

Mains Master

Water, an instrument to build world peace

Context

- **World Water Day (March 22nd)**, established by the United Nations in 1993, serves as an annual reminder of the critical importance of freshwater.
- Each year focuses on a specific theme; 2024's theme, "**Water for Peace**," underscores that water scarcity and mismanagement can be sources of conflict, while cooperation over water resources promotes stability.

Background

- **Water scarcity is a complex issue with far-reaching consequences, exacerbated by:**
 - Rapid urban growth straining water supplies for domestic and industrial use.
 - Climate change leading to unpredictable rainfall patterns, droughts, and floods.
 - Pollution degrading water quality from agricultural runoff, industrial waste, and untreated sewage.
 - Mismanagement due to wasteful practices, poor infrastructure, and lack of coordination between different water users.

Water as a Precious Natural Resource

- **Water's role extends far beyond basic survival:**
 - It's the foundation of food production, driving global agricultural systems.
 - Healthy ecosystems depend on clean water for biodiversity and vital ecological processes.
 - Access to water directly impacts public health and well-being.
- When water becomes scarce or degraded, competition arises, potentially leading to social unrest and conflict, especially in regions already facing instability.

Key Concerns

- **Groundwater depletion:**
 - Excessive pumping of groundwater, especially for irrigation, outpaces natural recharge.
 - India's agricultural heartland (Punjab, Haryana, etc.) is particularly vulnerable, with some areas facing severe depletion rates.
- **Pollution of surface water bodies:**
 - Rivers, lakes, and wetlands suffer from contamination by agricultural chemicals, industrial effluents, and untreated sewage, posing health risks and damaging ecosystems.
- **Lack of integrated water management strategies:**
 - Fragmented approaches with competing water demands from households, agriculture, and industry, lead to inefficient use and conflicts.
- **Overreliance on rainfed agriculture:**
 - A significant portion of India's food production depends on rainfall, making it highly susceptible to drought and climate variability, jeopardizing food security.

Best Practices

- **Rainwater harvesting:**
 - **In-situ techniques** (e.g., contour trenching) capture rainwater where it falls, increasing soil moisture and groundwater recharge.
 - **Ex-situ methods** (e.g., rooftop harvesting, dams) store rainwater for later use.
- **Conjunctive use of surface and groundwater:**
 - Managing surface water sources (rivers, lakes) in tandem with groundwater to optimize availability and reduce pressure on any single resource.
- **Safe wastewater reuse:**
 - Treating wastewater to appropriate standards makes it available for non-potable purposes like irrigation or industrial processes, reducing demand for freshwater.

- **Government initiatives:**
 - PMKSY emphasizes micro-irrigation for water efficiency.
 - Jal Shakti Abhiyan promotes water conservation, recharge structures, and traditional water body restoration.

Way Forward

- **Monitoring and regulating groundwater use:**
 - Measuring groundwater levels, tracking extraction rates, and implementing regulations to prevent over-exploitation.
- **Water quality improvement:**
 - Stricter pollution control measures, investments in wastewater treatment, and promoting eco-friendly agricultural practices.
- **Water pricing:**
 - Creating economic incentives for conservation and discouraging wasteful use.
- **Circular water economy:**
 - Focusing on minimizing water waste, maximizing reuse, and treating water as a valuable resource rather than a disposable commodity.
- **Precision irrigation:**
 - Drip irrigation, sensor-based systems for precision water delivery.
- **Integrated Water Resource Management (IWRM):**
 - Holistic approach coordinating water allocation and use across sectors, considering both human needs and ecosystem health.
- **Community awareness and participation:**
 - Public education, local water management bodies for decision-making.
- **Climate-resilient agriculture:**
 - Drought-tolerant crops, soil management for moisture.
- **Collaboration:**
 - Partnerships between scientists, policymakers, and industry developing innovative solutions for sustainable water management.

Should judges accept official posts after retirement?

Context

- Recent resignation of Justice Abhijit Gangopadhyay from the Calcutta High Court to join the BJP raises questions about judicial ethics and the practice of appointing retired judges to official positions.

