standoff that began in **April 2020**.
- ⇒ Focus areas: **Demchok** and **Depsang** regions in eastern Ladakh.

● Background of the Standoff

- ⇒ The standoff began due to **China's objections** to India's infrastructure projects, particularly a **road in the Galwan Valley** connecting to a key airbase.
- ⇒ Both countries have faced regular disputes over the **undemarcated border** across multiple sectors.

● India-China Border Dispute

⇒ Western Sector (Ladakh):

India claims **Aksai Chin** based on the **Johnson Line** (1860s).

China refers to the **Macartney-MacDonald Line** as the boundary.

⇒ Middle Sector (Himachal Pradesh and Uttarakhand):

Disputes here are minimal.

⇒ Eastern Sector (Arunachal Pradesh and Sikkim):

The dispute revolves around the **McMahon Line** (1914 Simla Convention), which China does not recognize.

● Agreements on LAC Management

- ⇒ **1993 Agreement**: Focus on maintaining peace along the LAC.
- ⇒ **1996 Agreement**: Introduced confidence-building measures during military operations.
- ⇒ **2005 Protocol**: Outlined detailed military procedures for cooperation.
- ⇒ **2012 Agreement**: Established the **Working Mechanism for Consultation and Coordination (WMCC)** on border issues.
- ⇒ **2013 Agreement**: Enhanced cooperation for border defense activities.



● **Way Forward**

- ➡ Strengthening **communication channels** like the WMCC to prevent further misunderstandings.
- ➡ **Infrastructure development** on India's side to ensure better logistical support in border areas.
- ➡ **Confidence-building measures** to promote peace and prevent future standoffs.

● **Conclusion**

- ➡ The new agreement marks a step towards resolving ongoing tensions along the LAC, though the underlying **border disputes remain unresolved**. Effective management of the border requires **both sides to adhere to protocols** and build mutual trust.



Offshore Areas Operating Right Rules, 2024

● Why in News?

- ➡ **Notification of Rules:** The government has notified the **Offshore Areas Operating Right Rules, 2024** under the **Offshore Areas Mineral (Development and Regulation) Act, 2002**.
- ➡ **First-Ever Auction:** This regulatory framework is significant due to the planned first-ever auction of **10 offshore mineral blocks**, including resources like **sand, lime mud, and polymetallic nodules**.

● Key Highlights of the Rules

- ➡ **Applicability:** Covers all minerals in offshore areas, excluding mineral oils, hydrocarbons, and specified atomic minerals.
- ➡ **Lease Surrender:** Allows for the surrender of mining leases after **10 years** if production operations are deemed uneconomic.
- ➡ **Priority Access:** Grants priority access to government and government-owned companies for operating rights in reserved offshore zones.

● Significance of Offshore Mining

- ➡ **Definition:** Offshore mining, also known as deep-sea mining, involves extracting mineral deposits from the seabed, specifically in ocean depths exceeding **200 meters**.
- ➡ **Meeting Demand:** It addresses the increasing demand for metals amid declining terrestrial deposits, potentially reducing reliance on mineral imports.

