

17 August, 2023

PM-eBus Sewa

Context: The Cabinet has given its approval for "PM-eBus Sewa," a scheme aimed at enhancing urban bus operations. Priority will be given to cities that currently lack organized bus services.

Scheme Overview

- The Cabinet, led by Prime Minister Shri Narendra Modi, has approved the "PM-eBus Sewa" scheme to enhance city bus operations using e-buses on a Public-Private Partnership (PPP) model.
- The scheme is set to deploy 10,000 e-buses across 169 cities.
- The total estimated cost of the scheme is Rs. 57,613 crores, with a Central government support of Rs. 20,000 crores. The scheme will cover bus operations for a duration of 10 years.

Scope and Priorities

- The scheme targets cities with a population of three lakh and above, as per the 2011 census. This includes Union Territory capitals, the North Eastern Region, and Hill States.
- Priority will be given to cities that currently lack organized bus services.
- The initiative aims to reach areas that are currently underserved by public transportation.

Employment Generation

- The deployment of around 10,000 e-buses is expected to generate direct employment for approximately 45,000 to 55,000 individuals in city bus operations.

Scheme Segments

- **Segment A - Augmenting City Bus Services:**
 - This segment focuses on augmenting city bus operations by introducing 10,000 e-buses through a PPP model.
 - Associated infrastructure development includes upgrading depot facilities and creating behind-the-meter power infrastructure for e-buses.
- **Segment B - Green Urban Mobility Initiatives (GUMI):**
 - This segment emphasizes green mobility initiatives, incorporating elements such as bus priority, multimodal interchange facilities, NCMC-based Automated Fare Collection Systems, and charging infrastructure.
 - The scheme supports the development of sustainable and environmentally friendly urban transportation solutions.

Operation and Support

- States and cities will be responsible for running the bus services and making payments to bus operators.
- The Central Government will provide subsidies as specified in the proposed scheme to support bus operations.

Promotion of E-Mobility

- The scheme aims to promote e-mobility by providing substantial support for behind-the-meter power infrastructure.
- Charging infrastructure development will be encouraged under the Green Urban Mobility Initiatives.
- The scheme's support for innovative and efficient electric buses aims to reduce noise, air pollution, and carbon emissions.

Mutual Recognition Arrangement of Authorised Economic Operators

Context: The Cabinet has given its approval for a Mutual Recognition Arrangement of Authorised Economic Operators between India and Australia.

Cabinet Approval and Entities Involved

- Cabinet chaired by PM Narendra Modi approves MRA signing.
- Involves Central Board of Indirect Taxes and Customs (CBIC) from India.
- Involves Department of Home Affairs (incorporating Australian Border Force) from Australia.

Reciprocal Benefits for Exporters and Streamlined Customs

- Offers benefits to accredited exporters from both countries.
- Simplifies customs clearance for imported goods.

Alignment with Global Standards and Secure Trade

- MRA aligns with World Customs Organization's SAFE Framework.
- Aims to ensure secure and efficient customs processes.

AEO

- An authorized economic operator (AEO) is a participant in international goods movement.
- AEO status is granted by a national Customs administration.
- AEOs are recognized for their compliance with supply chain security standards set by the WCO or similar entities.
- This recognition spans various roles, including manufacturers, importers, exporters, brokers, carriers, and more.
- It extends to entities like consolidators, intermediaries, ports, airports, terminal operators, integrated operators, warehouses, and distributors.

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Effective Implementation and Coordination

- MRA takes effect upon endorsement by authorized representatives.
- Proposed MRA text developed in collaboration with Customs Administrations.

Strengthened Trade Relationship and Smoother Procedures

- Expected to enhance trade ties between the two nations.
- Facilitates more streamlined customs procedures for exporters.

Promoting Secure and Efficient Cross-Border Trade

- Supports secure supply chains and promotes trade facilitation.

Anticipated Benefits

- Expected benefits encompass improved economic cooperation, enhanced trade efficiency, and secure cross-border trade between India and Australia.

Graphene-Aurora Programme

Context: The Ministry of Electronics & Information Technology (MeitY) has recently inaugurated the 'Graphene-Aurora program' in Kerala.

