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## Agni P

- Defence Research and Development Organisation (DRDO) successfully flight tested a New Generation Nuclear Capable Ballistic Missile Agni P from Dr APJ Abdul Kalam island off the coast of Odisha, Balasore.
- Agni P is the first of the new generation advanced variant of Agni class of missiles. It has a range capability between 1,000-2,000 kms
- It weighs 50% less than Agni 3 and has new guidance and a new generation of propulsion.
- Since it is a canisterised missile, it can be launched from rail and road and stored for a longer period and transported all across the country as per operational requirements.
- Due to its long range, this missile can be used to target enemy armadas in the Indo-Pacific.

## Electrically Configured Nanochannels

- Scientists from the S. N. Bose National Centre for Basic Sciences have developed electrically reconfigured parallel nanochannels that tune the behaviour of spin waves in nano-structure elements.
- They have done this by periodically tailoring the property that confers a preferred direction on the spin of a system, also called voltage-controlled magnetic anisotropy using the electric field.
- Spintronics or spin electronics, in addition to its fundamental electronic charge, in solid-state devices offer to harness electron spins.
- [Spintronics is the study of the intrinsic spin of the electron and its associated magnetic moment.]
- Spin-waves were efficiently transferred through these nanochannels, and this could be switched 'ON' and 'OFF' and its magnitude altered by a meagre voltage of few volts.
- **Significance** - These reconfigured nanochannels can eliminate unwanted energy waste and promise wave-based computing.
- The collective precession can carry information encoded in its amplitude, phase, wavelength, and frequency without any physical motion of particles, eliminating unwanted energy waste.
- These nanochannels can be engineered further to transfer specific bands of

frequencies through designed parallel channels towards development of on-chip multiplexing devices.

## Pakistan to Remain on FATF Grey List

- The Financial Action Task Force (FATF) has refused to take Pakistan out of the 'Grey List' again.
- Pakistan has now completed 26 of the 27 action items given to it in 2018.
- But, it had failed to take appropriate action against UN-designated terrorists such as 26/11 accused LeT founder Hafiz Saeed and its commander Zakiur Rehman Lakhvi and JeM chief Masood Azhar

### Financial Action Task Force

- Headquartered in Paris, the Financial Action Task Force (FATF) was set up in 1989 by the G7 countries.
- **Objective** - FATF is an inter-governmental body that acts as an international watchdog on issues of money laundering and financing of terrorism.
- It is empowered to curtail financing of UN-designated terrorist groups.
- It is to limit the concerned countries from sourcing financial flows internationally and thereby constraining them economically.
- **Members** - FATF has 39 members, which comprise 37 member jurisdictions and 2 regional organisations.
- Two regional organisations are the Gulf Cooperation Council (GCC) and the European Commission (EC).
- All 5 permanent members of the Security Council are members of FATF. India became a full member in 2010.
- **Grey list** - A country is put on the grey list when it fails to curb terrorism financing and money laundering.
- Grey list countries are Pakistan, Myanmar, Mauritius, Cambodia, Panama, Barbados, Cayman Islands, Syria and Yemen along with few other countries.
- **Blacklist now called the "Call for action"** - Putting a country on the blacklist means shutting all doors to international finance for that country. E.g.: North Korea.

## 6th Anniversary of Transformative Urban Missions

- The Ministry of Housing and Urban Affairs (MoHUA) organised an event to commemorate 6 years of the three transformative Urban Missions vis.
    1. Smart Cities Mission (SCM),
    2. Atal Mission for Urban Rejuvenation and Urban Transformation (AMRUT) and
    3. Pradhan Mantri Awas Yojana-Urban (PMAY-U).

### Smart City Mission

- It is a transformational Mission aimed to bring about a paradigm shift in the practice of urban development in the country.
- It is an initiative to drive economic growth and improve the quality of life of people by enabling local development and harnessing technology as a means to create smart outcomes for citizens.
- Its objective is to promote cities that provide core infrastructure and give a decent quality of life to its citizens, a clean and sustainable environment and application of Smart Solutions.
- Its focus is on sustainable and inclusive development and to look at compact areas, creates a replicable model which will act like a lighthouse to other aspiring cities.
- Integrated Command and Control Centres (ICCCs) equip cities to do more with less by graduating to real time data driven decision making with better situational awareness in an integrated manner.
- ICCCs are expected to deliver specific outcomes focusing on bringing positive impact on day-to-day life of the citizens.
- Standardization journey under Smart Cities Mission began in Dec 2018 with an International Conference organised by BIS.

