DAILY CURRENT AFFAIRS 07-10-2024

GS-2

1. **Caste in jail**
2. **Co-District**
3. **e-ABkari portal**

GS-3

4. **Preparing For The Next Pandemic What Niti Aayog Report Says**
5. **Nano Diamonds**

Caste in jail

Syllabus: GS-2: Law and Order – Prisons in India.

Context:

- *The Supreme Court recently sent out a clarion call to end caste discrimination in Indian jails and do away with caste-based stereotypes in jail manuals when it came to the division of labour in prison barracks [Sukanya Shantha vs Union of India and ors].*

Key Observations from the Verdict

1. Criminal Laws Must Avoid Colonial Philosophy

- *Criminal laws should not uphold pre-colonial or colonial philosophies.*
- **Context***: During British rule, caste discrimination was perpetuated in Indian prisons. This must not continue today.*
- **Court's Stand***: Colonial-era approaches to caste differences are unacceptable in modern times.*

2. End Discrimination Against Denotified Tribes

- *British laws labelled certain tribes as 'criminal tribes' based on stereotypes, which have persisted.*
- **Denotified Tribes***: Continue to face discrimination, being labelled as 'habitual offenders' in prison manuals.*
- **Court's Directive***: These stigmas and stereotypes must end.*

3. Caste Cannot Be a Ground for Discrimination

- *Caste-based classifications violate* **Article 14** *(Right to Equality).*
- **Court's Observation***: There is no security or reform-based justification for caste-based segregation in prisons.*

4. Segregation of Rival Caste Groups Unjustified

- *Example from Tamil Nadu: Rival caste groups were segregated in prison to avoid clashes.*
- **Court's Response***: Prison authorities must maintain discipline without resorting to caste segregation. Such practices violate fundamental rights.*

5. Right to Overcome Caste Barriers under Article 21

- **Article 21** *(Right to Life) includes the right to overcome caste-based discrimination.*
- **Court's View***: Caste prejudices hinder personal growth, and prison manuals that perpetuate this violate the right to life.*

6. Oppressed Castes and Menial Tasks

- **Court's Stand***: Assigning degrading tasks based on caste constitutes* **forced labor** *under* **Article 23***.*
- **Issue***: Marginalized caste inmates being forced to clean latrines or sweep based on caste is coercive and discriminatory.*

7. Multi-faceted Approach to Remedy Caste Discrimination

- **Systemic Issue***: Discrimination against Scheduled Castes, Scheduled Tribes, and Denotified Tribes persists.*
- **Court's Recommendation***: A comprehensive, multi-dimensional approach is needed to address this systemic issue.*

8. No Group Can Be Labelled as "Scavenger Class"

- **Court's Clarification***: No social group is inherently a 'scavenger class'. This label is rooted in caste-based notions of purity and pollution.*

9. Inaction on Caste Discrimination Perpetuates the Practice

- **Court's Warning***: Failure to address caste discrimination strengthens such practices, which is against the constitutional mandate to end untouchability.*

10. Gaps in Legislation and Prison Manuals

- **Model Prison Manual (2016)** *and* **Model Prisons and Correctional Services Act (2023)** *lack clear definitions of "habitual offenders" and prohibition on caste-based discrimination.*
- **Court's Directive***: No prisoner should be forced to perform tasks like manual scavenging or hazardous sewage cleaning.*

Conclusion

- *The Supreme Court's verdict sends a strong message against caste-based discrimination in prisons and emphasizes the importance of equality and dignity for all individuals, irrespective of their caste, in line with constitutional mandates.*

Co-District

Syllabus: GS-2: Governance

Context:

- *The Assam government has introduced a pioneering initiative of* **co-districts** *within its district administration framework, replacing the traditional civil sub-divisions. This initiative aims to decentralize governance and make administration more accessible to the people.*

Key Features of the Co-district Initiative:

- **Smaller Administrative Units***:*
  - *Co-districts are administrative units smaller than districts, aimed at improving local governance.*
  - *These are headed by an* **Assistant District Commissioner** *(ADC), with powers akin to District Commissioners.*
- **Objective***:*
  - *The initiative is designed to* **bring governance closer** *to the people by addressing administrative inefficiencies within larger districts.*
  - *It is expected to tackle challenges such as slow decision-making and ineffective service delivery.*
- **Roles and Powers***:*
  - *Co-district officers have the* **same powers and responsibilities** *as District Commissioners, ensuring uniform governance.*
  - *They handle essential tasks such as:*
    - **Land revenue matters**
    - **Development and welfare work**
    - **Excise and disaster management**
  - *They also possess* **magisterial powers** *for issuing permissions for events.*
- **Administrative Control***:*
  - *Co-districts have jurisdiction over all departments within their area and will perform routine administrative tasks, such as:*

