29/04/2024

TOPICS COVERED

Anticyclones, hanging even now over India, link warming to heat (29 April)   (GS Paper I: Geography, GS Paper III: Environment)

The record warming of 2023 has so far not been fully explained since it was much warmer than expected just from the superposition of El Niño on global warming. But the impact of the El Niño during its pre-monsoon demise on the IEJ tends to produce a stronger and more persistent anticyclone and thus longer lasting and intense heat waves

> **Indian Easterly Jet (IEJ)**
> - A strong upper-level wind pattern that develops over the Indian subcontinent.
> - Occurs during the pre-monsoon season, typically in April and May.
> - Extends across the Arabian Sea, peninsular India, and the Bay of Bengal, around the 10 degrees North latitude.
> - Characterized by strong easterly winds, blowing from east to west.

- Influences weather patterns, including the onset of monsoon rains and the formation of heat waves and anticyclones.
- Monitored and predicted by meteorological agencies like the India Meteorological Department (IMD) using advanced models and observational data.

- Global warming's local manifestations underscore the need for global modeling but local predictions.
- The waning El Niño of 2023 brings expected warm temperatures globally, with cooler temperatures spreading from Pakistan across India to West Bengal in March.
- Despite global warming, a cool band persisted across India in 2023.
- Heat waves in India are of concern, particularly during the general elections.
- Persistent circulation patterns contribute to heat waves, requiring improved prediction methods.
- Anticyclonic circulations over the North Indian Ocean drove unusual rainfall over Odisha in March.
- Anticyclones have clockwise winds, with sinking air creating high-pressure heat domes, explaining heat waves.
- Anticyclonic circulation also contributed to historic floods in Dubai on April 17.
- Anticyclones persist over the North Indian Ocean and the Indian subcontinent.

What links anticyclones to heat?

- During the pre-monsoon season, the upper-level Indian Easterly Jet (IEJ) forms around 10 degrees N latitude, spanning the Arabian Sea, peninsular India, and the Bay of Bengal.
- A strong westerly jet exists further north around 30 degrees N, and when combined, they can generate an anticyclonic pattern over the Indian Ocean and the Indian subcontinent.
- Easterly jets bring strong winds from the east, while westerly jets come from the west, and these are natural seasonal features.
- The westerly jet moves north during the monsoon season, allowing the IEJ to dominate the Indian subcontinent.
- During the pre-monsoon season, a strong anticyclone can bring dry and hot weather to many parts of India, while a weak anticyclone results in milder weather.
- The key question is whether the strength of the anticyclone this year is related to global warming and the occurrence of heat waves.

How are heat waves amplified?

- The pre-monsoon season in India is synonymous with summer and the occurrence of heat waves is expected during this time.
- Accurate prediction and early warning systems for heat waves are crucial for saving lives.
- Understanding the underlying factors influencing the duration, intensity, and frequency of heat waves helps identify heat wave hotspots.
- The record warming observed in 2023 has not been fully explained yet, as it exceeded expectations based solely on the superposition of El Niño on global warming.
- The **weakening of El Niño during the pre-monsoon season tends to strengthen the Indian Easterly Jet (IEJ), leading to a stronger and more persistent anticyclone**, resulting in longer and more intense heat waves.

- Therefore, the heat wave season this year is attributed to warmer temperatures due to El Niño and the additional impact of unexplained warming observed in 2023.
- The presence of a cool background state alongside a strong and persistent anticyclone is crucial for accurate predictions by the India Meteorological Department, enabling the development of effective early warning systems.

Stages of early warnings

- Accurate early-warning systems for extreme weather events utilize a three-step approach known as the 'ready-set-go' system.
- This approach is part of the 'Subseasonal-to-Seasonal Predictions' project initiated by the World Climate Research Program under the World Meteorological Organization.
- India is actively involved in this project and has made significant progress in enhancing the accuracy of predictions.
- The 'ready' step involves providing a seasonal outlook based on background factors like global warming and El Niño, allowing disaster response systems to prepare accordingly.
- Subseasonal predictions cover weeks two to four, contributing to the 'set' step, which involves resource allocation and identifying potential hotspots for disaster preparedness.
- The 'go' step utilizes short- (days 1-3) and medium- (days 3-10) range forecasts to implement disaster management measures, including rescue efforts, hydration centers, and heat shelters.

Preparedness and recovery

- India's prediction system and early warning systems have shown continuous improvement.
- The National Disaster Management Agency (NDMA) has integrated these advancements into its 'ready-set-go' system effectively.
- The main challenge now is to enhance resilience for the future by accurately predicting weather trajectories at every location across India.
- Efforts to predict weather patterns at 10-year timescales have shown promise but require further development.
- Coordination from the national to the neighborhood levels and the provision of early warnings spanning from days to a decade are being established.
- Training and engagement of governments, departments, and the general population are essential for ensuring sustained success.
- India's aspirations for sustained economic development hinge on the effectiveness of these efforts.

Combustion: a question of fuel (29 April)   (GS Paper III: Basic Science)

Internal Combustion Engines:

- Definition: Power vehicles like cars and motorcycles by burning fossil fuels like petroleum.
- Function: Convert chemical energy from fuel into mechanical energy to propel vehicles.

- Combustion Process: Involves a chemical reaction called redox, where one substance loses electrons (oxidant) and another gains them (reductant).
- Energy Release: All combustion reactions release energy, often producing heat that can vaporize fuel and create a flame.
- Emission: **Combustion also produces smoke, a gaseous mix of highly oxidized matter, which contributes to air pollution.**

Impact:

- **Environmental Impact**: Combustion of fossil fuels is a significant contributor to global warming due to greenhouse gas emissions.
- **Study of Combustion**: Combustion science is a branch of science focused on understanding combustion reactions.
- **Research**: Combustion scientists explore ways to control combustion reactions and develop cleaner technologies by studying them in various environments, including space.

