



28 August, 2023

SVAMITVA Scheme

Context: SVAMITVA Scheme by the Ministry of Panchayati Raj wins 2023 National e-Governance Gold Award for Citizen-Centric Tech Application.

- SVAMITVA Scheme is a Central Government effort for integrated property validation in rural India.
- The initiative employs advanced drone technology for mapping villages and validating property.
- This large-scale exercise covers all villages in the country, benefiting numerous rural property owners.
- Launched on April 24, 2020, coinciding with National Panchayat Day.
- The Ministry of Panchayati Raj (MoPR) is responsible for overseeing the scheme.

About the Scheme

- SVAMITVA stands for Survey of Villages and Mapping with Improvised Technology in Village Areas.
- The scheme's objectives will be executed through collaboration among the Revenue Department, Land Records Department, State Panchayati Raj Department, and the Nodal Ministry in each state.
- The scheme aims to offer a comprehensive property validation solution for rural India.
- Government authorities will issue SVAMITVA Property cards to landowners as part of the scheme.
- Demarcation of rural inhabited areas will be carried out using Drone Surveying technology and Continuously Operating Reference Station (CORS).
- This approach will allow homeowners to leverage their houses for loans and other financial needs.
- Over a span of 4 years (2020-2024), drone-based mapping will gradually cover all villages.
- The scheme's initial phase is applicable in 6 states: Haryana, Karnataka, Madhya Pradesh, Maharashtra, Uttar Pradesh, and Uttarakhand.
- The Central Government funds the scheme, allocating Rs 79.65 crores for the pilot phase.

Activities under the Scheme

- Continuous Operating Reference System (CORS) Establishment:
 - CORS is a network of reference stations that acts as a virtual base station.
 - Provides real-time access to high-accuracy network RTK corrections for precise positioning.
 - Offers centimetre-level horizontal positioning for accurate geo-referencing, ground truthing, and land demarcation.
- Large Scale Mapping with Drones:
 - Survey of India employs drone surveys to map rural inhabited areas.
 - Generates high-resolution and accurate maps to establish property ownership rights.
 - Data from these maps is used to issue property cards to rural household owners.
- Awareness Program:
 - s rural population about the surveying process and its advantages.
- Program Management Unit:
 - Setup at both National and State levels to oversee the scheme's implementation.
- Scheme Dashboard and Integration:
 - Develops and maintains a scheme dashboard.
 - Integrates drone survey spatial data and maps with the Ministry's spatial planning application.
 - Supports local-level planning based on this integrated data.

Objectives

- **Financial Stability:** Enables using rural land as an asset for loans and financial benefits.
- **Improved Land Records:** Addresses poor land division and records by creating accurate records.
- **Property Tax Calculation:** Helps determine property tax, benefiting Gram Panchayats or state treasury.
- **Effective Government Use:** Establishes survey infrastructure and GIS maps for government departments.
- **Supporting Development Plans:** Enhances Gram Panchayat Development Plan using GIS maps.
- **Dispute Resolution:** Helps settle legal and property disputes in rural areas.

6th Census Report on Minor Irrigation (MI) Schemes

Context: The 6th Census Report on Minor Irrigation (MI) Schemes has been released by the Ministry of Jal Shakti.

- Ministry of Jal Shakti released the 6th Census Report on Minor Irrigation (MI) Schemes.
- In the country, there are 23.14 million MI schemes: 21.93 million (94.8%) are Ground Water (GW), and 1.21 million (5.2%) are Surface Water (SW) schemes.
- Uttar Pradesh holds the most MI schemes, followed by Maharashtra, Madhya Pradesh, and Tamil Nadu.

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- Leading states in GW schemes include Uttar Pradesh, Maharashtra, Madhya Pradesh, Tamil Nadu, and Telangana.
- In SW schemes, Maharashtra, Karnataka, Telangana, Odisha, and Jharkhand have the highest share.
- Dug-wells, shallow tube wells, medium tube wells, and deep tube wells make up GW schemes, while SW schemes include surface flow and surface lift schemes.
- The 6th MI census saw an increase of around 1.42 million MI schemes compared to the 5th Census.
- Dug-wells have the highest share, followed by shallow tube-wells, medium tube-wells, and deep tube-wells.
- Private ownership accounts for 96.6% of all MI schemes, with 98.3% in GW schemes and 64.2% in SW schemes.
- The census collected data on the gender of MI scheme owners, revealing 18.1% are owned by women in individually owned schemes.
- 60.2% of schemes have a single source of finance, with 39.8% having more than one source.
- The 6th MI census was conducted under the "Irrigation Census" scheme, delayed by the Covid-19 pandemic.
- The report provides valuable insights for planners, policymakers, researchers, scientists, administrators, and those involved in irrigation and agricultural development in the country.

