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GS 2: POLITY, GOVERNANCE, SOCIAL JUSTICE, INTERNATIONAL RELATIONS/INSTITUTIONS

1. Men's mental health: An invisible crisis

Context: Study shows that men tend to approach mental health issues and seek help less than women do. In fact, mental health problems such as depression, anxiety, and suicidal ideation are prevalent among men. Only in extreme forms like substance abuse or violence do they typically tend to make themselves known. It is indeed alarming to hear of the male suicide statistics. They are quite distressing, with 171,000 suicides reported in India in 2022 – an increase of 4.2 per cent in 2023 and 27 per cent since 2018. Concernedly, the male-to-female suicide ratio is 72.5:27.4. According to a study carried out by the International Institute for Population Sciences (IIPS) in August 2023, the suicide rate for men is 2.5 times higher than for women, which indicates suicide has more to do with men.

Key points

- **Overview:** The Accidental Deaths & Suicides in India 2021, report highlighted a growing concern regarding mental health in India, an issue that remains significantly underexplored despite its critical implications for public health.
- **Alarming Statistics:** *Suicide Rates* - According to this report by the National Crime Records Bureau, men account for 72.5% of suicide victims in India, indicating a profound mental health crisis. *Disparity Across Age Groups* - A significant increase in suicides is observed among men aged 18-59, with a 170.7% rise in suicides among daily wage earners from 2014 to 2021.
- **Impact of Societal Norms:** *Cultural Expectations* - Deep-rooted cultural norms often prevent men from addressing emotional struggles, as stoicism and resilience are valued. *Coping Mechanisms* - Men tend to externalize mental health issues through aggression or substance abuse rather than seeking emotional support, which is more common among women.
- **Physiological and Psychological Factors:** *Stress Responses* - Research indicates that men typically respond to stress with a "fight or flight" reaction, releasing stress hormones like norepinephrine and cortisol. *Differences in Coping Strategies* - Women's "tend and befriend" response, influenced by oxytocin release, often leads them to seek social support, contrasting with men's tendencies to distance themselves from their emotions.
- **Government initiatives:** *Mental Health Care Act 2017* - It guarantees every affected person access to mental healthcare and treatment from services run or funded by the government. *Kiran Helpline* - In 2020, the Ministry of Social Justice and Empowerment launched a 24/7 toll-free helpline 'Kiran' to provide support to people facing anxiety, stress, depression, suicidal thoughts and other mental health concerns.
- **Technological Innovations in Mental Health:** *AI in Mental Health Support* - Artificial Intelligence (AI) presents new opportunities to address men's mental health challenges, particularly for those reluctant to seek traditional help.
 - *AI-driven Tools* - Platforms like Fortis Healthcare's Adayu Mindfulness app and Manodayam are already using AI to provide personalised mental health insights and blended treatment options.
 - *Innovative Algorithms* - The method helps identify subtle language and behavior patterns that may signal early signs of mental health issues like depression or anxiety.*Transcranial Direct Current Stimulation (tDCS)* - It is a non-invasive treatment using magnetic pulses to target specific brain areas, showing promise for severe depression that doesn't respond to standard medications.
- **Way forward:** *Increasing Mental Health Literacy* - There is a critical need to enhance awareness and understanding of mental health issues among men to reduce stigma. *Creating Supportive Environments* - Breaking down societal barriers and fostering open conversations around mental health can encourage people to seek help and support.
- **Conclusion:** The silent crisis of mental health in India necessitates a multifaceted approach that includes enhancing mental health literacy, promoting innovative technological solutions, and dismantling societal stigmas surrounding emotional vulnerability.