● Challenges in Offshore Mining

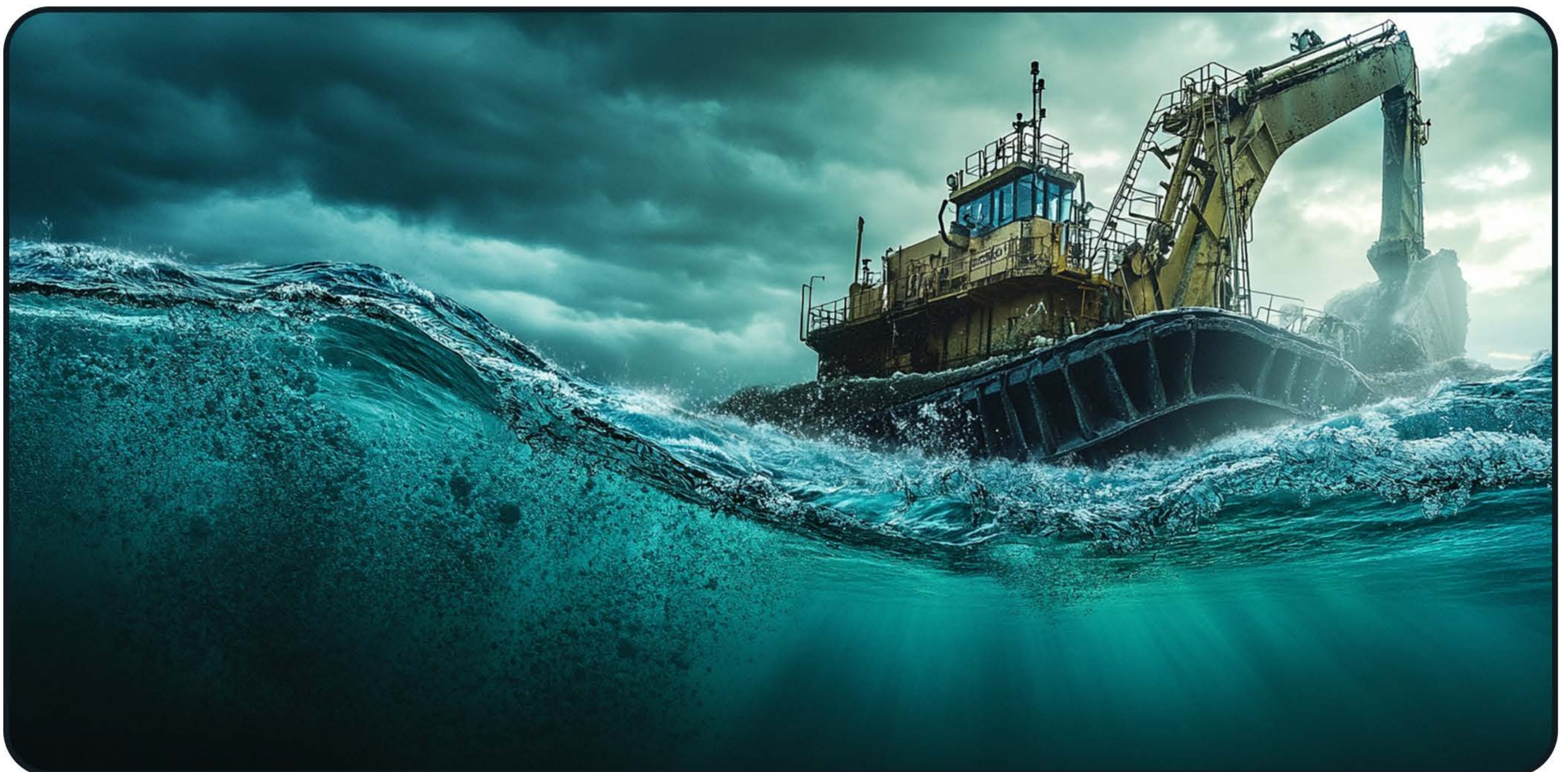
- ➡ **Environmental Concerns:** Risks of biodiversity loss due to habitat destruction, underwater noise pollution, and other environmental impacts.
- ➡ **Impact on Fishing Communities:** Potential negative effects on fish populations, threatening the livelihoods of local fishing communities.
- ➡ **Technological Barriers:** Insufficient research and development (R&D) and technological advancements for effective deep-sea mining operations.

● **Initiatives for Offshore Mining**

- ➔ **Regulatory Framework:** The **Offshore Areas Mineral (Development and Regulation) Act, 2002** establishes a legal structure for the development and regulation of offshore mineral resources.
- ➔ **Deep Ocean Mission:** Launched by the Ministry of Earth Sciences to promote deep-sea mineral exploration, including initiatives like the **Samudrayaan Mission** and **MATSYA 6000**.
- ➔ **International Collaboration:** The **International Seabed Authority (ISA)** allotted 10,000 sq. km of the Indian Ocean area to India in **2016** for the exclusive exploration of polymetallic nodules.

● **Way Forward**

- ➔ **Regulatory Oversight:** Ensure effective implementation of the newly notified rules to promote responsible offshore mining practices.
 - ➔ **Environmental Safeguards:** Develop measures to mitigate environmental impacts and protect marine biodiversity.
 - ➔ **Technological Investment:** Encourage investment in R&D and technology development to enhance offshore mining capabilities.
 - ➔ **Community Engagement:** Involve fishing communities in decision-making processes to address their concerns and protect their livelihoods.
- The introduction of the Offshore Areas Operating Right Rules, 2024 marks a significant step towards developing India's offshore mining sector while balancing economic growth and environmental sustainability.



Volcanic Eruptions and Their Connection to Ionospheric Disturbances

● ***Why in News?***

- ➡ **Recent Study:** A study conducted by the **Indian Institute of Geomagnetism** reveals the influence of volcanic eruptions on space weather, specifically through their effects on the ionosphere.

● ***Key Findings of the Study***

➡ **Ionospheric Disturbance**

Volcanic eruptions generate strong atmospheric gravity waves, which lead to the formation of **Equatorial Plasma Bubbles (EPBs)**.

EPBs are depletions in ionospheric plasma density typically observed in the equatorial ionosphere during post-sunset hours.