Irrigation Schemes in India

- **PMKSY-AIBP and CAD&WM:**
 - During 2016-17, 99 ongoing major/medium irrigation projects and 7 phases were included under PMKSY-AIBP with CAD&WM.
 - No new projects have been added since 2016 under this scheme.
- **PMKSY-HKPP-SMI:**
 - PMKSY-HKPP's Surface Minor Irrigation (SMI) sub-component included 1,321 schemes from 2018-21.
- **PMKSY-HKPP-RRR of Water Bodies:**
 - PMKSY-HKPP's Repair, Renovation, and Restoration of Water Bodies (RRR) sub-component covered 395 water bodies from 2018-21.
- **PMKSY-HKPP-Ground Water (GW):**
 - Since 2019, 15 projects were approved under PMKSY-HKPP's Ground Water (GW) sub-component during 2018-2021.
- **PMKSY-Per Drop More Crop (PDMC):**
 - PMKSY-Per Drop More Crop covered 32.697 lakh hectare under micro-irrigation in this period.
- **PMKSY-Watershed Development Component (WDC):**
 - Department of Land Resources initiated 6,382 projects under PMKSY-WDC.
- **Special Package for Irrigation Projects in Maharashtra:**
 - A special package for financial assistance was launched in July 2018 by the Government of India.
 - This addresses agrarian distress by completing 83 Surface Minor Irrigation (SMI) projects and 8 Major/Medium irrigation projects in drought-prone areas of Maharashtra by 2023-24.

B20 Summit

Context: B20 Summit concluded on 27th of August.

- The Business 20 (B20) serves as the official G20 dialogue forum with the global business community.
- The Confederation of Indian Industry (CII) has been formally chosen by the Government of India to lead and host B20 during India's G20 presidency.
- Established in 2010, B20 is a prominent Engagement Group within G20, involving companies and business organizations.
- B20 leads the process of uniting global business leaders to present their views on global economic and trade governance.
- It speaks collectively on behalf of the entire G20 business community.
- The theme of the event is "R.A.I.S.E." which stands for Responsible, Accelerated, Innovative, Sustainable, and Equitable Businesses.
- The gathering is witnessing participation from more than 1,500 delegates representing approximately 55 countries.
- Inclusiveness, particularly in terms of inviting the African Union to the G20, is a significant focus.
- Mutual trust, lessons from the Covid-19 pandemic, and India's role as the "pharmacy of the world" were emphasized.

Aims and Approach

- B20 aims to offer concrete policy recommendations to the G20 on priorities set by each rotating presidency to foster economic growth and development.
- Task Forces (TFs) and Action Councils (ACs) form the foundation of B20's work, tasked with generating consensus-based policy suggestions.

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Key Themes under B20's Inception Meeting

- Climate Change and Sustainable Practices:
 - change is a prime focus of India's G20 presidency.
 - The LIFE Mission (Lifestyle For Environment) emphasizes sustainable lifestyles to combat climate change.
- Inclusive Growth via MSMEs:
 - Accelerated and inclusive growth is envisioned through Micro, Small and Medium Enterprises (MSMEs), which are global growth engines.
 - The Indian government aims to increase MSME contribution to GDP from 18% to 25-30%.
- Reforming Multilateral Institutions:
 - Strengthening multilateral institutions like IMF and World Bank is crucial to address emerging challenges, including the Covid-19 pandemic.
- Empowering Women-Led Development:
 - Promoting women's involvement to boost socio-economic progress.

B20's Task Forces and Action Councils

- **Task Forces:** B20 operates through 7 Task Forces covering digital transformation, tech and innovation, resilient trade and investment, global economic recovery financing, and more.
- **Action Councils:** B20's Action Councils are devoted to environmental, social, governance aspects for businesses, and supporting the African continent's business integration.

Startup 20 under Indian G20 Presidency

- **Importance of Startups:**
 - Startups are catalysts for innovative economic recovery and growth worldwide.
- **Startup20 Initiative:**
 - Under India's G20 presidency, Startup20 is the inaugural engagement group for startups.
 - It brings together stakeholders to collectively voice the needs and potential of the global startup ecosystem.
- **India's Vibrant Startup Ecosystem:**
 - India boasts over 80,000 startups and 106 unicorns, making it the world's third-largest startup ecosystem.