- *Issuing* **ration cards** *and* **caste certificates**
- *Granting* **sale permissions** *for land*

Significance:

- **Enhanced Local Governance***: By decentralizing administration, the co-district initiative aims to improve the efficiency of service delivery and address specific local needs effectively.*
- **Closer Interaction with Citizens***: This move is expected to reduce delays in the execution of administrative functions, ensuring faster and better public services.*
- **Administrative Innovation***: Being the* **first of its kind in India***, this initiative may serve as a model for other states looking to streamline governance and make it more people-centric.*

e-ABkari portal

Syllabus: GS-2: e-Governance

Context:

- *New portal to now regulate liquor business in Delhi*

Introduction

- **e-ABkari Portal***: A new initiative by the Delhi Excise Department to regulate and automate the alcohol business in the capital.*
- **Objective***: To replace the existing Excise Supply Chain Management System (ESCIMS) and streamline the alcohol trade in Delhi through digital tracking.*

Key Features of e-ABkari Portal

- **Licensing and Permits***:*
  - *Facilitates licence renewal, import, and transport permits.*
  - *Licensees will receive a login ID and password for placing orders, renewing licences, and applying for permits.*
- **Tracking and Regulation***:*
  - *Tracks the entire alcohol trading process from orders to sales.*

- *Aims to provide complete regulation and monitoring of the liquor business in Delhi.*

- **Integration of Services***:*
  - *All excise services, including stock dispatch and sale, will be available in one place on the portal.*

Development and Launch

- **Developed by***: National Informatics Centre (NIC) under the Central Government's e-ABkari system.*
- **Trial Phase***:*
  - *Portal began a pilot run on Thursday to identify potential glitches before full-scale implementation.*
  - *Ten government liquor vends and 33 other licensees, including Hotel Club Restaurant (HCR) licensees, are participating in the trial period.*
- **Full Implementation***:*
  - *Once fully operational, the ESCIMS portal (developed by TCS in 2012-13) will be phased out.*

Inspiration and Model

- **Inspired by Punjab Model***: The e-ABkari portal launched in Delhi is based on the successful implementation of a similar system in Punjab.*
- **Wider Adoption***: The e-ABkari solution is currently in use in 10 other Indian states, showcasing its national relevance.*

Challenges and Recent Issues

- **ESCIMS Glitches***:*
  - *The previous ESCIMS portal faced operational issues in September 2023, resulting in significant revenue loss.*
  - *Revenue loss of approximately Rs 300 crore and a drop in daily liquor sales from 8 lakh bottles to 5 lakh bottles.*

Conclusion

- **Potential Impact***:*

- *The e-ABkari portal aims to modernize and bring transparency to the liquor trade in Delhi.*
- *By automating excise processes, the system seeks to enhance efficiency and reduce revenue losses due to technical glitches.*

Preparing For The Next Pandemic What Niti Aayog Report Says

Syllabus: GS-3: General Science - Health Emergency.

Context:

- *In response to lessons learned from the Covid-19 pandemic,* **a NITI Aayog expert group (constituted in June 2023)** *recommended a comprehensive framework for managing future public health emergencies.*
- *The report,* **titled 'Future Pandemic Preparedness and Emergency Response: A Framework for Action',** *was published on September 11, 2024.*
- *The framework stresses the need for swift and effective responses within the first 100 days of an outbreak.*

Key Recommendations:

- **Enactment of Public Health Emergency Management Act (PHEMA):**
  - *A new law to replace the shortcomings of the Epidemic Diseases Act (EDA) of 1897 and the National Disaster Management Act (NDMA) of 2005.*
  - **Issues with Existing Laws:**
    - *EDA 1897 lacks definitions of key terms like "dangerous," "infectious," or "contagious diseases."*
    - *NDMA 2005 focuses primarily on natural disasters and does not address health emergencies effectively.*
  - **Purpose of PHEMA:**
    - *To empower central and state governments to respond effectively to health emergencies, including pandemics, non-communicable diseases, bioterrorism, and other crises.*

- *It will also enable the formation of public health cadres at national and state levels to act as first responders during emergencies.*