Q. Examine the socio-cultural, psychological, and systemic factors behind India's men's mental health crisis and propose measures to enhance mental healthcare accessibility and awareness. (ভাৰতৰ পুৰুষৰ মানসিক স্বাস্থ্য সংকটৰ আঁৰৰ সামাজিক-সাংস্কৃতিক, মানসিক আৰু প্ৰণালীবদ্ধ কাৰকবোৰ পৰীক্ষা কৰক আৰু মানসিক স্বাস্থ্যসেৱাৰ উপলব্ধতা আৰু সজাগতা বৃদ্ধিৰ বাবে ব্যৱস্থাৰ প্ৰস্তাৱ দিয়ক।)

GS 2: POLITY, GOVERNANCE, SOCIAL JUSTICE, INTERNATIONAL RELATIONS/INSTITUTIONS

2. Govt. extends special subsidy on DAP

Context: The government has extended a special subsidy of Rs. 3500 per tonne on di-ammonium phosphate (DAP), which was to end on December 31, for a further one-year period from January 1, 2025. The pressure is given due to the rupee's recent slide against the US dollar, the government has informally frozen the maximum retail price (MRP) of all non-urea fertilizers. This is despite them being decontrolled on paper, unlike urea whose MRP has been statutorily fixed at Rs. 266.50 per 45-kg bag (gst applied) since November 2012. The rupee's steep fall has made these informal price caps difficult to sustain. In the case of DAP, its landed import price of \$632 per tonne works out to about Rs. 54,160 at the present exchange rate of Rs. 85.7 to the dollar.

Key points

- **Overview:** Fertiliser companies are being given a subsidy of Rs. 21,911 per tonne on DAP, plus the one-time special package concession of Rs. 3,500 that has now been extended until December 31, 2025.
- **Subsidy of fertilizers in India:** Fertilizers provide key nutrients (N, P and K) to the soil. Important fertilizers are- Urea (N based), DAP (P based) and MOP (K based). The allocation for fertilizer subsidy for FY24 was budgeted at Rs 1.75 lakh crore in FY24.
- **DBT in Fertilizers:** Under this, farmers would continue to get fertilizer at subsidised price whereas the fertilizer companies receive subsidy, only after the fertilizers are sold to farmers by the retailers through Point of Sale (PoS) machines (linked to the Department of Fertilizers' e-Urvarak DBT portal) through biometric authentication by Aadhar Card.
- **Issues of Fertilizer Subsidies:**
 - Loss of Fertility* - Since the price of Urea is still regulated, it failed to achieve balanced use of fertilizers and resulted in loss of fertility of soil and pollution of water bodies.
 - Breaches WTO AoA limit* - Fertilizer subsidies are treated as Amber box subsidies and breach the WTO (Agreement on Agriculture) limit of 10%.
 - Inverted Duty Structure* - The Basic Custom Duty (BCD) and GST rates of finished fertilizers are more than the raw materials like Sulphuric Acid and Ammonia and Natural gas, a major input for fertilizers, remains outside GST.
- **Government initiatives:**
 - Neem-coated Urea not only prevented the illegal diversion of urea for Industrial use but also improved nitrogen-use efficiency by slowing the release of nitrogen and thereby reducing the consumption.
 - Introduction of Nano Urea* - Nano Urea contains nitrogen in the form of granules that are a hundred thousand times finer than a sheet of paper. At this 'nano' scale, which is about a billionth of a metre, materials behave differently than in the visible realm.
 - One Nation One Fertilizer (ONOF)* - Under this scheme, all types of fertilizers, whether it is DAP, NPK or urea will be sold under the brand name of 'Bharat'. This will standardise fertilizer brands across the nation irrespective of the company that manufactures it.
- **Way Forward:** Deregulating the MRP of Urea and paying a fixed per-tonne subsidy linked to its nutrient content of 46% Nitrogen. Reduce GST rate and customs duty for raw materials such as Sulphuric Acid and Ammonia for P&K fertilizers to at least 5%. Need to create separate tariff code for Urea being used for non-agricultural purposes.

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3. Centre amends prison manual to address caste-based inequality

Context: The Union Home Ministry has amended the prison manual rules to check discrimination and classification of inmates in jails based on their caste. Model Prisons & Correctional Services Act, 2023, have been amended to address the issue of any caste-based discrimination of prisoners. The changes have been made on October 3, 2024, order of the Supreme Court. According to the MHA, changes have also been made in the Miscellaneous of the Model Prisons and Correctional Services Act 2023, with a new heading "Prohibition of caste-based discrimination in Prisons and Correctional Institutions" as Section 55(A).