NEWS IN BETWEEN THE LINES

Parboiled Rice



What is Parboiled Rice?

Parboiled rice, also known as converted rice, is a type of rice that undergoes a partial precooking process while still in its inedible husk.

Steps: Soaking, steaming, drying, husking before milling.

Benefits:

- Improved texture, longer shelf life, health advantages.
- More fiber, protein than white rice.
- Less stickiness, fluffy cooked kernels.
- Preserves rice fat, preventing rancidity.

Nutritional Profile:

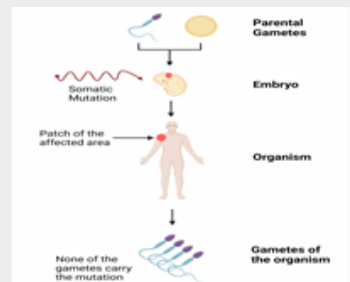
- Retains more thiamine, niacin than white rice.
- Less nutritious than brown rice.

Cooking: Takes slightly longer than regular white rice.

Application:

- Common in Asia and Africa.
- Enhanced texture, shelf life, nutritional value.
- Export Duty: 20% export duty imposed recently.

Somatic Mutations



About Somatic Mutations:

- Somatic mutations are genetic changes occurring after birth during an individual's life.
- Result from errors in DNA replication or exposure to mutagens.

Cancer Connection:

- Somatic mutations drive cancer initiation and growth.
- Some mutations accelerate cell division, leading to tumor formation.

Mutational Signatures:

- Cancers exhibit distinct mutation patterns, known as mutational signatures.
- These signatures aid in identifying and diagnosing specific cancer types.

Early Detection and Treatment:

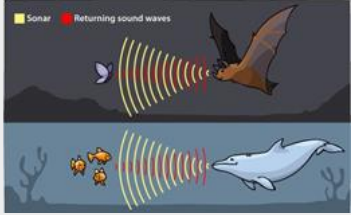



- Specific mutations in blood can signal early cancer presence.
- Understanding mutations helps tailor targeted therapies.

Immune Response: Immune cells use somatic changes to produce diverse antibodies.

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<p style="text-align: center;">Echolocation</p> 	<p>About Echolocation?</p> <ul style="list-style-type: none"> ➤ Echolocation is a technique used by animals and devices to perceive their surroundings through sound waves. ➤ Objects in the environment reflect emitted sound waves, providing information to the emitter. ➤ By interpreting echo patterns, animals and devices "see" their surroundings through sound. <p>Animal Echolocation:</p> <ul style="list-style-type: none"> ➤ Bats, dolphins, whales, certain birds and even the tenrec utilize echolocation. ➤ Animals emit high-frequency sound pulses for navigation, hunting, communication and object detection. ➤ Dolphins locate objects underwater and bats navigate and hunt in the dark using echolocation. <p>Technological Adaptation: Sonar and Radar:</p> <ul style="list-style-type: none"> ➤ Sonar (sound navigation and ranging) is a technology inspired by echolocation. ➤ Sonar aids underwater navigation, communication and fish finding. ➤ Radar (radio detection and ranging) uses radio waves to detect and track objects in aviation, weather forecasting and military applications. <p>Human-Developed Applications:</p> <ul style="list-style-type: none"> ➤ Engineers have harnessed echolocation principles for practical applications. ➤ Smartphone apps use echolocation to map rooms, assisting visually impaired individuals in navigating their surroundings.
<p style="text-align: center;">Crew-7 Mission</p> 	<p>What is the Crew-7 Mission? Crew-7 mission involved four astronauts from different countries launching aboard a SpaceX rocket from NASA's Kennedy Space Center.</p> <p>Objective:</p> <ul style="list-style-type: none"> ➤ The Crew-7 mission aimed to replace the previous crew that had been residing on the ISS since March. ➤ The new crew members would stay on the ISS for the next six months. <p>Composition:</p> <ul style="list-style-type: none"> ➤ Four astronauts from four different nations launched aboard SpaceX rocket to the ISS. ➤ The multinational crew consisted of Jasmin Moghbeli (USA), Andreas Mogensen (Denmark), Satoshi Furukawa (Japan) and Konstantin Borisov (Russia). <p>Scientific Experiments and Research:</p> <ul style="list-style-type: none"> ➤ During their stay on the ISS, the Crew-7 astronauts were tasked with conducting over 200 science experiments and technology demonstrations. ➤ The research conducted would have implications for future space missions, including those to the Moon and Mars.
<p style="text-align: center;">Alai Darwaza</p> 	<p>Architectural Gem - Alai Darwaza: Alai Darwaza is a historical structure situated at the southern end of the Qutub complex in Delhi.</p> <p>Built by Alauddin Khilji: Constructed during Alauddin Khilji's reign in Delhi, part of his plan to expand Quwwat-ul-Islam mosque.</p> <p>Gateway to Grand Mosque: Alai Darwaza was intended to be one of four gateways for the expanded mosque, showcasing grand design.</p> <p>Innovative Architecture:</p> <p>Material Fusion: Unique for using red and white marble together, a pioneering approach.</p> <p>Local Elements: Incorporated local symbols like lotus buds as decorative elements.</p> <p>Dome Innovation: Early example of true dome with arched architecture principles.</p> <p>Islamic Principles: Employed Islamic construction and ornamentation principles.</p> <p>Conservation Efforts:</p> <ul style="list-style-type: none"> ➤ Over time, it suffered from cracks, chipped carvings, and weathering. ➤ Archaeological Survey of India (ASI) initiated conservation work to restore intricate carvings. <p>Historical Significance:</p> <ul style="list-style-type: none"> ➤ First building to use Islamic principles in India. ➤ Reflects innovation in architectural design during the Delhi Sultanate era.
<p style="text-align: center;">Place in News</p> <p style="text-align: center;">Denmark</p>	<p>Denmark's justice minister has recently announced plans to implement a ban on the burning of religious texts, including the Quran, Islam's holy book.</p> <p>Denmark: (Capital: Copenhagen)</p> <p>Political Boundaries: Denmark shares its political boundaries with Germany to the south, Sweden to the east across the Oresund Strait and has a maritime boundary with Norway to the northwest in the North Sea.</p> <p>Legislation Aim:</p> <ul style="list-style-type: none"> ➤ Ban burning of religious texts, including Quran. ➤ Prevent disrespectful treatment of significant religious objects in public spaces. <p>Trigger: Incidents of Quran burnings in Denmark and Sweden.</p> 