➡ **Impact on Satellite Systems**

The EPBs generated by volcanic activity can adversely affect satellite communication and navigation technologies.

● ***Understanding Volcanism***

- ➡ **Definition:** A volcano is an opening in the Earth's crust through which **lava, ash, and gases** escape.
- ➡ **Recent Eruptions:** Notable recent volcanic events include **Mount Ruang** in Indonesia and **Whakaari/White Island** in New Zealand, both occurring in **2024**.

● ***Positive Impacts of Volcanic Activities***

- ➡ **Cooling Effect:** Volcanic particles can lead to temporary cooling of the Earth's atmosphere by blocking incoming solar radiation.
- ➡ **Geothermal Energy:** Volcanoes can serve as a source of geothermal energy, providing inexpensive electricity to local communities.
- ➡ **Soil Fertility:** Ejected volcanic ash can enhance soil fertility, benefiting agriculture.
- ➡ **Mining Opportunities:** Volcanic activity can bring valuable minerals to the surface, creating mining prospects.
- ➡ **Tourism Potential:** Volcanic sites often attract tourists, boosting local economies.

● **Negative Consequences of Volcanic Activities**

- ➡ **Climate Impact:** Volcanic eruptions release dust, ash, and gases that can affect global climate patterns.
- ➡ **Natural Disasters:** Events such as tsunamis can occur as a result of volcanic eruptions, exemplified by the **Tonga eruptions** in 2022.
- ➡ **Damage to Lives and Property:** Eruptions can cause significant harm to human lives, property, habitats, and landscapes.

● **Way Forward**

- ➡ **Further Research:** Continued research is essential to better understand the connection between volcanism and space weather phenomena.
 - ➡ **Monitoring Systems:** Improved monitoring systems for volcanic activity can help mitigate risks associated with satellite communications and navigation.
 - ➡ **Public Awareness:** Educating communities about both the positive and negative impacts of volcanic eruptions can lead to better preparedness and risk management.
- The study highlights the complex relationship between volcanic eruptions and ionospheric disturbances, emphasizing the need for ongoing research and preparedness measures in response to volcanic activity.



Role of Wetlands in National Biodiversity Strategies and Action Plans (NBSAP)

● Why in News?

- ➔ **New Assessment Released:** A recent assessment by **35 per cent Ltd**, commissioned by **Wetlands International**, emphasizes the crucial role of wetlands in the **National Biodiversity Strategies and Action Plans (NBSAP)** following the **COP15** conference.
- ➔ **Global Context:** This assessment aligns with the **Kunming-Montreal Global Biodiversity Framework (KMGBF)**, which aims to halt and reverse biodiversity loss by **2030**.

● Key Findings of the Assessment

➔ Inclusion of Wetlands

High Mention: Approximately **83%** of NBSAPs incorporate wetlands, inland waters, or freshwater within their targets, with **71%** of NBSAPs in **Asia** explicitly mentioning these ecosystems.

Types of Wetlands: The assessment notes the inclusion of various wetland types, such as **mangroves, rivers, lakes, and peatlands**, reflecting their increasing significance in national environmental strategies.

➔ Underrepresentation of Significant Areas

Notable wetland regions, such as the **Amazon River Basin** and **Hudson Bay Lowland**, are infrequently referenced in national biodiversity targets.

● Role of Wetlands in Biodiversity Conservation

- ➔ **Biodiversity Hotspots:** Wetlands occupy only **6%** of the Earth's surface but are home to approximately **40%** of global biodiversity.
- ➔ **Nutrient Cycling:** The diverse plant life within wetlands contributes to nutrient cycling and water purification, thereby improving water quality and supporting various forms of life.
- ➔ **Carbon Sequestration:** Wetlands play a vital role in carbon storage through plant biomass and sediments, aiding in climate change mitigation and flood control.

● Recommendations

- ➔ **Measurable Goals:** The report calls for the establishment of clear and measurable objectives for wetland restoration and protection, which are essential for enhancing regional and global ecological health.

● **Way Forward**

- ➡ **Revising NBSAPs:** Countries are encouraged to revise their NBSAPs to incorporate actionable strategies for wetland conservation aligned with the KMGBF.
 - ➡ **Targeted Initiatives:** Focus on addressing the underrepresentation of significant wetland areas in biodiversity strategies to ensure comprehensive environmental management.
 - ➡ **Collaboration:** Foster partnerships between countries and organizations to share best practices in wetland conservation and restoration efforts.
- The assessment highlights the urgent need to prioritize wetlands in national biodiversity planning to safeguard their vital ecological functions and enhance global biodiversity.



RISE Mission

● Why in News?