A three-dimensional view of the Israel-Iran crisis (29 April)   (GS Paper II: IR)

For years, Iran has shown strategic patience in its shadow war with Israel, but Tel Aviv's bombing in Damascus seems to have altered Tehran's thinking

- Benjamin Netanyahu, Israel's Prime Minister, **identified Iran as the greatest threat to Israel in a March 2018 interview.**
- Netanyahu has been vocal about his opposition to the 2015 Iran nuclear deal brokered by the Obama administration.

- **Iran launched a significant attack on Israel on April 14 during Netanyahu's tenure, marking the first such attack by a state actor in over three decades.**
- The attack challenged Israel's deterrence and highlighted its dependence on the United States for security.
- Despite the attack, the United States restrained Israel's response, leading to criticism of Israel's perceived feeble reaction.
- The incident underscores Iran's growing risk appetite and the complex dynamics in the volatile West Asia region.

The Biden doctrine

- The Biden administration aimed to prevent the Israel-Hamas conflict from escalating into a larger regional war.
- **President Biden supported Israel's military operation in Gaza but also worked diplomatically to ease tensions between Israel and its neighbors.**
- Challenges arose as the U.S. had limited influence over Iran, and Israel was combating both Hamas in Gaza and Iranian influence in the region.
- The bombing of the Iranian embassy compound in Damascus by Israel heightened the risk of an Israel-Iran confrontation.
- The U.S. anticipated Iranian retaliation and took steps to intercept Iranian projectiles to prevent escalation.
- **President Biden informed Prime Minister Netanyahu that the U.S. would not participate in any Israeli retaliation against Iran, signaling a desire to de-escalate tensions.**

Netanyahu's dilemma

- Israel and Iran have been engaged in a shadow war for years, with Israel conducting numerous air strikes targeting Iranian interests.
- **Israel has also carried out operations inside Iran, including the assassination of a senior nuclear scientist in November 2020.**
- These actions by Israel have been relatively unchallenged by Iran, which has emboldened Israel to continue its operations.
- Following an escalation on October 7, Israel intensified its shadow war by targeting senior Iranian figures in Syria, prompting a muted response from Iran.
- Despite calls for forceful retaliation against Iran, Israeli Prime Minister Netanyahu faced limitations due to the lack of U.S. support for Israeli retaliation.
- Netanyahu opted for a symbolic strike inside Iran, targeting a radar system, which was seen as a weak response from an Israeli perspective but avoided further escalation with Iran.
- The Biden administration's stance of not joining Israel's retaliation efforts helped prevent a regional war but was perceived as a constraint by Israel.

The Ayatollah's calculus

- **Iran-Israel Shadow War**:

- Iran and Israel have been engaged in a shadow war for years, marked by covert operations and airstrikes targeting each other's interests.
- Israel has conducted over 400 airstrikes in Syria targeting Iranian assets, including operations inside Iran.
- Despite losing senior officers and scientists, Iran's influence in the region and its nuclear program remain largely intact.

- **Change in Iran's Strategy**:

  - Israel's bombing of the Iranian embassy compound in Damascus seems to have prompted a shift in Iran's strategy.
  - Iran has decided to impose a cost on Israel for its continued strikes on Iranian officials.

- **Factors Influencing Iran's Strategy Change**:

  - **Improved strategic ties with Russia and China, with Iran supplying drones to Russia for the conflict in Ukraine.**
  - Assessment that the U.S. has a low appetite for prolonged wars in the Middle East, especially amidst challenges from China and Russia.

- **Impact of Israel's Gaza Offensive:**

  - Israel's offensive against Hamas in Gaza, lasting six months, has failed to meet its objectives.

  - The offensive triggered international condemnation and accusations of genocide against Israel.

- **Iran's Calculated Risk**:

  - Iran's decision to openly attack Israel reflects its assessment of the changing regional dynamics and weakened Israeli position.
  - Despite collective defense efforts by the U.S., UK, France, Jordan and Israel, some Iranian missiles still hit Israel, highlighting Iran's growing boldness.

- **Pattern of Iranian Attacks**:

  - Iran has previously targeted Saudi oil facilities and American military bases in Iraq, facing minimal consequences.
  - The recent attack on Israel further demonstrates Iran's willingness to escalate tensions without significant repercussions.

- **Implications for West Asia**:

  - Iran's actions signal a shift in the strategic landscape of the region, with potential implications for regional stability and security.

Inequality can no longer be ignored (29 April) (GS Paper III: Inequality)

Addressing inequality is also about questioning the nature of growth itself — which is now unequal — and ensuring that jobs are generated

- The Congress party's election manifesto, Nyay Patra, has sparked a debate on inequality and wealth concentration.
- The Prime Minister's comments on the manifesto have also stirred discussions on wealth redistribution.
- World Inequality database found that inequality in India has been on the rise, with evidence showing that **22.6% of the national income went to the top 1% in 2022-23, the highest since 1922.**
- **Wealth inequality is even more pronounced, with the top 1% holding 40.1% of the country's wealth.**
- It's evident that inequality can no longer be ignored or justified as a byproduct of economic growth.
- The cost of such unequal growth needs to be examined and addressed.

As an election issue is welcome

- **There's growing awareness of the unfairness where some individuals and corporations thrive while most of the population struggles for decent employment.**
- The idea of supporting 'wealth creators' to stimulate job creation and prosperity has repeatedly failed, not just in India but worldwide.
- Relying solely on economic growth, even if it exacerbates inequality, to improve people's lives is being questioned globally.
- The emergence of this issue as an election topic in India is noteworthy regardless of the election outcome in 2024.
- Public discourse, especially on social media, has largely focused on direct redistribution measures **like taxing the rich and subsidizing the poor**, which are relevant in India.
- **India has a low tax-GDP ratio compared to other middle-income countries**, with indirect taxes contributing the majority of tax revenue.
- Even direct taxes in India are not very progressive, with companies earning over ₹500 crore profit before taxes facing a lower effective tax rate compared to smaller companies.

