
1. Ring of Fire

Why in News?

- A Volcano erupted in the southern Pacific Island of Tonga, which recently triggered Tsunami waves around the Pacific.

Highlights:

- The Tonga Islands occur along the Ring of Fire—a perimeter of heightened volcanic and seismic activity that encircles the Pacific Ocean basin
- It is an Undersea Volcanic Eruption consisting of two small uninhabited islands, Hunga-Ha'apai and Hunga-Tonga.
- The Hunga-Tonga-Hunga-Ha'apai volcano has erupted regularly over the past few decades
- During events in 2009 and 2014/15, hot jets of magma and steam exploded through the waves. But these eruptions were small, dwarfed in scale by the January 2022 events.
- This is one of the massive explosions the volcano is capable of producing roughly every thousand years. One of the reasons for it being highly explosive is the Fuel-Coolant interaction. Huge volcanic eruptions can sometimes cause temporary global cooling as sulfur dioxide is pumped into the stratosphere. But in the case of the Tonga eruption, initial satellite measurements indicated the amount of sulfur dioxide released would only have a tiny effect of perhaps 0.01 Celsius global average cooling.
- The eruption altered atmospheric pressure that may have briefly helped clear out the fog in Seattle, in the United States.
- The waves crossed the Pacific, drowning two people in Peru and causing minor damage from New Zealand to Santa Cruz, California.
- The US Geological Survey estimated the eruption caused the equivalent of a magnitude 5.8 Earthquake.

2. Exercise PASSEX

Why in News?

- India's INS Kochi and Russian ships has recently engaged in the international Passage Exercise (PASSEX).

Highlights:

- A passage exercise is normally undertaken whenever an opportunity arises, in contrast to Pre-Planned Maritime Drills.

- Russia's inclusion as a dialogue partner of the Indian Ocean Rim Association (IORA) has opened up a plethora of opportunities for collaboration with India including a possible Maritime Security Architecture to create balance in the Indian Ocean Region (IOR) and on scientific and Research Endeavours.
- In the Arctic Region: India has scientific, environmental, commercial and strategic interests in the Arctic region, and the Russian Arctic can potentially address India's energy security objectives.
- Hydrocarbons: Russia has the largest proven natural gas reserves in the world, enough to last for about 80 years at current production rates.
- Strategic Minerals: The Russian Arctic also has vast deposits of cobalt, copper, diamonds, gold, iron, nickel, platinum, high-value rare earth elements, titanium, vanadium and zirconium.
- The Arctic accounts for 90% of Russia's nickel and cobalt production, 60% of copper, and over 96% of Platinum Metals.
- Indian rare earth reserves are richer in lighter fractions and deficient in heavier ones.
- Most of the rare earth products used in strategic industries viz. Defence, fibre optic Communications, space and nuclear energy are also critical to various clean energy Technologies, including wind turbines and electric vehicles.
- The Russian Arctic, therefore, has the potential to mitigate India's critical deficiencies in rare earth and Strategic Minerals.
- INS Kochi is an indigenously designed second ship of the Kolkata-class stealth guided-missile destroyers, was built under the code name of Project 15A for the Indian Navy.
- It was constructed by Mazagon Dock Limited (MDL) in Mumbai and was later commissioned to the Indian Navy services in 2015, after undergoing extensive sea trials.

3. Rare Earth Metals

Why in News:

- The US has recently proposed a law aiming to end China's alleged "chokehold" on rare-Earth Metal Supplies.

Highlights:

- The Bill aims to "protect the US from the threat of rare-earth element supply disruptions, Encourage Domestic production of those elements, and reduce its reliance on China.
- The law would require the creation of a "strategic reserve" of rare earth minerals by 2025.