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	<p>Response: Widespread outrage and calls for ban in Nordic countries.</p> <p>Physical Features:</p> <p>Peninsula: The Jutland Peninsula extends from continental Europe into the North Sea and the Baltic Sea. It forms the western part of Denmark.</p> <p>Islands: Numerous islands surround the Danish mainland, including Zealand, Funen, Lolland and Bornholm. These islands contribute to Denmark's unique geography.</p> <p>Baltic and North Seas: Denmark's coastal areas are influenced by the Baltic Sea to the east and the North Sea to the west. These bodies of water contribute to the nation's maritime heritage.</p>
<p>Personality in News</p> <p>Jayanta Mahapatra</p>	<p>Jayanta Mahapatra (22nd October 1928- 27th August 2023)</p> <p>Academic Pursuits:</p> <ul style="list-style-type: none"> ➤ Mahapatra initially pursued a career in academia, starting as a physics lecturer. ➤ He taught at various government colleges across Odisha. <p>Emergence as a Poet:</p> <ul style="list-style-type: none"> ➤ He discovered his passion for poetry and literature in his later years. ➤ Mahapatra transitioned from a physics lecturer to an acclaimed poet. <p>Literary Contributions:</p> <ul style="list-style-type: none"> ➤ His debut collection of poems, "Close the Sky, Ten by Ten," marked his entry into the literary world. ➤ Authored a total of 27 poetry books, with seven in Odia and the rest in English. ➤ Notable works include "Indian Summer" and "Hunger," which achieved the status of classics in modern Indian English literature. <p>Awards and Honors:</p> <ul style="list-style-type: none"> ➤ He received the Sahitya Akademi Award in 1981 for for English poetry "Relationship," showcasing his literary excellence. ➤ He received the prestigious Padma Shri award in 2009, recognizing his literary achievements.



POINTS TO PONDER

- ❖ **What are the non-germ cells of the body called?** – Somatic Cells
- ❖ **Which institution plans to set up 'Research Analyst Administration and Supervisory Body (RAASB)'?** – SEBI
- ❖ **The African Union has suspended which country until 'the effective restoration of constitutional order'?** – Niger
- ❖ **Which institution is to support Ministry of Development of North Eastern Region, including fast-tracking progress on SDGs?** – UNDP
- ❖ **Which country is the host of 'World Water Week 2023' event?** – Sweden

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