- ➡ **RISE Mission:** First in-orbit servicing mission by the European Space Agency (ESA), scheduled for launch in 2028.
- ➡ **Objective:** Focuses on satellite refuelling, refurbishment, and assembly in orbit—key elements of a **circular space economy**.

● About RISE Mission

- ➡ **Geostationary Satellite Operations:** Ability to dock with and control geostationary satellites.
- ➡ **Graveyard Orbit Operations:** Will move defunct satellites to the **geostationary graveyard orbit**, 100 km higher than operational orbits.

● Circular Space Economy Explained

- ➡ **Concept:** Inspired by the **circular economy** on Earth, it focuses on reducing waste and maximizing resource efficiency in space.
- ➡ **Key Aspects:**
 - Satellite Refurbishment and Repair
 - Space Debris Removal
 - Resource Utilization (e.g., materials from asteroids or the Moon)

● Significance of a Circular Space Economy

- ➡ **Debris Reduction:** Prevents collisions and minimizes space debris generation.
- ➡ **Resource Conservation:** Reusing and recycling materials in orbit.
- ➡ **Cost Efficiency:** Prolongs satellite lifespan, reducing launch costs.
- ➡ **Faster Space Operations:** Enables in-orbit assembly and manufacturing.

● Circular Space Economy

- ➡ **Technological Limitations:** In-orbit servicing, recycling, and asteroid mining are still evolving technologies.
- ➡ **Funding Issues:** High costs associated with R&D and specialized equipment development.
- ➡ **Regulatory Gaps:** Need for **global standards and space sustainability regulations**.



● **Global and Indian Initiatives Promoting Circular Space Economy**

⇒ Global

ESA's Goal: Circular economy in space by 2050 and **debris neutrality** by 2030.

NASA's COSMIC Program: Consortium for in-space servicing, assembly, and manufacturing (ISAM).

SpaceX's Falcon 9: Use of reusable launch vehicles.

⇒ India

ISRO's Reusable Launch Vehicle Program: Developing reusable rocket technologies.

Debris-Free Missions: Indian space actors aim for **debris-free operations by 2030**.

● **Way Forward**

⇒ **R&D Investment:** Prioritize funding for technology development in space recycling and servicing.

⇒ **Global Collaboration:** Strengthen cooperation to create **unified regulations** for space sustainability.

⇒ **Private Sector Involvement:** Encourage startups and private companies to participate in circular economy projects.



IMF's World Economic Outlook Report – October 2024

● Why in News?

- ➔ The International Monetary Fund (IMF) has released its World Economic Outlook (WEO) report for October 2024.
- ➔ This report is published biannually and offers short- and medium-term projections of the global economy.

● Key Highlights

➔ Global Economic Projections

Global Growth: Projected to remain **stable at 3.2%** for 2024 and 2025.

Uncertainty Factors: Risks include **geopolitical conflicts**, trade tensions, and **political transitions** due to upcoming elections in major economies.

➔ India's Economic Outlook

India's Growth: Expected to achieve **6.5% growth** in 2025-26.

Emphasis on the **urgency of structural reforms** to sustain economic momentum.

● Structural Reforms – Key Insights

- ➔ **Definition:** Structural reforms are **policy changes** aimed at reallocating resources more efficiently by modifying existing economic rents and privileges.

● Challenges to Social Acceptability

- ➔ **Uneven Distribution of Gains and Losses:** Reforms often create winners and losers across different social groups and timelines.
- ➔ **Misperceptions:** People's **attitudes** towards reforms are shaped by beliefs, personal interests, and misinformation about policies.



● **Strategies to Build Public Support for Structural Reforms**

- ➡ **Information:** Provide **clear and unbiased information** to address public misconceptions.
- ➡ **Engagement:** Encourage **two-way dialogue** between policymakers and the public to involve citizens in policy design.
- ➡ **Mitigation Measures:** Implement **targeted assistance** (e.g., temporary cash support, skills development) to protect groups adversely impacted by reforms.
- ➡ **Trust Building:** Establish **credible and independent institutions** to foster public trust, combat corruption, and improve governance.

● **Way Forward**

- ➡ **Focus on First-Generation Reforms:** Address **governance issues and corruption** to enhance trust in future reforms.
- ➡ **Long-term Vision:** Structural reforms must balance **economic growth with social acceptability** to ensure smooth implementation and sustainable outcomes.



Regulation of Industrial Alcohol

● Why in News?

- ➡ **Supreme Court Decision:** In *State of U.P. vs. M/S. Lalta Prasad Vaish*, the SC ruled that **States can regulate industrial alcohol**, overturning the 1990 *Synthetics & Chemicals Ltd. vs. State of U.P.* decision.
- ➡ **Key Judgment:** The term “intoxicating liquor” under **Entry 8 of the State List** includes **industrial alcohol**, granting states the power to legislate and impose taxes.