Background

- No constitutional law explicitly prohibits judges of higher courts from accepting official posts after retirement.
- However, the issue raises concerns about potential conflicts of interest and the public's perception of judicial independence.
- **Should Judges Accept Post-Retirement Official Posts?**
- **YES**
 - **Expertise:**
 - Retired judges have decades of experience interpreting laws, adjudicating complex cases, and understanding legal principles.
 - This expertise can be invaluable in roles such as heading commissions, tribunals, or advisory bodies where intricate legal matters are involved.
 - Example: A retired Supreme Court judge could be well-suited to lead a commission investigating a major human rights issue.



- **No Constitutional Bar:**
 - Since there is no explicit constitutional prohibition, the government has the flexibility to tap into this valuable pool of retired judges for suitable positions.
 - It allows the government to utilize experienced legal minds for the good of the state without legal hurdles.
- NO**
- **Public Perception:**
 - If judges routinely accept post-retirement government appointments, it can create suspicion that their judgments while on the bench might have been influenced by hopes of future rewards.
 - This erodes public faith in the judicial system, even if judges act with complete integrity.
 - Example: A landmark ruling that goes against the government might be seen as less credible if the judge later accepts a position with that same government.
- **Undermines Independence:**

- The core of judicial independence lies in judges being free from external influence or pressure.
- When a judge knows post-retirement opportunities hinge on government favor, it can create a subconscious bias that impacts decisions, even if unintentionally.

Best Practices

- **Judicial Code of Conduct:**
 - A well-defined code established by the Supreme Court would provide clarity and set standards for judges' behavior even after leaving the bench.
 - This could include guidelines on waiting periods before accepting official posts, restrictions on politically charged appointments, etc.
- **Focus on Alternative Career Paths:**
 - Proactive promotion of options like arbitration, mediation, legal consultancy, and legal education would provide fulfilling post-retirement career paths.
 - This reduces judges' dependence on government offers and strengthens their perceived independence.

Way Forward

- **Judicial-Led Reform:** The judiciary must take responsibility for self-regulating to maintain public trust. Expecting the government to limit its own power in this area is unrealistic.
- **Possible Solutions:**
 - **Cooling-off period:** Mandating a wait (e.g., 2-3 years) between retirement and accepting an official post would create distance between a judge's rulings and potential benefits.
 - **Age Increase:** Raising the retirement age reduces the urgency to find immediate post-retirement roles and discourages ruling in hopes of later rewards.
 - **Tribunal Service:** Specialized, self-contained career paths for tribunals would lessen the need to recruit retired judges, enhancing the independence of these bodies.

Nuclear energy: fixing the finance

Context

- The urgent need to address climate change is driving a renewed interest in nuclear energy as a reliable, low-carbon power source.
- The recent Nuclear Energy Summit in Brussels, along with the UAE's COP28 declaration, highlight the importance of nuclear power in reaching decarbonization goals.

Background

- * Nuclear power provides significant advantages: low emissions, continuous operation, small land footprint, and long lifespan.
- * Recent technological innovations, including Small Modular Reactors (SMRs), offer further safety and efficiency improvements.

Issues with Nuclear Energy Finance

- * Despite the advantages, nuclear energy financing faces major obstacles:
 - Stigma and perceived risks deter private investors.
 - Multilateral Development Banks (MDBs) like the World Bank have traditionally avoided funding nuclear projects.
 - High upfront costs and past project failures (e.g., Westinghouse, Aрева) create further reluctance.

Importance of Nuclear Energy Finance

- * To scale up nuclear energy and meet climate targets, innovative financing models are crucial.

- Technology alone is not enough; without proper funding, nuclear power's potential remains untapped.

What World Leaders Are Doing

- Nuclear Energy Summit and COP28 declaration signal a shift in perception and a call for increased nuclear capacity.
- Growing number of reactors under construction, particularly in Asia (China is poised to lead).

Possible Solutions

- **MDB Policy Reform:** Re-evaluation of financing policies to facilitate private investment and blended finance models.
- **Financial Cooperation:** Replicating successful funding models like the 'Mankala' cooperative used in Finland.
- **Market Support:** Providing low-interest loans and incentives to encourage investment.

Way Forward

- Changing the narrative around nuclear energy safety and emphasizing its role in a clean energy mix.
- Active government support to create attractive conditions for private investors.
- Collaboration between governments, MDBs, and the private sector to develop sustainable financing solutions.