Welfare spending is low

- **Public spending on welfare and social sectors in India is significantly low compared to other countries.**
- For example, **spending on health remains around 1.3% of GDP, falling short of the National Health Policy target of 2.5% of GDP by 2025.**
- Despite the impact of COVID-19, there haven't been significant increases in health expenditures, making it unlikely to achieve the NHP target.

- **Other major budget allocations, like for MGNREGA and education, show a decline as a proportion of total expenditure or GDP.**
- There's a **need to improve revenue mobilization progressively while increasing spending on areas directly impacting the lives of the poor.**
- Addressing inequality also involves questioning the nature of growth, particularly its ability to generate jobs.
- Recent growth in India has been accompanied by joblessness, **declining employment elasticity, rising profit shares, and stagnant real wages.**
- The **focus should be on generating decent employment opportunities with adequate remuneration, rather than just promoting self-employment.**
- Equitable growth, where people's purchasing power increases, can be achieved through government spending on programs like NREGA and the Public Distribution System.
- Cash transfer schemes like the Mahalakshmi scheme proposed in the Congress manifesto can also contribute to equitable growth.

Job creation

- **Governments can create jobs by filling existing vacancies and expanding public services in health, education, nutrition, and social security.**
- **Improving the quality of jobs for frontline workers like anganwadi workers and health activists is essential, including better wages and working conditions.**
- Direct job creation efforts can enhance employment opportunities, especially for women, and improve human development outcomes.
- **Investing in public services can reduce the burden of unpaid care work on women and enable them to pursue other employment opportunities.**
- **Addressing inequality in opportunities and intergenerational inequality** requires equitable access to services like pre-school education and nutrition during childhood.
- **An employment-centered growth strategy should support labor-intensive small and medium enterprises and promote skill training and human capital development.**
- **Measures like maternity entitlements, childcare support, transportation, and affordable housing can facilitate women's participation in the labor market.**
- Addressing the employment issue is crucial for tackling inequality, as long as growth prioritizes profits for a few, employment challenges are likely to persist.

Turnout and tropes: On phase two voter turnout and election rhetoric (29 April)

Voter turnout has been lower in most States compared to the 2019 election

- **Voter Turnout**:

  - High in East and North East India.

- Low in Bihar, Uttar Pradesh, Kerala, Madhya Pradesh, Maharashtra, and Rajasthan.

- **Possible Reasons for Turnout**:

  - Heat-wave conditions.
  - Reduced voter motivation compared to 2019.

- **Significance for BJP**:

  - Lower turnout could be concerning.
  - **Historically, high turnout indicated anti-incumbency.**

- **Campaign Strategies**:

  - PM Modi used communal rhetoric.
  - Criticized Congress's manifesto on social justice and welfare.

- **Historical Context**:

  - Congress lost base to Mandal politics, BJP capitalized on OBC dissatisfaction.
  - Congress seeks revival through alliances with Mandal parties.

- **Election Outcome**:

  - Voter response to BJP's rhetoric versus expectations of better livelihoods will impact outcomes.

Towards a green growth: On the RBI and a green taxonomy   (GS Paper III: Economy and Environment)

The RBI must assess the impact of climate change on economic stability

- RBI's Monetary Policy Report highlights extreme weather events and climate shocks affecting food inflation and **natural interest rates.**
- It warns of a potential **9% long-term output loss by 2050** without climate mitigation policies.
- RBI has made incremental progress in addressing the transition to a green economy since July 2022.
- It acknowledges **India's need for over $17 trillion to achieve net zero ambitions by 2070.**
- RBI aims to develop a **green taxonomy framework** similar to that of the ASEAN region to assess sustainability credentials.
- Initiatives include issuing **₹16,000 crore Sovereign Green Bonds** and allowing Foreign Institutional Investors to participate in green government securities.
- **RBI urges a thorough assessment of the impact of climate change on the economy and financial stability.**

- It encourages administrative consultation to develop a layered green taxonomy reflective of India's developmental trajectories.
- The goal is to mitigate transitional risks to the financial system during the move towards a sustainable future.

Making space for migrants in manifestos (29 April) (GS Paper II: Vulnerable section of Society)

While the BJP and Congress have both made promises to migrants in their respective manifestos, they have overlooked some critical areas

- **An election manifesto is a public document that outlines a political party's vision, intentions, and promises.**
- The BJP and Congress have expressed concern for migrants in their manifestos for the 2024 Lok Sabha elections.
- The COVID-19 pandemic and subsequent lockdowns brought attention to migrants, highlighting their vulnerability and disenfranchisement.
- India has an estimated **600 million internal migrants** who significantly contribute to the economy.
- Despite their economic contribution, **migrants remain highly vulnerable**.
- It is important to examine the promises made by political parties to effectively include the migrant population.

The BJP's manifesto

- BJP's manifesto, Sankalp Patra, under 'Modi ki Guarantee for Shramik Samman,' makes promises for internal migrants.
- The first promise is to reach out to migrant workers registered on the e-Shram portal, aiming to include them in welfare programs.
- **The e-Shram portal, established in 2021, aims to create a database of unorganized workers, but issues like Aadhaar-seeding and technical problems persist.**

---

e-Shram Portal
- The e-Shram portal, launched by the **Ministry of Labour and Employment, aims to create a centralized national database of unorganized sector workers**.
- This database helps the government target and **deliver social security benefits** to this vast and often marginalized workforce.