● Background

- ➡ **Previous Judgment (1990):** Declared that “intoxicating liquor” refers only to **potable alcohol**, excluding industrial alcohol from state taxation.
- ➡ **Union Government Regulation:** Currently, the Union controls industrial alcohol under the **Industries (Development and Regulation) Act, 1951**, using:
 - Entry 52 (Union List): Pertains to industries.
 - Entry 33 (Concurrent List): Regulates production, supply, and distribution of certain goods.
- ➡ **States' Argument:** Industrial alcohol is often misused to produce **illegal consumable alcohol**, necessitating local regulation.

● What is Industrial Alcohol?

- ➡ **Definition:** Industrial alcohol is **non-consumable alcohol**, unlike **usable alcohol (ethyl alcohol or ethanol)**, which is meant for human consumption.
- ➡ **Denatured Alcohol:** Ethanol made undrinkable by adding **poisonous or unpleasant additives**.
- ➡ **Isopropyl Alcohol:** Commonly used in cleaning and disinfecting applications.

● Applications of Industrial Alcohol

- ➡ **Manufacturing:** Solvent in **paints, varnishes, and adhesives** production.
- ➡ **Cleaning:** Used to clean **tools, equipment, and surfaces**.
- ➡ **Fuel:** Powers **stoves, lamps, and motor vehicles**.
- ➡ **Medical Uses:** Acts as a **disinfectant or preservative** in healthcare settings.



● **Significance**

- ➔ **Enhanced State Control:** Helps states address **illegal alcohol production** and safeguard public health.
- ➔ **Regulatory Clarity:** Provides a clearer demarcation of **state vs. union powers** regarding industrial products.

● **Way Forward**

- ➔ **Collaborative Regulation:** Need for **coordination between Union and State governments** to avoid regulatory overlaps.
- ➔ **Monitoring Mechanisms:** States can establish **mechanisms to track misuse** of industrial alcohol for illegal purposes.
- ➔ **Clear Frameworks:** Ensure that regulatory frameworks are aligned with **economic and public health priorities**.



Watch the Explained Video on YouTube 



India's First GIB Hatched via Artificial Insemination

● Why in News?

⇒ India's first successful artificial insemination of the Great Indian Bustard (GIB) achieved at the National Breeding Centre, Jaisalmer (Rajasthan) under the Bustard Recovery Program.

● About the Bustard Recovery Program

⇒ **Initiated:** Initially launched for five years (2016-21) and later extended till 2024.

⇒ Objectives:

Promote **conservation breeding** to boost GIB population.

Build **capacity and raise awareness** among stakeholders and decision-makers.

Encourage **bustard-friendly land use practices** in identified regions.

● About the Great Indian Bustard (GIB)

⇒ Distribution and Habitat

Geographic Range: Primarily found in Rajasthan and Gujarat, with smaller populations in Maharashtra, Karnataka, and Andhra Pradesh.

Habitat: Grassland species native to the Indian subcontinent.

⇒ Conservation Status

IUCN Status: Critically Endangered.

Legal Protections:

Wildlife Protection Act, 1972: **Schedule I.**

CITES: **Appendix I.**

Current Population:

Fewer than **150 individuals**, restricted almost exclusively to India.

Listed under India's **species recovery program.**

● **About the Great Indian Bustard (GIB)**

⇒ **Characteristics and Behavior**

Distinctive Features:

Identified by a **black crown** on the forehead; males exhibit **larger crowns**.

Males have a **gular pouch** to produce a deep humming sound for attracting females.

Diet: Omnivorous; consumes **grass seeds, insects (grasshoppers, beetles), small rodents, and reptiles**.

● **Threats to GIB Population**

⇒ **Hunting and poaching** for its meat and feathers.

⇒ **Habitat loss** due to agricultural expansion and human encroachment.

⇒ **Collisions with power lines** are a significant cause of mortality.

● **Way Forward**

⇒ **Habitat Protection:** Create **powerline-free zones** or bury overhead cables in bustard habitats to reduce collision risks.

⇒ **Community Participation:** Engage **local communities** to adopt bustard-friendly land practices.

⇒ **Technology and Conservation:** Continue **artificial breeding and insemination efforts** to increase GIB population.

⇒ **Advocacy:** Strengthen **awareness campaigns** and incentivize conservation activities among stakeholders.



Amendment of Rights of Persons with Disabilities (RPwD) Rules, 2024

● Why in News?

- ➔ The Union Ministry of Social Justice and Empowerment has notified amendments to the **Rights of Persons with Disabilities (RPwD) Rules, 2024** under the **RPwD Act, 2016**.

