11 Apr 2022: PIB Summary for UPSC

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1. Indigenous Intelligent Transportation Systems (ITS) Solutions

Syllabus: GS3: Security Challenges: Defense equipment

Prelims: Onboard Driver Assistance and Warning System – ODAWS; Bus Signal Priority System; Common SMart iot Connectiv (CoSMiC)

Context:

An indigenous Onboard Driver Assistance and Warning System – ODAWS, Bus Signal Priority System and Common SMart iot Connectiv (CoSMiC) software have been launched under the Ministry of Electronics and Information Technology (MeitY).

Onboard Driver Assistance and Warning System – ODAWS:

- ODAWS incorporates vehicle-borne sensors for monitoring driver propensity and vehicle surroundings to deliver acoustic and visual alerts for driver assistance.
- The project involves the development of sub-modules such as the navigational unit, driver assistance console, and mmWave radar sensor.
- The ODAWS algorithm is used to interpret sensor data and offer real-time notifications to the driver, boosting road safety.

Bus Signal Priority System:

- The Bus Signal Priority System is an operational strategy that modifies normal traffic signal operations to better accommodate in-service public buses at signal-controlled intersections.

- The developed system will enable to minimize person delay by providing priority to public transport buses, either through Green extension or Red truncation, considering all vehicles approaching a signalized intersection.

Common SMart iot Connectiv (CoSMiC):

- The CoSMiC platform also provides Interworking Proxy Entity (IPE) APIs for connecting non-oneM2M (NoDN) devices or third-party applications to get connected to the CoSMiC platform.
- CoSMiC provides a Dashboard page showing IoT units, products, applications, and its live data in a Geographical Information System (GIS) map.
- It provides an end-to-end solution for the seamless connection of IoT devices and applications.

2. 5G Vertical Engagement and Partnership Program (VEPP)

Syllabus: GS3: Science and technology: Achievements of Indians in science & technology;

Prelims: 5G Vertical Engagement and Partnership Program (VEPP)

Context: The Department of Telecommunications (DoT) has invited Expressions of Interest (EoI) for the "5G Vertical Engagement and Partnership Program (VEPP)".

5G Vertical Engagement and Partnership Program (VEPP):

- The 5G Vertical Engagement and Partnership Program (VEPP) initiative aims to build strong collaboration partnerships across 5G use-case ecosystem stakeholders.
- In order to multiply the 5G opportunities across the usage verticals, Digital Communications Commission is constituted with representatives from the Ministry of Electronics and IT, the Department of Science and Technology & relevant **Vertical Ministries.**
  - Vertical Ministries viz. Agriculture, Health, Urban Affairs, Education, Power, Mines, Jalshakthi, Commerce, Ports, Railways, Heavy Industries, Road Transport, Tourism, etc. to facilitate collaborative efforts across stakeholders.

Roles of Stakeholders under 5G Vertical Engagement and Partnership Program (VEPP)

- **Role of the VEPP Partner**
  - Identify Single Point of Contact (SPoC)
  - Ideate and collaborate with other ecosystem players for relevant 5G use cases

- o Facilitate access to relevant premises/campus/infra/data for use-case piloting and prototyping to address prevalent problems and also performance efficiencies
- **Facilitation from DoT**
  - o Non-exclusive access to 5G Tech Ecosystem to enable partnerships
  - o Conduct awareness sessions on 5G opportunities in the respective vertical at NTIPRIT
  - o Use case Standardization & Interoperability with the support of TEC & C-DOT
- **Role of Tech Stakeholders**
  - o Deploy use cases as per the needs of the Vertical User requirements which would potentially accelerate 5G commercial deployment and adoption by enterprises

3. New materials & processes for carbon capture and utilization could show new light for global warming challenge

Syllabus: GS3: Environment and Ecology: Conservation, environmental pollution and degradation.

Prelims: Carbon capture; Greenhouse gases

Context: A group of scientists have designed a hybrid material that can absorb greenhouse gas methane.

Details:

- Scientists are trying to explore innovative methods of absorbing greenhouse gases and converting them into useful substances.
- They tried capturing methane and converting it to clean hydrogen.
- They also simulated a process of capturing carbon dioxide in-situ and converting it to high purity hydrogen from non-fuel grade bioethanol.
- **Know more about [Greenhouse Gases (GHGs).](link)**

4. Anti-Tank Guided Missile 'HELINA' successfully flight tested

Syllabus: GS3: Environment and Ecology: Conservation, environmental pollution and degradation.

Prelims: HELINA; [Anti Tank Guided Missiles (ATGM)](link)

Context: The anti-tank guided missile HELINA was tested.

'HELINA'

- HELINA is an Anti-Tank Guided Missile which is the helicopter-based version of the Nag missile.
- The missile is guided by an Imaging Infra-Red (IIR) Seeker operating in the Lock on Before Launch mode.
- The HELINA missile system has all-weather day and night capability and can defeat battle tanks with conventional armour as well as explosive reactive armour.
- It has been developed for integration with choppers in both the Indian Army and the Air Force.

5. Waterways Conclave

Syllabus: GS2: Polity and governance: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

Prelims: Waterways Conclave 2022

Context: The Waterways Conclave 2022 was held in Dibrugarh, Assam.

Waterways Conclave 2022:

- The Waterways Conclave 2022 was organized by the Union Ministry of Ports, Shipping and Waterways along with the Inland Waterways Authority of India (IWAI).
- It aims to deliberate on new possibilities for cooperation in the waterways sector between nations.
- The conclave is also taking forward the vision of the Prime Minister on 'Vocal for Local' by giving a platform to Assam's handicrafts, tea and artisans in the exhibition.

6. State Energy and Climate Index

Syllabus: GS3: Environment and Ecology: Conservation, environmental pollution and degradation.

Prelims: Energy and Climate Index List

Context: NITI Aayog has launched the State Energy & Climate Index-Round I.

State Energy and Climate Index

- NITI Aayog has come out with the State Energy & Climate Index.
- The states have been categorized based on size and geographical differences as larger states, smaller states, and UTs.

Know more about the **State Energy and Climate Index in [CNA 12th April 2022](link)**