### AMRUT Mission

- Launched in 2015, AMRUT Mission is the first focused national water Mission.
- All cities having population above 1 lakh are covered under Mission.
- Providing piped water supply and sewerage & septage management to every household in Mission cities is the major focus of the Mission.
- It aims to increase the amenity value of cities by developing greenery and well maintained open spaces and reduce pollution by switching to public transport or constructing facilities for non-motorized transport.
- Master Plans of AMRUT cities are being prepared based on Geographical Information System (GIS) through a sub-scheme.
- National Remote Sensing Centre (NRSC), Hyderabad has been roped in to provide satellite photos and for digitization of city maps.
- To ensure efficient land use, a sub-Scheme on Local Area Planning and Town Planning Scheme (LAP/TPS) is in progress in 25 cities.

### Pradhan Mantri Awas Yojana – Urban

- It intends to provide **‘Housing For All’ in urban areas** by year 2022.
- It addresses Urban housing shortage among the Urban Poor including the Slum Dwellers by ensuring a pucca house to eligible urban poor.

- The Mission covers the entire urban area consisting of Statutory Towns, Notified Planning Areas, Development Authorities, Special Area Development Authorities, Industrial Development Authorities or any such authority under State legislation which is entrusted with the functions of urban planning & regulations.
- For the first time, interest subsidy on home loans have been given to Middle-Income Group having annual income of upto ₹18 Lakh under PMAY-U's Credit Linked Subsidy Scheme (CLSS).
- The beneficiaries under the fold of CLSS belong to Economically Weaker Sections (EWS), Lower Income Group (LIG) and MIG.
- As a response to the reverse migration taking place due to the COVID-19, MoHUA launched Affordable Rental Housing Complexes (ARHCs), a sub-scheme under PMAY (U) for urban migrants/ poor.
- The Light House Projects (LHPs) that are being built under PMAY-U showcase the best of new-age alternate global technology in housing construction sector, selected through GHTC-India.
- [MoHUA organised Global Housing Technology Challenge India (GHTC-India) in 2019 to identify and mainstream globally best sustainable, green and disaster-resilient construction technologies.]

## ICT Initiatives under Smart City Mission

### ICCC Maturity Assessment framework (IMAF)

- IMAF is a self-assessment tool kit developed to assess the maturity of ICCCs across key aspects of functionality, technology, governance and citizen/stakeholders engagement.
- This tool kit will help cities identify areas of improvement in their ICCCs to deliver better services to the citizens.
- With this framework cities will be able to improve data-driven governance and move towards the achievement of outcomes that were intended to as part of the cities ICCC.

### TULIP Report

- The Urban Learning Internship Program (TULIP) was launched in 2020 in partnership with AICTE.
- It is a platform to connect graduates to Urban Local Bodies and Smart Cities to co-create new solutions for our cities.

### Cities Insights Report

- It is an initiative under the Building Accessible Safe Inclusive Indian Cities (BASIIC) Programme at the National Institute of Urban Affairs.

- It investigates the economic and social inequity faced by marginalized communities living in cities by comparing global and national strategies that prioritized universal access to urban services and infrastructure.
- [Marginalized populations - persons with disabilities, elderly, children and women.]

**CITIIS - Knowledge Products**

- It was launched in partnership with the French Development Agency and the European Union in 2018 as a complement to the Smart Cities Mission.
- The CITIIS program has a novel approach of developing demonstrative projects while also furthering the agenda of sustainability and innovation in urban infrastructure.
- Its unique maturation phase methodology helped plan and design robust projects.

## Preventing a Drone Attack

- The need for an anti-drone system shielding critical installations came under sharp focus after a drone attack on an IAF base in Jammu.
- Drones have been increasingly used in the Middle East, particularly in Iraq and Syria, by the US to carry out targeted assassinations.
- At present, the only option is to shoot down the drones, but it is not easy as that would require sniper fire and the drone to be within range. Also, sighting drones, especially during night, is not easy.
- **Countering the drone threat** - Several private defence contractors are offering off-the-shelf anti-drone tech to counter hostile Unmanned Aerial Vehicles (UAVs), popularly known as drones.
- Companies, based out of Israel, US, have developed anti-drone systems using technologies such as radars, optic and thermal sensors etc.
- These systems stand apart when it comes down to the range and the manner in which the threat is assessed and neutralised.
- Some systems simply monitor and alert the presence of a drone, while others are equipped with ballistics and even lasers.
- **Indigenous solution** - The Defence Research and Development Organisation (DRDO) has developed an 'Anti Drone System'.
- The anti-drone system can detect and jam drones up to 3km and uses a laser weapon to fire at targets that are 1 to 2.5km away.

**Source: PIB, Hindustan Times, The Indian Express**



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