- That reserve would be tasked with responding to the needs of the army, the tech sector and other essential infrastructure “for one year in the event of a supply disruption”.
- They are a set of seventeen metallic elements. These include the fifteen lanthanides on the periodic table in addition to scandium and yttrium that show similar physical and chemical properties to the lanthanides.
- The 17 Rare Earths are cerium (Ce), dysprosium (Dy), erbium (Er), europium (Eu), gadolinium (Gd), holmium (Ho), lanthanum (La), lutetium (Lu), neodymium (Nd), praseodymium (Pr), promethium (Pm), samarium (Sm), scandium (Sc), terbium (Tb), thulium TM, ytterbium (Yb), and yttrium (Y).
- Even futuristic technologies need these REEs (For example high-temperature superconductivity, safe storage and transport of hydrogen for a post-hydrocarbon economy, environmental global warming and energy efficiency issues).
- They are called ‘rare earth’ because earlier it was difficult to extract them from their oxides forms technologically.
- They occur in many minerals but typically in low concentrations to be refined in an economical manner.
- India has granted government corporations such as IREL a monopoly over the primary mineral that contains REEs: monazite beach sand, found in many coastal states.
- IREL produces rare earth oxides (low-cost, low-reward “upstream processes”), selling these to foreign firms that extract the metals and manufacture end products (high-cost, high-reward “downstream processes”) elsewhere.
- IREL’s focus is to provide thorium — extracted from monazite — to the Department of Atomic Energy.

4. Interstate River Water Disputes Act, 1956

Why in News?

- Karnataka CM has said irrigation projects are bogged down by river water sharing disputes and asked the Centre to ‘revisit the Inter-State River Water Disputes (IWRD) Act since the law is creating more disputes than Resolving Them’.

IWRD Act:

- The IWRD Act, 1956 aims to resolve the water disputes that would arise in the use, control and distribution of an Interstate River or River Valley.

- Article 262 of the Indian Constitution provides a role for the Central government in Adjudicating Conflicts surrounding inter-state rivers that arise among the state/regional Governments.
- This act is confined to states of India and not applicable to union territories.
- Only concerned state governments are entitled to participate in the tribunal adjudication and Non-Government Entities are not Permitted.

Jurisdictions Over Rivers:

- River waters use / harnessing is included in states jurisdiction.
- However, Union government can make laws on regulation and development of inter-State rivers and river valleys to the extent such water resources are directly under its control when expedient in the public interest.
- When union government wants to take over a interstate river project under its control by law, it has to take approval of the riparian states' legislature assemblies before passing such bill in the Parliament per Article 252 of the constitution.
- When public interest is served, President may also establish an interstate council as per Article 263 to inquire and recommend on the dispute that has arisen between the states of India.

Resolution of Disputes:

- Dispute resolution is a layered process, as mandated by the ISWD Act.
- After receiving a complaint from a state, the Union government first tries to mediate. It is only when negotiations fail that the Centre is required to form a tribunal to adjudicate the Dispute. If a State Government makes a request regarding any water dispute and the Central Government is of opinion that the water dispute cannot be settled by negotiations, then a Tribunal is constituted.

Constitution of Tribunal:

- Whenever the riparian states are not able to reach amicable agreements on their own in sharing of an interstate river waters, section 4 of IRWD Act provides for a Tribunal.
- The tribunal shall not only adjudicate but also investigate the matters referred to it by the central government and forward a report setting out the facts with its decisions.
- The tribunal responsibility is not limited to adjudication of issues raised by the concerned states and but investigation of other aspects such as water pollution, water quality deterioration, flood control etc.

- Time-frame for dispute resolution
- The tribunals have been allotted three years to arrive at a final decision, extendable by two years.
- The 2002 Amendment to the ISWD Act specified a one-year limit on the timeline allowed to carry out the process of dispute resolution.

Active Tribunals in India:

- Ravi & Beas Water Tribunal (1986) – Punjab, Haryana, Rajasthan
- Krishna Water Disputes Tribunal II (2004) – Karnataka, Telangana, Andhra Pradesh, Maharashtra
- Mahadayi Water Disputes Tribunal (2010) – Goa, Karnataka, Maharashtra
- Vansadhara Water Disputes Tribunal (2010) – Andhra Pradesh & Odisha
- Mahanadi Water Disputes Tribunal (2018) – Odisha & Chhattisgarh

Need for the IWRD Act:

- **Major inter-state River Basins:** India has 25 major river basins, with most rivers flowing across states.
- **Equitable Distribution of water:** As river basins are shared resources, a coordinated approach between the states is necessary for the preservation, equitable distribution and sustainable utilization of River Water.
- **Hydro-politics:** Much recently, interstate rivers in India have become sites of contestations, fuelled by conflicting perceptions of property rights, flawed economic Instruments for Food Security.
- **Sustainability:** This has led to a lack of an integrated ecosystems approach, and the prevalence of reductionist hydrology for water resource development.