Key points

- **Overview:** According to the new addition in the manual, the prison authorities will have to strictly ensure that there is no discrimination, classification, segregation of prisoners based on their caste.
- **Background:** The Supreme Court, in its October 3, 2024, ruling, highlighted the persistence of caste-based discrimination and inconsistencies in defining habitual offenders across states. It directed governments to update their legal frameworks and ensure equality and fairness in prison administration. This judgment forms the basis for the Home Ministry's comprehensive overhaul of prison rules.
- **Addressing Caste-Based Discrimination in Prisons:** To eradicate caste-based discrimination within prisons, the following changes have been implemented-
 - *Prohibition of Discrimination* - Prison authorities are now mandated to ensure there is no discrimination, classification, or segregation of prisoners based on their caste. Duties and work assignments within prisons must be allocated without prejudice, promoting equal treatment for all inmates.
 - *Legal Provisions in Prison Rules* - A new section, 55(A), titled 'Prohibition of caste-based discrimination in Prisons and Correctional Institutions,' has been added under the Miscellaneous category of the Model Prisons and Correctional Services Act, 2023.
 - *Implementation of Manual Scavenging Prohibition* - The provisions of the Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013, have been extended to prisons and correctional institutions. Manual scavenging and hazardous cleaning of sewers or septic tanks within prisons are explicitly prohibited, safeguarding inmates from degrading practices.
- **Significance of the Amendments:**
 - Ensuring Equality* - The amendments aim to uphold the constitutional right to equality and dignity for all prisoners, irrespective of their caste or background.
 - Eliminating Degrading Practices* - By prohibiting manual scavenging and hazardous cleaning, the rules reinforce humane treatment within prisons.
 - Standardized Framework* - The unified definition of habitual offenders ensures consistent treatment of repeat offenders across states, avoiding arbitrary classifications.
- **Conclusion:** These amendments mark a significant step toward ensuring a fair and non-discriminatory prison environment. By addressing caste-based discrimination and aligning the treatment of habitual offenders with constitutional principles, the Union Home Ministry aims to create a more just and equitable correctional system. These changes reflect India's commitment to human rights and the rule of law, setting a progressive precedent for prison reforms nationwide.

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4. Scorpene-class submarine among 3 frontline platforms to be inducted by Navy on Jan. 15

Context: The Indian Navy is set to commission three frontline platforms into service at the Naval Dockyard, Mumbai, on January 15. This is the sixth and last Scorpene-class submarine, Vagsheer; the fourth and last of the Project-15B stealth destroyers, and the leadership of the Project-17A stealth frigates, Nilgiri. All three platforms had been manufactured at Mazagon Dock Shipbuilders Ltd. (MDL), Mumbai. While the two ships are indigenously designed, the Scorpene-class submarines are manufactured in India under licence from Naval Group of France.

Key points

- **Overview:** The Defence Acquisition Council (DAC), the apex decision-making body for the acquisition of military equipment for India's armed forces, cleared proposals worth thousands of crores.
- **Scorpene Class Submarines in India:** The Mazagon Dock Shipbuilders Limited (MDL) in Mumbai is building six Scorpene class submarines under the Project-75, as part of a \$ 3.75 billion deal signed in 2005. The fifth submarine under this project, INS Vagir, was commissioned in January 2023. In May 2023, the sixth submarine Vagsheer began her sea trials.
- **Capabilities of Scorpene Submarines:**
 - Attack Submarines* - Scorpene submarines are designed as conventional attack submarines to target and sink enemy naval vessels.
 - Weapons and Surveillance* - They can launch a variety of torpedoes and missiles, equipped with surveillance and intelligence-gathering systems.
 - Specifications* - Scorpene submarines are approximately 220 feet long, with a height of about 40 feet. They have a top speed of 11 knots when surfaced and 20 knots when submerged.
 - Diesel-Electric Propulsion* - These submarines use diesel-electric propulsion systems, providing an endurance of around 50 days.
- **Need for Additional Submarines: Addressing Delays and Fleet Strength** - The procurement of three additional submarines is necessary to compensate for the delayed deliveries under Project-75 and strengthen India's submarine fleet.
 - Current Fleet Status* - The Indian Navy currently operates 16 conventional submarines, but it needs a minimum of 18 submarines to carry out its full spectrum of operations.
 - Refit Challenges* - Around 30% of submarines are under refit at any given time, further reducing the number of operational submarines.
 - Employment Opportunities* - Procuring additional submarines with higher indigenous content will create employment opportunities and enhance MDL's submarine construction capabilities.
- **Conclusion:** India's decision to procure three additional Scorpene submarines enhances its naval capabilities and strengthens the indigenous manufacturing sector. The addition of these submarines will help meet the requirements of a growing fleet and improve operational readiness.