● Key Amendments

- ➔ **Application for Disability Certificate:** Required documents: Proof of identity, recent photograph (not older than six months), and Aadhaar card.
- ➔ **Issuance Authority:** Disability certificates can only be issued by a **medical authority** or competent authority at the **district level** in the applicant's district of residence.
- ➔ **Extended Processing Time:** Processing period increased from **one month to three months**.
- ➔ **Application Lapse Clause:** Applications will lapse if undecided for **over two years**. Applicants must reapply or contact the issuing authority to reactivate their request.
- ➔ **Introduction of Colour-Coded UDID Cards**
 - White:** Disability below 40%.
 - Yellow:** Disability between 40% and 80%.
 - Blue:** Disability of 80% or above.

● Concerns with the Amended Rules

- ➔ **Aadhaar Dependency:** Exclusion risk for those without Aadhaar, especially individuals from rural or marginalized backgrounds.
- ➔ **Longer Processing Time:** Delayed issuance may hinder access to services, benefits, and essential identification for persons with disabilities.

● About the RPwD Act, 2016

- ➔ **Definition:** A person with a disability has **physical, mental, intellectual, or sensory impairments** that affect their daily activities.
- ➔ **Recognition:** The Act covers **21 disability categories**.
- ➔ **Prohibition of Discrimination:** Ensures non-discrimination in **employment, education, healthcare, and public services**.

● **Way Forward**

- ➔ **Digital Inclusion:** Enable alternatives for individuals without Aadhaar.
- ➔ **Process Simplification:** Monitor and streamline the 3-month processing period to avoid delays.
- ➔ **Awareness Campaigns:** Promote understanding of the new UDID system among stakeholders to ensure smooth implementation.



Conclusion of the 16th BRICS Summit with Kazan Declaration

● Why in News?

- ➡ The **16th BRICS Summit**, hosted by **Russia** in **Kazan**, concluded with the adoption of the **Kazan Declaration**, which outlines key areas for cooperation and a unified stance on global challenges.
- ➡ **Theme of the Summit:** "Strengthening Multilateralism for Just Global Development and Security"

● Key Highlights of the Kazan Declaration

- ➡ **Global Governance and Multilateralism:** Commitment to collaborate on **International Financial Architecture Reform**.

➡ Economic Cooperation

BRICS Cross-Border Payment System: Aims to minimize trade barriers and encourage the use of local currencies.

BRICS Clear Depository: Establishes an independent infrastructure for cross-border settlement and deposits.

BRICS Interbank Cooperation Mechanism (ICM): Focuses on expanding innovative financial practices, including financing mechanisms in local currencies.

BRICS Grain Exchange: A Russian initiative to create a trading platform for grain and other commodities within BRICS.

➡ Health and Safety Initiatives

BRICS R&D Vaccine Center and **BRICS Integrated Early Warning System** for addressing mass infectious disease risks.

Recognition of India's initiative to establish an **International Big Cats Alliance**.

➡ New Partner Countries

Creation of a **BRICS Partner Country** category for non-member states.

Official addition of **13 new partner countries**, including **Cuba, Turkey, and Vietnam**.



● **About BRICS**

- ➡ The term **BRICs** was first coined in 2001 by British economist **Jim O’Neill**.
- ➡ The grouping was formalized during the first meeting of BRIC Foreign Ministers in 2006.
- ➡ It became **BRICS** with the inclusion of **South Africa** in 2010.
- ➡ **Current Members:** Brazil, China, Egypt, Ethiopia, India, Iran, Russia, South Africa, United Arab Emirates, and Saudi Arabia (pending final confirmation).

● **Way Forward**

- ➡ **Implementation of Initiatives:** Focus on executing the proposals outlined in the Kazan Declaration, particularly in economic cooperation and health initiatives.
- ➡ **Strengthening Partnerships:** Enhance collaboration with newly added partner countries for mutual benefit.
- ➡ **Monitoring Progress:** Establish mechanisms for tracking the implementation of cooperative efforts in multilateral governance and economic reforms.



Gram Panchayat-Level Weather Forecasting Initiative

● Why in News?

- ➡ India launches localized weather forecasting at the Gram Panchayat level to strengthen rural climate resilience.
- ➡ Supported by the **India Meteorological Department (IMD)**, the initiative enhances weather coverage through expanded sensor networks.

● Key Features

➡ Collaborating Ministries:

Ministry of Panchayati Raj

IMD

Ministry of Earth Sciences

- ➡ **Coverage:** 2.5 lakh Gram Panchayats will access weather data, including temperature, wind speed, rainfall, cloud cover, and humidity.
- ➡ **Forecasting Tools:** e-GramSwaraj, Gram Manchitra, and Meri Panchayat portals to provide 5-day forecasts and hourly updates.
- ➡ **Extreme Weather Alerts:** Panchayat representatives will receive **SMS alerts** for cyclones, heavy rainfall, and other severe events.