Key Features
- **Registration:** Unorganized workers can register on the portal using their Aadhaar number, providing basic details about themselves and their occupation.
- **e-Shram Card:** Upon registration, workers receive a unique e-Shram card with a **12-digit Universal Account Number (UAN).**
- **Benefits:** Registered workers gain **access to various social security schemes and benefits, including accidental insurance coverage under Pradhan Mantri Suraksha Bima Yojana (PMSBY).** The portal also acts as a bridge to connect workers with job opportunities and skill development programs.

Eligibility
- **Occupations:** The e-Shram portal covers unorganized workers such as agricultural laborers, construction workers, domestic workers, migrant workers, gig workers, platform workers, street vendors, and more.
- **Age:** Any unorganized worker between the **ages of 16-59 years.**
- **Other Criteria:** Workers should not be members of EPFO/ESIC or income taxpayers.

How to Register
- **Self-Registration:** Workers can register directly on the e-Shram portal **Common Service Centres (CSCs):** Workers can visit their nearest CSC for assisted registration.
- **State Seva Kendras, Post Offices:** Select locations may facilitate registration.

Significance of the e-Shram Portal
- **Database for the Unorganized Sector:** The portal creates a comprehensive, digitized record of unorganized workers, enabling better policy planning and welfare program implementation.
- **Portability of Benefits:** The UAN allows workers to access benefits across different locations as they work in diverse sectors and regions.
- **Targeting Social Security:** The database aids the government in accurately identifying beneficiaries for social welfare programs.

- Many migrant workers have misconceptions about e-Shram's benefits.
- The second promise is to **enhance Special Train Services for migrant workers, connecting major migration corridors throughout the year.**
- The manifesto proposes **periodic review of National Floor Wages to ensure minimum living standards for workers,** but critics worry about exploitative conditions.
- **Different floor wages for regions may skew migration towards higher-paying areas.**
- Post office savings, insurance, and social security measures will be implemented using digital technologies, raising concerns about digital divide and accessibility.
- The **manifesto overlooks unique challenges faced by women, children, and young migrants**.
- **It is silent on implementing the draft National Migrant Labour Policy prepared by NITI Aayog.**
- The manifesto favors **city-centric development, potentially triggering distress migration to cities.**
- It promises **'One Nation, One Election,'** which may disenfranchise migrant voters.

The Congress' promises

- Congress manifesto, Nyay Patra, **promises to enact a law regulating employment of migrant workers, ensuring their legal rights and social security.**
- **It pledges to update ration card holders, expand PDS coverage, and allocate more funds to PDS and Integrated Child Development Service.**
- However, **it remains silent on PDS portability.**
- Congress vows **to increase MGNREGA wage to ₹400 per day, crucial for rural migrants, and enforce 'Same Work, Same Wages' principle to prevent gender-based discrimination.**
- It plans to launch an urban employment scheme for the urban poor, potentially benefiting urban migrants.
- Focuses on women's welfare, **promising sufficient night shelters and hygienic public toilets for migrant women.**

- Misses addressing specific challenges faced by migrant women and **overlooks issues like informal labor market exploitation and forced labor conditions**.
- Both parties overlook critical areas like public health, education for migrating children, housing, water, sanitation, and legal aid.
- Emphasizes the need for political will to effectively improve the lives of migrants and their families.

The significance of carrier aviation (29 April)
(GS Paper III: Defence)

INS Vikrant (IAC-1)

- **India's First Indigenous Aircraft Carrier**

Motto:"Jayema Sam Yudhi Sprdhah" (Sanskrit: I defeat those who fight against me).

Basic Information
- **Commissioned:** September 2nd, 2022 by Prime Minister Narendra Modi
- **Builder:** Cochin Shipyard Limited (CSL), Kochi, Kerala, India
- **Type:** STOBAR (Short Take-Off But Arrested Recovery) aircraft carrier
- **Displacement:** Approx. 45,000 tonnes
- **Length:** 262 meters
- **Beam:** 62 meters
- **Speed:** Over 28 knots

Key Features
- **Ski jump for short take-off of aircraft**
- **Three arrester wires for aircraft recovery**
- **Large hangar deck to accommodate aircraft**
- **Powerful sensor suite and combat management system**

Significance

- Marks a major milestone in India's shipbuilding capability and pursuit of 'Atmanirbhar Bharat' (self-reliant India) in defense manufacturing.
- Enhances India's power projection capabilities and maritime security in the Indian Ocean Region (IOR).
- Allows India to operate two carrier battle groups, significantly bolstering naval strength.
  - **INS Vikrant: Indigenously designed and constructed**
  - Commissioning: September 2022
  - Operationalization: INS Vikrant fully integrated into operations
  - Accompaniment: Fleet of frontline warships and aircraft joined the carriers

What does INS Vikrant signify?

- Design work on the Indigenous Aircraft Carrier (IAC)-I, later named Vikrant, started in 1999.
- Crucial years for the carrier and India's warship building were 2005-2006.
- Decision made to develop warship-grade steel in India, called **DMR-249 steel**.
- Collaborative effort involving Steel Authority of India, DRDO, and Indian Navy for steel development.
- DMR-249 steel now used for constructing all warships in India.
- Introduction of 3-D modeling in 2002 for the first time in India.
- Joint team of 200 personnel from Navy's Warship Design Bureau and CSL began work.
- Keel of Vikrant laid in 2009, launched into water in 2013.
- Extensive user acceptance trials conducted from August 2021 to July 2022.
- Vikrant was eventually commissioned into service.

What is the composition of INS Vikrant?