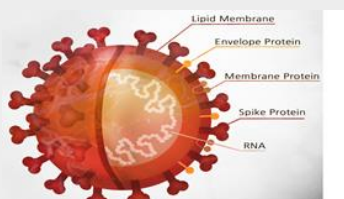
- Aims to bridge the gap between R&D and commercialization for startups and industries.
- Implemented by Digital University Kerala.
- Joint funding from MeitY, Government of Kerala, and industry partners.
- Establishes a Section 8 Company named 'India Graphene Engineering and Innovation Center (I-GEIC)'.
- Total budget of Rs 94.85 Crore.
- Industry partner: Carborundum Pvt Limited.
- Consideration of research centers like India Innovation Centre Graphene (IICG) for commercialization.
- Initial operations at the Digital Science Park in Trivandrum.
- Focus on nurturing the emerging Graphene technology ecosystem.
- Supports SMEs and startups in commercializing graphene technologies.
- Aiming to position India in the global new material market.
- Acknowledgment of Maker Village's contribution to hardware startup development.
- Commitment to creating a comprehensive ecosystem for Electronics Product Testing.

Graphene

- Graphene is a single layer of carbon atoms arranged in a honeycomb pattern.
- It's incredibly thin, strong, and highly conductive for both electricity and heat.
- Its remarkable properties have the potential to revolutionize various industries.
- Adding even a small amount of graphene can significantly enhance the strength or reduce the weight of materials.
- Graphene's exceptional heat conductivity makes it suitable for heat-spreading solutions like heat sinks.
- Applications range from microelectronics (e.g., more efficient LED lighting) to larger uses like thermal foils.
- Its high surface-area-to-volume ratio makes it promising for batteries and supercapacitors, enabling increased energy storage and faster charging.
- Graphene's potential applications extend to anti-corrosion coatings, sensors, efficient electronics, flexible displays, solar panels, DNA sequencing, drug delivery, and more.

NEWS IN BETWEEN THE LINES

SARS-CoV-2



What is SARS-CoV-2?

SARS-CoV-2 is a novel coronavirus responsible for the COVID-19 pandemic. It stands for "Severe Acute Respiratory Syndrome Coronavirus 2" and is a successor to the earlier SARS-CoV virus.

Global Emergence: Variants of SARS-CoV-2 seen worldwide.

Mutation Impact: Mutations alter virus characteristics.

RNA vs DNA Mutation: RNA viruses mutate faster due to lack of correction mechanisms.

Selective Advantage: Mutations can lead to virus dominance.

RBD Mutations: Receptor-binding domain changes affect virus entry and antibody interactions.

Vaccine Efficacy: Some variants impact vaccine effectiveness.

Pfizer, Moderna: Reduced efficacy against certain variants.

INSACOG: Indian consortium monitors and analyzes variants.

Genomic Surveillance: INSACOG tracks virus evolution, transmission, vaccine impact.

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Ministry of Environment, Forests, and Climate Change



Recently, the Ministry of Environment, Forests, and Climate Change (MoEFCC) reversed its previous decision to merge agencies such as the Forest Survey of India, National Tiger Conservation Authority, Wildlife Crime Control Bureau, and Central Zoo Authority.

Aim: Centralize operations under the Ministry.

Reasons: Technical and administrative complexities.

About MoEFCC:

Nodal Role: Central authority for environmental and forestry policies.

Focus Areas: Emphasis on conservation, pollution control, and animal welfare.

Objectives: Primary goals include preserving flora, fauna, forests, and wildlife.

Pollution Control: Aims to prevent, control pollution, and promote afforestation.

Global Roles: Nodal agency for UN Environment Programme, ICIMOD, and more.

Guiding Policies: Operates guided by policies like the National Conservation Strategy.

Efficient Clearances: Manages PARIVESH Portal for streamlined environmental approvals.

Pong Dam



About Pong Dam:

Pong Dam is also known as the Bhakra Nagal Dam. It is a multipurpose dam located on the Beas River at Talwara, on the border of Punjab and Haryana in India.

Purpose: Multi-purpose dam for irrigation, hydroelectric power and flood control.

Construction: Completed in 1974, inaugurated as "Bhakra Nagal Dam."