● Significance

- ➡ **Agricultural Benefits:** Helps farmers plan **sowing, irrigation, and harvesting** with more accuracy, reducing weather-related risks.
- ➡ **Grassroots Governance:** Equips rural communities to respond better to environmental challenges, making them **more climate resilient**.
- ➡ **Disaster Preparedness:** Reduces disaster-related mortality through early warnings and localized planning.
- ➡ **Global Leadership in Climate Resilience:** IMD acts as a **UN Early Warning for All advisor** to five developing countries, showing India's commitment to climate action.

● **India's Localized Weather Forecasting Capabilities**

- ➡ **Forecast Precision:** Covers a 12 km x 12 km area, with plans for 3 km x 3 km and 1 km x 1 km grids in the future for hyper-local forecasts.
- ➡ **Technological Advancements:**
 - IMD has **improved forecast accuracy by 40%** in the last decade.
 - Launched **WINDS (Weather Information Network and Data System)** to generate hyper-local, long-term weather data.
- ➡ **Agricultural Advisory Services: Agro Advisory Services (AAS) and Gramin Krishi Mausam Sewa (GKMS)** help farmers manage crops efficiently.

● **Way Forward**

- ➡ **Expand Sensor Networks:** Improve coverage for more granular forecasts.
- ➡ **Enhance Rural Capacity:** Train panchayat members to interpret weather data and act accordingly.
- ➡ **Public Awareness Campaigns:** Increase the adoption of weather tools among farmers.
- ➡ **Collaborate Globally:** Strengthen India's role in international climate resilience initiatives.



UN COP16 Nature Summit: Debate on Digital Sequence Information

● Why in News?

- ➔ The UN COP16 Nature Summit will discuss regulations for **Digital Sequence Information (DSI)**, aiming to create a unified multilateral framework for generating revenue for conservation through DSI usage.

● About Digital Sequence Information (DSI)

- ➔ **Definition:** DSI encompasses genomic sequence data and related digital information, including DNA, RNA, and protein sequences.
- ➔ **Current Status:** There is no consensus on the precise interpretation and scope of DSI.

● Significance of DSI

- ➔ **Research Advancement:** DSI supports biological research, including:
 - Understanding the evolution of life.
 - Bioprospecting for useful products from biological resources (e.g., SARS-CoV-2 DSI used in COVID-19 diagnostic kits).
- ➔ **Agriculture and Food Security:** DSI aids in developing:
 - Pest-resistant, high-yield, and climate-resilient crop varieties.
- ➔ **Species Conservation:** DSI is crucial for:
 - Identifying and mitigating risks to threatened species.
 - Tracking illegal trade in wildlife.



● **Challenges Associated with Digital Sequencing**

- ➡ **Lack of Accountability:** Public databases for DSI, established before the **Convention on Biological Diversity (CBD)** in 1992, are not accountable to the CBD or its parties.
- ➡ **Equitable Benefit Sharing Issues:** The primary sectors linked to DSI generate approximately **\$1.6 trillion** annually, with little benefit returned to the countries of origin or local communities.
- ➡ **Other Concerns:**
 - Privacy issues.
 - Data security risks.
 - Ownership disputes.
 - Technological constraints.

● **Initiatives for DSI**

- ➡ **Kunming-Montreal Global Biodiversity Framework:**
 - Target 13:** Promotes equitable sharing of benefits derived from DSI on genetic resources.
- ➡ **Digital Sequencing Initiatives in India:**
 - Example: **Genome India Project**, aimed at mapping the genetic diversity of the Indian population.

● **Way Forward**

- ➡ **Strengthening Regulations:** Develop comprehensive rules for the use of DSI that ensure accountability and benefit sharing.
- ➡ **Enhancing Collaboration:** Foster international cooperation to address the challenges associated with DSI and promote equitable benefits.
- ➡ **Promoting Research and Innovation:** Encourage further research initiatives to utilize DSI for sustainable development and conservation efforts.



Pandemic Fund Project

● Why in News?

- ➡ **Pandemic Fund Project** launched by the Ministry of Fisheries, Animal Husbandry & Dairying to enhance **pandemic preparedness** in animal health.
- ➡ Release of **Standard Veterinary Treatment Guidelines (SVTG)** and **Crisis Management Plan (CMP)** for managing animal diseases.