- Vikrant is an engineering marvel with a total area exceeding 12,450 m2, equivalent to about two and a half hockey fields.
- It measures 262m long and 62m wide, powered by four General Electric LM2500 engines generating 88 MW of power.
- **Vikrant has a maximum speed of 28 Knots and an endurance of 7,500 nautical miles.**
- Constructed at a cost of approximately ₹20,000 crore with 76% indigenous content.
- The ship has around 2,200 compartments and accommodates a crew of around 1,600, including specialized cabins for women officers and sailors.
- Vikrant houses two galleys that prepare up to 4,500-5,000 meals daily, equipped with automatic chapati making machines, large cooking boilers, combi-steamers, dosa machine, and ovens.
- Shipbuilding has one of the highest employment multipliers (6.48), with Vikrant engaging approximately 500 MSMEs, 12,000 employees from ancillary industries, and 2,000 CSL employees.

What are its capabilities?

- **Vikrant can operate an air wing of 30 aircraft, including MiG-29K fighter jets, Kamov-31 helicopters, MH-60R multi-role helicopters, Advanced Light Helicopters, and Light Combat Aircraft (Navy).**

- It uses the STOBAR (Short Take-Off but Arrested Recovery) method for launching and recovering aircraft, equipped with a ski-jump for launching and three 'arrester wires' for recovery.
- Around 200 personnel prepare the flight deck for flying operations, cleaning debris and briefing pilots.
- The flight deck has an independent lighting system for bad weather and night operations.
- Aircraft are safely vectored back to the ship for precision landing, with fighters stopping within 90m in 2-3 seconds using arresting gear wires.
- Vikrant has larger deck space and hallways compared to previous carriers like Vikramaditya.
- India is negotiating with France for the purchase of **26 Rafale-M carrier jets due to short supply of MiG-29Ks**, while an indigenous twin engine deck-based fighter is under development.
- Navy Chief Admiral R. Hari Kumar expects the indigenous fighter to be received by 2034.
- **Vikrant is India's first domestically built carrier, following the purchase of carriers like Vikrant (1961) and INS Viraat (1987), and the procurement of INS Vikramaditya (2013).**

After Vikrant, what next?

- Aircraft carriers are crucial for commanding, controlling, and coordinating operations at sea and projecting combat power.
- India's fragile maritime security situation in the Indian Ocean Region (IOR) necessitates a strong Navy with robust capabilities.
- Two Carrier Battle Groups enable credible presence and preparedness on both Western and Eastern seaboards.
- **A proposal for a second Indigenous Aircraft Carrier (IAC-II), similar to Vikrant, has been cleared by the Defence Procurement Board.**
- IAC-II, displacing 45,000 tonnes, will integrate newer technologies and modifications compared to Vikrant.
- It will take around eight to 10 years to build IAC-II, manufactured by CSL.
- Plans for a larger 65,000-tonne carrier have been shelved due to technological complexities, cost, and timelines.
- IAC-II is not India's third aircraft carrier but serves as a replacement for INS Vikramaditya.
- For the foreseeable future, the Indian Navy will operate with two aircraft carriers while envisioning a force structure around three carriers.
- Delay in decision-making risks India's expertise in carrier building and operations, akin to the submarine debacle of the 1980s.
- Global interest in aircraft carriers is increasing, with countries like the US, UK, France, Russia, Japan, and China expanding their carrier capabilities.
- The global trajectory suggests a bright future for carrier aviation, despite advancements in targeting missiles and drones.

Green Taxonomy Framework
- A green taxonomy is a classification system that sets out clear criteria to determine whether an economic activity can be considered environmentally sustainable.

- It provides a common language and guidelines to help businesses, investors, and policymakers understand which investments and projects support the transition to a low-carbon, climate-resilient, and sustainable economy.

Key Purposes of Green Taxonomies:
1. **Tackling Greenwashing:** Ensures genuine sustainability by preventing mislabeling of investments as "green" when they don't meet defined standards.
2. **Guiding Investment Decisions:** Helps investors and companies make informed choices about where to allocate funds for environmentally friendly activities.
3. **Encouraging Transparency:** Promotes disclosure of environmental data and the impact of investments, increasing accountability.

Major Green Taxonomy Frameworks
Here are some of the most prominent green taxonomies:
- **EU Taxonomy:** A comprehensive framework guiding investments towards the European Green Deal goals. It focuses on six environmental objectives:
  - Climate change mitigation
  - Climate change adaptation
  - Sustainable use and protection of water and marine resources
  - Transition to a circular economy
  - Pollution prevention and control
  - Protection and restoration of biodiversity andecosystems
- **China's Green Bond Endorsed Project Catalogue:** A system focusing on specific projects eligible for green bond financing.
- **Green Finance Taxonomies around the World:** Many countries are developing their own taxonomies, such as the UK, Canada, Japan, and the ASEAN region. Initiatives exist to promote international convergence and comparability among these different frameworks.

How Green Taxonomies Work
1. **Defining Environmental Objectives:** The taxonomy outlines its environmental goals, such as climate change mitigation or biodiversity protection.
2. **Setting Technical Screening Criteria:** Detailed criteria are established for each economic activity, determining if and how much it contributes to sustainability aims.
3. **"Do No Significant Harm" Principle:** Activities must not cause significant harm to any of the other environmental objectives.
4. **Reporting and Verification:** Companies and investors are expected to report how their activities align with the taxonomy, often involving independent verification.

Importance of Green Taxonomies
Green taxonomies are an increasingly crucial tool as the world looks to finance the transition to a sustainable future. They play a vital role in:
- **Mobilizing Capital:** By giving investors confidence, taxonomies increase capital flows into sustainable projects and activities.
- **Supporting Policy Cohesion:** They ensure that policy goals are in line with what's defined as sustainable at an investment level.
- **Accelerating the Green Transition:** They help accelerate action on climate change and other environmental crises by making the economic and financial benefits of sustainability clearer.