Issues with IRWD Act:

- Centre's dilemma: Since river water falls within the ambit of State Subjects, its governance remains confined to the limits of the state political discourse.
- **Interference of Judiciary:** The apex court has limited the role of the tribunals to quantification and allocation of water between riparian states, and its own role is to be an interpreter of the awards and agreements.
- **Colonial Award:** The history of colonial rule has led to the creation of asymmetries between states, and the present water disputes stem from the reproduction of this imperial and colonial power relation.

- **Structural Issues:** Various operational characteristics of the tribunals as problematic, since they do not adhere to any established system.
- **Operational Issues:** For instance, the sittings are not routine, the functioning is outside the regular court system, and day-to-day or week-to-week hearings are few and far in between.

Why this has become a Sensitive Topic?

- **Associated ethnicity:** At the state level, river water is politically perceived as part of the larger issue of “regional sharing of resources,” which is linked with the ethnic and cultural identity of the state and its people.
- **Matter of autonomy:** The political narrative around river disputes is subsumed within the question of regional rights, and any possibility of water sharing is seen as a compromise or infringement on the regional autonomy of a state.
- **Identity politics:** Hence, the political narrative around the river disputes jumps to a larger scale of identity politics.

Way forward:

- For such dispute resolution, all other recourses such as mediation and conciliation must remain viable options.
- These should operate simultaneously along with adjudication and political consensus among the riparian states.
- Directly approaching the Supreme Court may result in adversarial outcomes, with the Conflict Reaching a point of no return.

5. Inequality Kills Report

Why in News?

- The COVID-19 pandemic has heightened economic inequalities across the world says the Inequality Kills Report.

What is the “Inequality Kills” Report?

- “Inequality Kills: The unparalleled action needed to combat unprecedented inequality in the wake of COVID-19” is a report released in January 2022 by Oxfam, a U.K.-based consortium.
- The report argues for sustained and immediate action to end the pandemic, address global inequality and initiate concerted measures to tackle the Climate Emergency.

- The central argument of the report is that inequality is a death sentence for people that are marginalized by social and economic structures and removed from political decision-Making.

Key Highlights:

- **Billionaire Variants:** Identifying this process as “the billionaire variant”, the report says that this vertical aggregation of global wealth into the hands of a few is “profoundly dangerous for our world”.
- **Pauperization:** 160 million people were rendered poor during the pandemic, while the ten richest people doubled their fortunes since the start of the pandemic.
- **Vaccine Apartheid:** Holding governments to account the report identifies “vaccine apartheid” (unequal access to vaccines between countries) and the lack of universal vaccination programs in many countries.
- **Inflation:** It also demonstrates how emergency government expenditure (estimated at \$16 trillion) that was meant to keep economies afloat during this crisis, inflated stock prices.
- **Collective:** This resulted in billionaires’ collective wealth increasing by \$5 trillion during the Pandemic.

Why does the report say that inequality kills?

- For the writers of the report inequality is not an abstract theory.
- Instead, they see it as institutionalized violence against Poorer People.
- Extreme inequality is a form of ‘Economic Violence’—where structural and systemic policy and political choices that are skewed in favours of the richest and the most powerful people.
- This results in direct harm to the vast majority of ordinary people worldwide.

Implications of Inequality:

- **Crime and violence:** The report identifies higher inequality with more crime and violence and less Social Trust.
- **Impact on marginalized:** The brunt of inequality and the violence is borne, for instance, by women across the world, Dalits in India, Black, Native American and Latin persons in the US and indigenous groups in many countries.

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- **Victimization of women:** Pointing to the example of women, the problem runs a lot deeper as 13 Million women have not returned to the workforce and 20 million girls are at risk of losing access to Education.

Way Ahead:

- **The “Inequality Kills” report** proposes far-reaching changes to structures of Government, economy and policy-making to Fight Inequality.
- **Vaccine sharing:** It urgently asks for “vaccine recipes” to be made open-source so that every qualified vaccine manufacturer can manufacture them.
- **Taxing the opportunists:** The report then asks for governments to claw back the wealth from billionaires by administering solidarity taxes higher than 90% Especially on the billionaires that have profited during Pandemic.
- **Taxation reforms:** The report asks for Permanent cancellation of tax havens, Progressive taxation on corporations and an end to tax Dodging by Corporations.
- **Welfare:** The report then suggests that this regained wealth be redirected towards building income safety nets, universalizing healthcare for everyone, investing in green technologies and democratizing them, and, investing in Protecting women from violence.