● About the Pandemic Fund Project

- ➡ **Fund Size:** \$25 million initiative under the **G20 Pandemic Fund**, introduced during **Indonesia's G20 Presidency (2022)**.
- ➡ **Aim:** Improve the response capacity of low- and middle-income countries to animal health threats and pandemics.
- ➡ **Implementing Entities:** Asian Development Bank (ADB), World Bank, Food and Agriculture Organization (FAO).

● Need to Focus on Animal Disease Outbreaks

- ➡ **Preventing Zoonotic Diseases:** 5 of 6 global health emergencies declared by WHO were of animal origin.
- ➡ **Minimizing Socio-Economic Impact:**
 - SARS:** \$50 billion global loss
 - Avian Flu:** \$30 billion global loss

● Major Interventions under the Project

- ➡ **Lab & Vaccine Manufacturing Expansion:** Upgrading facilities for improved disease response.
- ➡ **Early Warning Systems:** Strengthening **surveillance mechanisms** to detect outbreaks early.
- ➡ **Data Management:** Enhancing **analytical systems** for better risk assessment.
- ➡ **Institutional Capacity Development:** Addressing gaps through a **disaster management framework** for the livestock sector.



● **India's Initiatives to Improve Animal Health**

- ➡ **National Animal Disease Control Program (NADCP):** Focuses on controlling and eradicating **Foot and Mouth Disease (FMD)** and **Brucellosis**.
- ➡ **Rashtriya Gokul Mission:** Aims to **develop and conserve indigenous bovine breeds** for higher productivity.

● **Way Forward**

- ➡ **Strengthen Regional Cooperation:** Develop cross-border disease control mechanisms.
 - ➡ **Increased Investment in Animal Health:** Ensure continuous support for lab infrastructure and early warning systems.
 - ➡ **Public Awareness Campaigns:** Educate farmers and livestock owners on disease prevention.
- This initiative reflects **India's proactive steps toward pandemic preparedness** by safeguarding animal health, reducing socio-economic risks, and promoting a **resilient livestock sector**.



Watch the Explained Video on YouTube 



New Guidelines for Import of Live Seaweeds into India

● **Why in News?**

- ➡ The **Ministry of Fisheries, Animal Husbandry and Dairying** has notified new “**Guidelines for Import of Live Seaweeds**” to streamline seaweed imports.
- ➡ The guidelines aim to facilitate the **import of high-quality seed material**, promote **seaweed enterprises** in coastal villages, ensure **environmental protection**, and address **biosecurity risks**.

● **Need for Guidelines**

- ➡ **Unique Characteristics of Seaweeds:** Seaweeds are submerged aquatic plants that experience varying **salinity** and **temperature fluctuations**.
- ➡ **Biosecurity Concerns:** Imported seaweeds can carry **diseases, pests, or pathogens** that may impact local ecosystems.
- ➡ **Biological Factors:** Differences in **genetics** and **reproductive strategies** may allow imported seaweeds to persist or spread in new environments, threatening native ecosystems.

● **Key Guidelines**

- ➡ **Prohibited Imports:** Seaweed species known to carry **pathogens** or listed under **CITES, IUCN**, or the **exporting country's threatened list** cannot be imported unless certified by the competent authority of the exporting country.
- ➡ **Permits and Clearances:** Import requires a **permit from the Department of Fisheries** and approval from the **National Committee on Introduction of Exotic Aquatic Species into Indian Waters**.
- ➡ **Market Restrictions:** Direct sale of imported seaweed in **domestic or international markets** is not allowed.
- ➡ **Intellectual Property Rights:** Neither the **exporter** nor the **importer** can claim intellectual property or other rights over the imported material.

● **About Seaweeds**

➔ **What are Seaweeds?**

Marine plants and algae that grow in **oceans, rivers, lakes**, and other water bodies.

➔ **Examples:**

Kappaphycus alvarezii

Red Algae Gelidiella acerosa

Gracilaria edulis

➔ **Applications:** Used in **pharmaceuticals, cosmetics, laboratories, paper, paint**, and processed foods.

● **India's Seaweed Production**

➔ **Current Production:** Only **34,000 tonnes** against a potential of **9.7 million tonnes** annually.

➔ **Target by 2025:** Increase seaweed production to **1.12 million tonnes** under the **Pradhan Mantri Matsya Sampada Yojana (PMMSY)**.

● **Way Forward**

➔ **Strengthen Biosecurity Measures:** Ensure stringent screening to prevent the introduction of invasive species.

➔ **Promote Domestic Seaweed Farming:** Focus on local production to reduce dependence on imports.

➔ **Collaborate with Coastal Communities:** Support livelihoods in coastal villages by expanding seaweed-based industries.

➔ **Encourage R&D and Innovation:** Develop sustainable farming techniques and explore new applications for seaweeds.






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