How the Hindutva project handles caste dynamics (29 April)

- Narendra Modi, the prime ministerial candidate of the Bharatiya Janata Party (BJP), made notable public appearances in Kerala, a politically progressive state.
- In February 2014, Modi addressed a meeting of Pulayas, a Dalit community traditionally supporting Communist parties.
- In April 2013, Modi was the chief guest at the Sivagiri Mutt, founded by Kerala's social reformer Sree Narayana Guru, who led the Ezhava community to social awakening, also supporters of the Left.
- Modi highlighted the persistence of political untouchability despite the end of social untouchability, referring to his own isolation from various quarters.
- He emphasized the significance of Dalits and backward classes in the next decade, citing his lower-caste origins.
- Modi's rally in Muza•arpur, Bihar, alongside Lok Jansakti Party chief Ram Vilas Paswan, and the joining of Dalit leader Udit Raj and backward class leader Ramkripal Yadav to the BJP, reflect efforts to overcome caste barriers.
- These developments indicate Modi's growing acceptance among Dalits and backward class leaders, breaking the caste stranglehold within the BJP's overarching Hindu identity project.

The issue of caste identity

- Hindutva politics in India slowed by caste identity.
- Backward classes and Dalits suspicious of Hindutva's hierarchical social structure.
- Dr. B.R. Ambedkar critical of Hindutva.
- 2013 article in Organiser portrayed Ambedkar positively.
- Hindutva strategy includes aggressive integration and Ayodhya movement.
- Ayodhya movement boosted Hindutva's popularity.
- Mandal Commission report sparked surge in backward classes' political participation.
- BJP gained power in states, but Hindutva dominance not settled except in Gujarat.
- Election question: Will Hindutva triumph over caste? Factors pushing Hindu consolidation: Ayodhya movement, Mandal Commission impact, BJP's rise to power.

Debate on Muslim reservation

- Hindutva politics in Gujarat grew from violent anti-reservation protests by ABVP in the 1980s.
- Protests targeted reservations for backward classes but mostly affected Dalits.
- Hindutva politics expanded by portraying Muslims as the "other" and unifying lower castes against them.
- Uttar Pradesh (UP) and Bihar have different dynamics: strong backward politics distrust RSS on reservations, align with Muslims.
- Quota politics now divides lower castes, who see Muslim quotas as against their interests.
- Affirmative action for Muslims strengthens, but benefits Hindutva politics.

- Social coalition against Hindutva in UP and Bihar weakening.
- Dalit involvement in UP's Muza•arnagar riots and Yadav-Muslim clashes in Bihar strain solidarity among poor and disadvantaged.
- Lower caste movements aiming for higher status within Hindu hierarchy sometimes adopt Sanskritising aspirations.
- Clearer portrayal of the "other" accentuates Sanskritising tendencies.

Willingness to concede leadership

- Lower caste support for Hindutva increased.
- Upper castes were initially uncomfortable with lower caste leadership.
- Turning point: 2005 Bihar Assembly election, BJP-JD(U) alliance with Nitish Kumar as CM candidate.
- In 2007, upper castes supported Dalit leader Mayawati in UP, marking a shift.
- In 2010 and 2012, rainbow caste coalitions supported Nitish Kumar and Akhilesh Yadav in Bihar and UP respectively.
- Change in upper caste attitude crucial for BJP's success.
- BJP responsive to leadership ambitions of backward classes and Dalits.
- Tentative support from upper castes for leaders like Kalyan Singh and Uma Bharti.
- Sangh's efforts empowered lower castes and backward classes.
- In 1998, BJP had a significant number of SCs and STs as MPs.
- With Modi as leader and changing upper caste attitudes, Sangh's efforts gain momentum.

Bangladesh garment exporters hem in Indian shippers (29 April)

- Imran, in charge of logistics at a leather goods company in Ambur, Tamil Nadu, faces difficulties sending shipments to Europe and the U.S.
- Bangladesh-made garments transiting via Delhi's IGI airport are causing congestion, limiting space for Indian exporters.
- India has a trade agreement allowing Bangladesh's sealed export cargo to arrive directly at Delhi airport with minimal checks.
- Geopolitical disruptions in Red Sea cargo movement led to Bangladesh's garment exports being routed via Delhi by air since February 2023, previously through Kolkata.
- Indian exporters struggle to secure space in aircraft; premium payments sometimes secure space.
- From April to December 2023, Delhi airport handled 260,000 tonnes of export cargo, with Bangladesh accounting for only 5,000 tonnes (less than 2%). In March 2024, Bangladesh's share increased to 8,000 tonnes (9%), causing congestion and a 300% spike in air freight rates.
- Federation of Indian Export Organisations (FIEO) seeks corrective measures, including a "landing charge" on Bangladesh cargo, and engagement with airlines and freight companies to increase capacity and lower costs.

- Apparel Export Promotion Council (AEPC) urges the government to suspend transshipment of Bangladeshi export cargo via Delhi air cargo complex, claiming it harms local industry competitiveness.
- Indian exporters already face high freight charges due to the prolonged Red Sea crisis, forcing them to switch from sea to air routes.
- Movement of Bangladeshi export cargo via Delhi air cargo terminal worsens logistical challenges and transportation costs for Indian apparel exporters.
- Around 30 loaded trucks arrive in Delhi from Dhaka daily, slowing down cargo flow and allegedly allowing airlines to take advantage by raising prices.
- Higher air freight rates reduce competitiveness for Indian exporters and lead to delays and congestion at IGI airport's cargo terminal.
- Space crunch for air cargo in Delhi affects other Indian airports as well, causing spillover effects.
- Disrupted access to Suez Canal affects Asian exports, including India, increasing air freight rates significantly.
- Lack of belly space on airlines due to cargo diversion from Red Sea crisis causes congestion at airports worldwide.