India's Position

- Low nuclear share in India's energy mix despite cost advantages (e.g., Tarapur, Kudankulam plants).
- Recent liberalization and ambitious growth plans indicate a positive trajectory for India's nuclear industry.

Prelims Booster

Global sea level jumped due to El Nino, climate change: NASA

- 🌊 The global average sea level experienced a notable increase of approximately 0.3 inches (0.76 cm) from 2022 to 2023, a significant jump that has been attributed to the combined effects of a strong El Nino event and the ongoing impact of a warming climate, as reported by NASA.
- 📈 Over the past three decades, sea levels have risen by around four inches since 1993, with the rate of increase showing a notable acceleration. The rate has more than doubled from 0.07 inches per year in 1993 to the current rate of 0.17 inches per year, indicating a concerning trend of rising sea levels.
- 🌐 Projections suggest that if the current rates of acceleration continue, an additional 20 cm of global mean sea level rise could be expected by 2050. This rate of change would be double that of the previous century, potentially leading to a future where flooding events become more frequent and catastrophic than seen today.
- 🌡️ While the immediate cause of the recent spike in sea level rise is attributed to the El Nino weather effect, characterized by warmer ocean temperatures in the equatorial Pacific, there is also a clear human influence evident in the underlying trend of acceleration, emphasizing the impact of both natural climate phenomena and human-induced climate change on the rising sea levels globally.

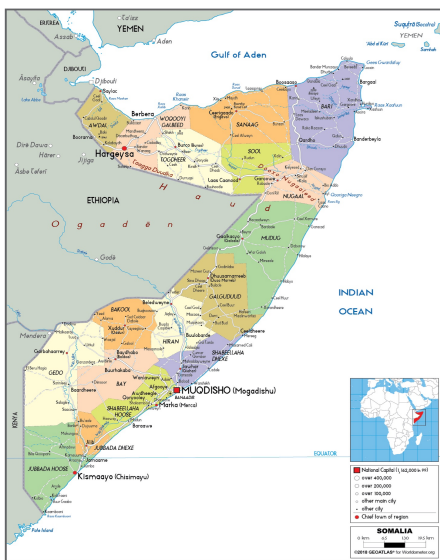
Arab League lauds India's Palestine policy

- 🇸🇦 The Arab League commends India's unwavering support for the Palestinian cause, highlighting India's humanitarian assistance and endorsement of a "two-state solution" to the Israel-Palestine conflict as a demonstration of deep-rooted empathy and commitment to alleviating suffering.
- 🌍 Ambassador Yusuf Mohamed Abdulla Jameel praised India's principled stance and solidarity with Palestine, emphasizing India's role as a beacon of hope and support in the international community through its voting in favor of Palestine and provision of humanitarian aid.
- 🤝 India's dedication to the Palestinian cause and advocacy for a two-state solution have been recognized by the Arab League, underscoring India's commitment to promoting peace and addressing the humanitarian needs of those affected by the conflict in the region.

- 🌐 The Arab League, established on March 22, 1945, in Cairo, Egypt, is a regional organization comprising Arabic-speaking countries in the Middle East and North Africa, with 22 member states including founding members Egypt, Iraq, Jordan, Lebanon, Saudi Arabia, Syria, and Yemen.
- 🤝 Initially focused on promoting Arab unity, cooperation, and independence, the League serves as a forum for member countries to collaborate on political, economic, social, and cultural issues, acting as a platform for policy coordination, conflict resolution, and addressing regional challenges.
- 🕒 Founded in the post-World War II era during a period of rising nationalism and decolonization, the League historically prioritized the establishment of an independent Palestinian state, evolving over time to encompass broader goals such as economic integration, conflict resolution, and advocating for Arab interests globally.

Somali pirates' return exacerbates the crisis for global shipping companies

- 🚢 The resurgence of Somali pirates in the western Indian Ocean has reignited concerns for global shipping companies, as recent raids have led to a spike in risks and costs associated with maritime operations. The pirates, who had been relatively dormant for almost a decade, have reemerged to target ships, posing significant challenges for the shipping industry.
- 🛡️ The security vacuum created by Houthis strikes in the region has provided an opportunity for Somali pirates to exploit the situation and engage in hijackings, leading to increased incidents of piracy. This resurgence has not only raised security concerns but has also resulted in a surge in insurance premiums and the need for enhanced security measures to safeguard vessels and crew members.