Reservoir: Known as Pong Reservoir or Pong Lake.

Catchment Area: Primary catchment area in Himachal Pradesh.

Benefits: Provides irrigation to areas in Punjab, Haryana, and Himachal Pradesh.

Hydroelectric Power: Generates hydroelectricity for the region.

Recent Event: Managed rising water levels by releasing excess water downstream.

Mizo Hills



About Mizo Hills:

Location: Mizo Hills, now known as Mizoram, is located in the northeastern part of India.

Elevation: Varying heights, highest peak Phawngpui (Blue Mountain).

River Systems: Numerous rivers like Tlawng and Tuivai, vital for water and livelihoods.

Historical Background: In the early 1960s, the Mizo National Front (MNF) led a separatist movement in the Mizo Hills seeking autonomy and independence.

Operation Jericho: The MNF launched "Operation Jericho" in 1966 to take control of Aizawl, the largest town in the region, and establish control over the Mizo Hills.

MNF's Goals: MNF aimed to gain control of the region, challenge the presence of security forces, and assert its claims for autonomy.

Air Support: The Indian Air Force (IAF) played a crucial role in supporting the Army's operations by conducting offensive air missions against rebel targets.

Historical Significance: Operation Jericho remains an important episode in the history of insurgency and counterinsurgency in the Northeast.

Lessons Learned: The operation highlighted the need for coordinated military response and collaboration between Army and Air Force for effective counterinsurgency measures.

ZARTH App



What is ZARTH App?

- ZARTH stands for "ZTF Augmented Reality Transient Hunter."
- Developed by astronomers from the California Institute of Technology.

Purpose:

- Designed to engage both astronomy enthusiasts and the general public.
- Incorporates astronomy data from the Zwicky Transient Facility (ZTF).

Transients:

- Transients are sudden, short-lived cosmic events.
- ZTF is a robotic telescope at Palomar Observatory that scans the sky every two days.
- ZTF collects vast data, including transients like supernovae, flaring stars, and more.

App Functionality:

- ZARTH combines science with a gaming-like experience.
- Users "hunt" for transients in an augmented reality setting.
- Points are earned by capturing transients, leading to a competitive environment.

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Denube River



The significance of the Sulina Channel in Ukraine's grain trade has become increasingly evident due to recent developments along the Danube River.

Location: The Danube River flows through multiple European countries, including Germany, Austria, Slovakia, Hungary, Croatia, Serbia, Bulgaria, Romania, Moldova, and Ukraine.

Length: Europe's second-longest river, stretching approximately 2,850 kilometers.

Source: Originates in the Black Forest region of Germany, flowing southeastwards.

Channels: Major channels in the delta include Chilia, Sulina, and St. George.

Sulina Channel: This distributary is the primary trade route connecting Ukrainian ports to the Black Sea, essential for grain exports. It is around 63 km long and lies within Romania.

Danube Delta: A UNESCO World Heritage Site, the delta is a complex wetland ecosystem supporting diverse flora and fauna.

Places in News

Triton Island

Location: Triton Island is situated in the South China Sea, specifically within the Paracel group of islands.

Disputed Territory: The island is a subject of dispute among multiple nations, including China, Vietnam and Taiwan, regarding sovereignty and territorial claims.

Chinese Presence: China has established infrastructure on Triton Island, including a small harbor, buildings, helipad, radar arrays, and more.

Airstrip Construction: Recent satellite images indicate that China is constructing an airstrip on Triton Island, similar to its actions on other islands in the region.

Strategic Significance: The island's location in the South China Sea holds strategic importance due to its proximity to shipping lanes and international waters.

Geopolitical Tensions: Triton Island's disputed status and China's construction activities contribute to ongoing geopolitical tensions in the South China Sea.



POINTS TO PONDER

- ❖ Which traditional rice variety is gaining popularity in Himachal Pradesh? - Red Rice
- ❖ Which is the highest mountain in Libya? - Bikku Bitti
- ❖ Where is Pong Dam located? - Beas River, India
- ❖ Which channel is significant for Ukraine's grain trade? - Sulina Channel
- ❖ What is the focus of the STEREO-A spacecraft mission? - Sun-Earth

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