Hezbollah says it fired missiles at Israel (29 April)

- Hezbollah was established by Lebanese clerics to fight the 1982 Israeli invasion of Lebanon.
- It adopted Ayatollah Khomeini's model after the Iranian Revolution in 1979 and was named "Hezbollah" by Khomeini.
- Close ties developed between Iran and Hezbollah since its inception.
- Hezbollah received support from 1,500 Islamic Revolutionary Guard Corps (IRGC) instructors and unified various Lebanese Shia groups to resist Israeli occupation of Southern Lebanon.
- Its objectives during the Lebanese Civil War included expelling American, French, and allied forces from Lebanon.
- From 1985 to 2000, Hezbollah participated in the South Lebanon conflict against the South Lebanon Army (SLA) and Israel Defense Forces (IDF), and in the 2006 Lebanon War.
- During the 1990s, Hezbollah organized volunteers to fight for the Army of the Republic of Bosnia and Herzegovina during the Bosnian War.

- Hezbollah, a Iran-backed movement in Lebanon, targeted northern Israel.
- This action came after Israeli strikes across the border killed three people, including two Hezbollah members.
- Hezbollah launched a complex attack using explosive drones and guided missiles on the Al Manara military command headquarters and a gathering of Israeli forces.
- The Israeli Army's Iron Dome air-defense system intercepted a suspicious aerial target that crossed from Lebanon into the area of Manara in Israel.

World Economic Forum
- **Definition:** The World Economic Forum (WEF) is an international non-governmental organization that facilitates dialogue between top figures in government, business, and civil society. Its mission is to improve the world through public-private cooperation.
- **Founded:** 1971 in Cologny, Switzerland, by Klaus Schwab

- **Headquarters:** Cologny, Switzerland
- **Leadership:**
  - Klaus Schwab, Founder and Executive Chairman
  - Børge Brende, President

Key Activities
- **Annual Meeting in Davos:** The high-profile annual meeting in Davos, Switzerland, is the organization's flagship event. It's a gathering of world leaders in politics, business, academia, and civil society to discuss pressing global issues.
- **Regional and Industry Meetings:** The WEF organizes numerous events throughout the year focused on specific regions or industries.
- **Initiatives and Platforms:** The Forum launches and manages various initiatives and platforms focused on issues like:
  - Climate change
  - The Fourth Industrial Revolution (technologies like AI)
  - Global health
  - Economic development

How it Works
- **Membership Model:** Companies become members of the WEF, providing the primary source of funding for its activities.
- **Partnerships:** The WEF actively collaborates with governments, other international organizations, and civil society groups.
- **The "Spirit of Davos":** The Forum emphasizes a collaborative, multi-stakeholder approach they term the "Spirit of Davos," where diverse actors work together to find solutions.

PRELIMS PRACTICE QUESTION:

Question 1: Which of the following statements about the Indian Easterly Jet (IEJ) is/are correct? 1. It is a narrow band of high-altitude winds flowing from west to east. 2. It is found primarily in the winter season. 3. It plays a crucial role in the Indian Summer Monsoon. Select the answer using the code given below: a. 1 only b. 2 and 3 only c. 1 and 3 only d. 1, 2, and 3	Answer: c. 1 and 3 only **Explanation:** Statement 1 is correct: The IEJ is a high-altitude, narrow band of winds blowing eastward. Statement 2 is incorrect: The IEJ is found primarily in the summer season (June-September). Statement 3 is correct: It plays a significant role in the onset and progress of the Indian Summer Monsoon.
Question 2: Consider the following: 1. Sub Tropical Westerly Jet 2. Indian Easterly Jet Which of the above jet streams brings Western Disturbances over India? Options: a. 1 only b. 2 only c. Both 1 and 2 d. Neither 1 nor 2	Answer: a. 1 only **Explanation:** The Subtropical Westerly Jet (flows west to east) is responsible for bringing Western Disturbances (extra-tropical cyclones) that cause winter rainfall in Northwestern India. The Indian Easterly Jet has no direct role in Western Disturbances.
Question 3: The Indian Easterly Jet can be typically found:	Answer: c. Over the sub-tropics

Options:	Explanation: The IEJ is a subtropical jet stream,
a. Near the equatorial region	typically found between 10-15 degrees North
b. Throughout the mid-latitudes	latitude over India
c. Over the Sub-tropics	
d. In the Polar region	
Question 4: Consider the following statements about INS Vikrant: 1. It is India's first indigenously designed and built aircraft carrier. 2. It uses a CATOBAR system for aircraft launch and recovery. Which of the above statements is/are correct? (a) 1 only (b) 2 only (c) Both 1 and 2 (d) Neither 1 nor 2	Answer: (a) 1 only **Explanation:** Statement 1 is correct. INS Vikrant is a significant achievement for India's defense industry and a major step towards self-reliance. Statement 2 is incorrect. INS Vikrant utilizes a STOBAR (Short Take-Off But Arrested Recovery) system. CATOBAR (Catapult Assisted Take-Off But Arrested Recovery) is a more advanced technology found on some US aircraft carriers.
Question 5: Which of the following features is/are associated with INS Vikrant? 1. Displacement of about 45,000 tonnes 2. Maximum speed of about 28 knots 3. Can carry a mix of rotary-wing and fixed-wing aircraft (a) 1 and 2 only (b) 2 and 3 only (c) 1 and 3 only (d) 1, 2, and 3	Answer: (d) 1, 2, and 3 **Explanation:** All three features are accurate characteristics of INS Vikrant.
Question 6: Consider the following statements: (1) It enhances India's maritime power projection capabilities. (2) It is a major symbol of the 'Make in India' initiative. (3) It strengthens India's position in the Indian Ocean Region (IOR). How many of the above statements is/are correct with regard to significance of INS Vikran for India: a. One Only b. Two only c. All the three d. None	Answer: (d) All of the above **Explanation:** INS Vikrant is important for India on multiple levels. It boosts the country's naval power, showcases India's growing technological and industrial capabilities, and reinforces India's strategic role in the IOR.
Question 7: Which of the following is the primary objective of the e-Shram portal? (a) Providing employment opportunities in rural India (b) Creating a national database of unorganized workers (c) Skilling and upskilling the urban workforce (d) Organizing the agricultural sector	Answer: (b) **Explanation:** The primary objective of the e-Shram portal is to create a comprehensive database of India's vast unorganized workforce, helping bridge the gap between workers and government welfare schemes.
Question 8: The e-Shram portal is an initiative launched by which Ministry of the Indian government? (a) Ministry of Skill Development and Entrepreneurship (b) Ministry of Labour and Employment (c) Ministry of Electronics and Information Technology (d) Ministry of Rural Development	Answer: (b) **Explanation:** The e-Shram portal is an initiative by the Ministry of Labour and Employment to streamline and systematize the benefits extended to unorganized workers.