- 💰 The escalating piracy incidents have driven up prices for armed security guards and insurance coverage, impacting the operational costs of shipping companies. The rising expenses, coupled with the potential for ransom negotiations, have added financial burdens and complexities to maritime operations, prompting industry representatives to emphasize the importance of addressing the evolving security threats in the region proactively.
- 🌐 The evolving situation underscores the need for collaborative efforts among international navies, industry stakeholders, and regional authorities to mitigate the risks posed by piracy and ensure the safety and security of maritime activities in the western Indian Ocean. The resurgence of Somali pirates serves as a stark reminder of the persistent challenges faced by the shipping industry and the imperative of implementing effective strategies to combat piracy and safeguard global shipping routes.

Ministry of Environment tightens rules on bioplastics

- 🌱 The Ministry of Environment in India has implemented stricter regulations on bioplastics, requiring disposable plastic products labeled as 'biodegradable' to not leave any microplastics behind, aiming to address the issue of plastic waste pollution and promote environmentally friendly alternatives.
- ♻️ Biodegradable plastics undergo treatment before being sold, while compostable plastics degrade but typically require industrial or large municipal waste management facilities for decomposition, presenting two distinct approaches to managing plastic waste.
- 📄 The recent amendments to India's Plastic Waste Management Rules emphasize that biodegradable plastics should degrade through biological processes without leaving any microplastics behind, although the rules do not specify the specific tests or thresholds for microplastics elimination, prompting discussions on establishing comprehensive standards for assessing microplastic presence in plastic products.
- 🌊 Microplastics have emerged as a significant source of pollution impacting water bodies like rivers and oceans, underscoring the importance of regulating plastic materials to minimize environmental harm and promote sustainable waste management practices in India.
- 💡 The Central Pollution Control Board's stringent criteria for certifying plastics as biodegradable, requiring a 90% degradation process that spans at least two years, has posed challenges for companies seeking approval, highlighting the need for clear guidelines and standardized testing methods to ensure the efficacy of biodegradable and compostable plastics in reducing plastic pollution.

Panel to study scope of altering power lines in bustard habitat

- 🏛️ The Supreme Court has established an expert committee to address the conservation of the endangered Great Indian Bustard bird population while aligning with India's commitments to promote renewable energy sources, particularly focusing on mitigating the threat posed by high-powered power cables causing collisions with the birds in their core habitats in Gujarat and Rajasthan.
- 🌿 The committee, comprising wildlife and forest conservation experts, officials from the Renewable Energy and Environment Ministries, and representatives from relevant authorities, will assess the feasibility and impact of altering power lines in priority areas for the Great Indian Bustard in Rajasthan and Gujarat to strike a balance between sustainable development and wildlife conservation.
- ⚡ The panel's mandate includes evaluating the potential for underground and overhead electric lines, exploring alternative solutions, and recommending additional measures to safeguard the bird species, with a deadline to submit its findings to the Supreme Court by July 31, aiming to address the critical issue of bird mortality due to power line collisions and advance conservation efforts.

SC stays govt. notification on establishing fact check unit

- 🏛️ The Supreme Court has issued a stay on the government's notification establishing the Press Information Bureau's Fact Checking Unit (PIB FCU) to combat fake news and misinformation related to the activities of the Central government, pending a decision by a third judge of the Bombay High Court on the validity of Rule 3(1)(b)(v) of the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021.
- 🗳️ The stay order, in response to petitions filed by the Editors Guild of India and comedian Kunal Kamra, suspends the implementation of the March 20 notification until the High Court resolves the legal issues surrounding the provision under which the notification was issued, with the Supreme Court deferring judgment on the impact of Rule 3(1)(b)(v) on free speech and expression rights for the High Court to analyze.
- 🗣️ Concerns raised by the petitioners include fears that the establishment of the FCU could lead to self-censorship by social media intermediaries, potentially limiting free speech, and creating a scenario where the government has control over determining the veracity of information, prompting debates on the need for balanced regulation to combat misinformation while safeguarding individual rights and preventing undue influence on online content dissemination.