- **Creation of an Empowered Group of Secretaries (EGoS):**
  - *A high-level committee, headed by the Cabinet Secretary, to guide preparedness and monitor public health emergencies.*
  - **Functions of EGoS:**
    - *Oversee governance, finance, R&D, surveillance, partnerships, and collaborations.*
    - *Develop Standard Operating Procedures (SOP) for pandemics.*
    - *Establish sub-committees for specific areas of emergency response.*
- **Strengthening Disease Surveillance:**
  - *Epidemics and pandemics (e.g., Covid-19) have been linked to viruses from bat species.*
  - **Surveillance Network:**
    - *Establish a national biosecurity and biosafety network, which includes research institutions, biosafety labs, and genome sequencing centres.*
    - *Continuous monitoring of human-bat interfaces to detect potential outbreaks.*
    - **Emergency Vaccine Bank:**
      - *Source vaccines from both national and international markets for future pandemics.*
- **Epidemiology Forecasting and Modelling Network:**
  - *A network to predict transmission dynamics of infectious diseases.*
  - **Functions:**
    - *Forecast disease outbreaks and assess the effectiveness of countermeasures (e.g., vaccination).*
    - *Establish Centres of Excellence (CoEs) for research on priority pathogens.*
    - *Pre-develop diagnostics, therapeutics, and vaccines for WHO-identified priority pathogens.*

Conclusion:

The PPER framework emphasizes a proactive and well-coordinated approach to manage public health crises. Through legal reforms like PHEMA, strengthened surveillance systems, and early-warning networks, India can enhance its pandemic preparedness and ensure a timely response to future health emergencies.

Nano Diamonds

Syllabus: GS-3: Science and Technology – Nano Technology.

Context:

- *In a recent study published in Nature Communications, physicists from Purdue University in the U.S. reported levitating Fluorescent Nano-Diamonds (FNDs) in a high vacuum and spinning them very fast, paving the way for multiple applications in industry.*

Chemical and Physical Properties:

- **Composition***: FNDs are nanometer-sized diamonds composed primarily of carbon atoms arranged in a crystalline structure. These carbon nanoparticles form the core of the FNDs.*
- **Stability***: FNDs are highly stable under light exposure, non-toxic, and capable of maintaining their fluorescence for extended periods, making them ideal for long-term applications.*
- **Fluorescence***: FNDs exhibit fluorescence when irradiated with light of higher frequencies (e.g., ultraviolet), emitting light at lower frequencies. This fluorescence has a longer lifespan compared to other fluorescent materials, offering advantages in imaging and sensing.*
- **Non-blinking***: Unlike other fluorescent materials that blink (i.e., intermittently stop emitting light), FNDs maintain consistent fluorescence, providing more reliable data in applications like bio-imaging.*

Technology Process in Formation:

- **Production***: FNDs are created under high-pressure, high-temperature (HPHT) conditions, mimicking the natural diamond formation process at a nanoscale.*

- **Doping**: *FNDs can be doped with nitrogen atoms to create nitrogen-vacancy (NV) centres, which play a crucial role in quantum computing by hosting electron spin qubits. These qubits are the foundation for developing quantum technologies.*
- **Vacuum Levitation**: *In recent advancements, FNDs were levitated in a high vacuum and spun at ultra-high speeds (up to 20 million rotations per second). This experiment explores the quantum properties of FNDs in an extreme environment, paving the way for further technological breakthroughs.*

Limitations:

- **Technical Challenges**: *Controlling and manipulating FNDs in a vacuum environment has been a significant hurdle. Earlier experiments struggled with preventing the loss of nanodiamonds and effectively controlling spin qubits.*
- **Complexity**: *Manipulating the spin qubits within levitated FNDs requires sophisticated equipment, including precise control of electric and magnetic fields, which adds to the complexity of the setup.*

Applications:

- **High-Resolution Imaging**: *Due to their stable fluorescence, FNDs are used in biological imaging to track cells over time. They are particularly useful in long-term studies, such as monitoring the behavior of cancer cells.*
- **Temperature Sensing**: *FNDs can measure temperature changes at the microscale level due to their sensitivity to thermal variations, making them valuable in various scientific and industrial applications.*
- **Sensors**: *FNDs can detect acceleration, electric fields, and magnetic fields, making them useful in strategic industries such as aerospace and defense.*
- **Quantum Physics**: *FNDs doped with NV− centres are employed in quantum experiments to explore superposition and other quantum mechanical phenomena. They hold potential in advancing quantum computing.*
- **Gyroscopes**: *The Berry phase generated by rotating FNDs can lead to the development of highly accurate rotation-sensing gyroscopes, which could be applied in navigation systems.*

Conclusion:

- *Fluorescent nanodiamonds, with their unique chemical stability, long-lasting fluorescence, and quantum potential, offer groundbreaking opportunities in various fields.*

- *Recent advancements in levitating and spinning FNDs in a vacuum environment mark a significant step forward in quantum research.*
- *FNDs are poised to revolutionize applications in imaging, sensing, and quantum technologies, making them an increasingly important tool in both theoretical and applied science.*