Question 9: Which of the following categories of workers is NOT eligible to register on the e-Shram portal? (a) Construction workers (b) Domestic workers (c) Street vendors (d) Government employees with EPFO membership	Answer: (d) **Explanation:** The e-Shram portal specifically caters to workers in the unorganized sector. Government employees who are members of the Employees' Provident Fund Organization (EPFO) are part of the organized sector and not eligible for e-Shram registration.
Question 10: Consider the following statements about the e-Shram portal: 1. Registration on the portal is mandatory for all workers in India. 2. Registered workers are eligible for accidental insurance coverage. Which of the above statements is/are correct? (a) 1 only (b) 2 only (c) Both 1 and 2 (d) Neither 1 nor 2	Answer: (b) **Explanation:** Registration on e-Shram is voluntary but highly beneficial. Registered workers are eligible for accidental insurance coverage under the Pradhan Mantri Suraksha Bima Yojana (PMSBY).
Question 11: The World Economic Forum is headquartered in: A. Cologny, Switzerland B. New York, USA C. Davos, Switzerland D. Paris, France	Answer: A. Cologny, Switzerland **Explanation:** The World Economic Forum (WEF) is an international non-profit organization with its headquarters located in Cologny, a suburb of Geneva, Switzerland.
Question 12: Which of the following reports is published annually by the World Economic Forum? A. World Development Report B. Human Development Report C. World Investment Report D. Global Competitiveness Report	Answer: D. Global Competitiveness Report **Explanation:** The Global Competitiveness Report is a key annual publication by the WEF that assesses the competitiveness landscape of countries around the world. Other major reports published by different organizations **include:** World Development Report: Published by the World Bank Human Development Report: Published by the United Nations Development Programme (UNDP) World Investment Report: Published by the United Nations Conference on Trade and Development (UNCTAD)
Question 13: The World Economic Forum's annual meeting is famously held in: A. New York, USA B. Davos, Switzerland C. Geneva, Switzerland D. London, UK	Answer: B. Davos, Switzerland **Explanation:** The WEF's annual meeting is a high-profile event held in Davos, Switzerland. It brings together world leaders, CEOs, policymakers, and experts in various fields to discuss global issues.
Question 14: Which of the following is a key initiative launched by the World Economic Forum? A. Paris Agreement B. Belt and Road Initiative C. The Great Reset D. Doha Development Round	Answer: C. The Great Reset **Explanation:** The Great Reset is a WEF initiative launched in 2020. It aims to rebuild the global socioeconomic system in a more sustainable and equitable way following the COVID-19

	pandemic. The other options are different initiatives:
Question 15: The World Economic Forum primarily focuses on which of the following? A. Promoting free trade and globalization B. Eradicating poverty and hunger C. Enforcing international human rights law D. Improving the state of the world through public-private cooperation	Answer: D. Improving the state of the world through public-private cooperation **Explanation:** The World Economic Forum's primary focus is on fostering dialogue and collaboration between the public and private sectors to address global challenges and shape a better future.
Question 16: Which of the following statements is/are correct regarding the National Floor Level Minimum Wage (NFLMW)? 1. It is a statutory requirement for all states to implement. 2. It is revised periodically by the Central Government. (A) 1 only (B) 2 only (C) Both 1 and 2 (D) Neither 1 nor 2	Answer: (B) 2 only **Explanation:** Statement 1 is incorrect. NFLMW is a recommendation, not a legal mandate for states. Statement 2 is correct. The Central Government revises the NFLMW from time to time.
Question 17: Consider the following statements: 1. The Minimum Wage in India is the same across all states and sectors. 2. The purpose of the National Floor Level Minimum Wage is to reduce wage disparities across the country. Which of the above statements is/are correct? (A) 1 only (B) 2 only (C) Both 1 and 2 (D) Neither 1 nor 2	Answer: (B) 2 only **Explanation:** Statement 1 is incorrect. Minimum wages vary across states and sectors in India. Statement 2 is correct. The NFLMW aims to create a more uniform wage structure nationwide.
Question 19: The power to fix and revise minimum wages in India rests with: (A) Central Government only (B) State Governments only (C) Both Central and State Governments (D) The Supreme Court of India	Answer: (C) Both Central and State Governments **Explanation:** India has a 'dual system' for minimum wages under the Minimum Wages Act, 1948. Both the Centre and States have the authority to set minimum wages for 'scheduled employments' within their respective jurisdictions.