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5. Excessive nitrates found in groundwater in 440 districts

Context: Excessive nitrates have been found in groundwater in 440 districts as of 2023, an increase from 359 such districts in 2017, a report by the Central Groundwater Board (CGWB) said on Wednesday. This is a health hazard, particularly for young children, and a source of environmental toxicity. The data suggest

that about 56% of India's districts have excessive nitrates — defined as more than 45 mg per litre — in groundwater, largely due to the use of subsidised synthetic nitrogenous fertilizer, a key input for farming. Of the 15,239 groundwater samples collected from across the country for testing, 19.8% had nitrates or nitrogen compounds above the safe limits.

Nitrogen Pollution

- **About:** Nitrogen pollution refers to the excessive presence of nitrogen compounds in the environment, primarily in water bodies like rivers and lakes. According to the United Nations Environment Programme (UNEP), each year, 200 million tonnes of reactive nitrogen, 80% of the total, is lost to the environment.
- **Sources of Nitrogen Pollution:**
 - Agricultural Activities* - One of the main drivers of nitrogen pollution has been the rising consumption of nitrogen-based fertilizer, which can leach into groundwater or runoff into surface water bodies.
 - Industrial Processes* - Manufacturing processes, particularly those involved in the production of nitrogen-based chemicals and fertilisers, release nitrogen compounds into the environment.
 - Livestock Farming* - Livestock waste, primarily from manure and urine, contains nitrogen compounds such as ammonia.
 - Biomass Burning* - Wildfires and burning of cow dung cake as a fuel release nitrogen oxide (NO_x) and nitrous oxide (N₂O) into the atmosphere.
- **Major Impacts of Nitrogen Pollution:**
 - Eutrophication* - Excess nitrogen acts as a nutrient fertiliser for aquatic plants, leading to excessive growth of algae and other aquatic vegetation. This phenomenon is known as eutrophication and leads to algal blooming.
 - Human Health Impacts* - Nitrogen pollution can have direct and indirect effects on human health. High levels of nitrogen dioxide (NO₂) in the air can exacerbate respiratory conditions such as asthma and increase the risk of respiratory infections.
 - Ozone Depletion* - Nitrous oxide (N₂O) released into the atmosphere can lead to the depletion of the stratospheric ozone layer, which protects the Earth from harmful ultraviolet (UV) radiation.
- **Government Initiatives:**
 - Bharat Stage (BS VI) Emission Standards* - Stricter emission standards for vehicles and industries aim to curb the release of nitrogen oxides and particulate matter, which are precursors to air and water pollution.
 - Nano Urea* - It is a fertiliser patented and sold by the Indian Farmers Fertiliser Cooperative Limited (IFFCO) and has been approved by the government for commercial use. Nano urea reduces the unbalanced and indiscriminate use of conventional urea and increases crop productivity.
- **Way Forward:**
 - Incentivizing Green Infrastructure* - Offering incentives and subsidies for the implementation of green infrastructure projects, such as green roofs, rain gardens, and permeable pavements, which help mitigate nitrogen runoff by absorbing and filtering stormwater.
 - Improved Wastewater Treatment* - Upgrading and expanding wastewater treatment infrastructure ensures proper treatment and disposal of industrial and urban sewage, preventing nitrogen-rich compounds from entering water bodies.

Q. Sikkim is the first 'Organic State' in India. What are the ecological and economic benefits of Organic State? (ছিক্কিম হৈছে ভাৰতৰ প্ৰথমখন 'জৈৱিক ৰাজ্য'। জৈৱিক ৰাজ্যৰ পৰিবেশগত আৰু অৰ্থনৈতিক লাভালাভসমূহ কি কি?)