Prelim Bits 29-07-2021 | UPSC Daily Current Affairs

South Korea's Iron Dome

- South Korea's defence procurement agency had approved plans to develop an artillery interception system, similar to Israel's Iron Dome.
- This new defence system will be designed and built specifically to thwart attacks by rockets and long-range missiles launched by North Korea.
- It will be deployed by 2035 along the Military Demarcation Line that divides the Korean Peninsula.
- **Difference between the Iron Domes** - South Korea's Iron Dome would cost a lot more that the Israel's.
- There are operational differences between the two systems as well, with the most significant being that South Korea's system will be designed to intercept long-range artillery pieces.
- South Korea and Israel face different security threats that require different responses.
    1. Israel contends with Hamas, which is primarily a militant group, and irregular forces sporadically,
    2. South Korea had to contend with North Korea, a nation with its own extensive military capabilities.

Nauka

- Russia's space agency Roscosmos will be attaching a module called Nauka ("science" in Russian) to the International Space Station (ISS).
- Nauka is a significantly larger module that will replace a Russian module called Pirs ("pier" in Russian), which was detached from Zvezda module of the ISS using a Progress MS-16/77P cargo ship.
- [Pirs module was used as a docking port for spacecraft and as a door for cosmonauts to go out on spacewalks.]
- Nauka was launched from the Baikonur Cosmodrome in Kazakhstan using a Proton rocket, Russia's most powerful space inventory.
- It is the biggest space laboratory Russia has launched to date, and will serve as a Russia's main research facility on the ISS.

- On the ISS, Nauka will be attached to the critical Zvezda module, which provides all of the ISS's life support systems.
- [Zvezda module serves as the structural and functional centre of the Russian Orbital Segment (ROS), the Russian part of the ISS.]

James Webb Space Telescope

- NASA is set to launch the large infrared James Webb Space Telescope (JWST) touted as the "premier observatory" of the coming decade.
- Considered the successor of the Hubble Space Telescope, JWST will study various phases in the history of the universe, from the formation of solar systems to the evolution of our own Solar System.
- It will also explore the most ancient and distant galaxies using infrared light. It will also have the power to analyse the atmospheres of many the new planets, for the potential for life.
- After launch, it will head near the Earth-Sun 'L2' Lagrange point almost a million miles away (1.5 million kilometers).
- It is funded by NASA in conjunction with the European Space Agency (ESA) and the Canadian Space Agency (CSA).

SRIJAN Portal

- Launched in 2020, this indigenization portal was developed by the Department of Defence Production.
- This portal provides information regarding the defence equipment and items which are being imported currently or to be imported by the Defence PSUs in the country.
- It is a one stop shop online portal that provides access to the vendors to take up items that can be indigenized. Then the government will take proper measures regarding making these products indigenized.
- The Indian industry has shown interest for indigenization of 2880 displayed items on this portal so far.

'Make' Procedure of Capital Procurement

- The 'Make' Procedure of capital procurement has been simplified.
- **Make-I** - There is a provision for funding upto 70% of development cost by the Government to Indian industry under Make-I category.
- In addition, there are specific reservations for MSMEs under the 'Make' procedure.
- **Make-II** - Introduced in DPP 2016, the procedure for 'Make-II' category (Industry funded) encourages indigenous development and manufacture of defence equipment.

- It has number of industry friendly provisions such as relaxation of eligibility criterion, minimal documentation, provision for considering proposals suggested by industry/individual etc.

Defence Investor Cell

- It has been created in 2018 under the Department of Defence Production, Ministry of Defence.
- It acts as a single point of contact and provides all necessary information including addressing queries related to investment opportunities, procedures and regulatory requirements for investment in the sector.

Technology Development Fund (TDF)

- This fund has been established in 2019 to promote self-reliance in Defence Technology as a part of the 'Make in India' initiative.
- It is a programme of Ministry of Defence executed by DRDO meeting the requirements of Tri-Services, Defence Production and DRDO.
- TDF programme covers the following technology development in terms of,
    1. Significant up-gradation/improvements/ further developments in the existing products/process/application etc
    2. Technology readiness level up-gradation from TRL3 onwards to realization of products as per Tri-Services requirements
    3. Development of futuristic technologies/innovative products which can be useful for the defence applications
    4. Import substitution of components whose technologies doesn’t exist with the Indian industry
- **Features** - The scheme will be limited to development of technologies or prototype of product having potential use for the Services and typical development period of two years.
- It encourages participation of public/private industries so as to create an eco-system for enhancing cutting edge technology capability for defence application.
- It will cover funding through provision of grants to industry that may work in collaboration with academia or research institutions to carry out innovation, research and development.
- Such chosen entities will be referred to as Development Agencies (DAs).
- In cases where academia or research institutions are involved, their work involvement cannot exceed 40% of the total effort required.
- **Eligibility for TDF**- Indian private and public industries, including MSMEs and Startups registered in India.
- Public limited company, private limited company, partnership firms, limited liability partnership, one-person company, sole proprietorship registered as

per applicable Indian laws.

- Industry to be owned and controlled by a resident Indian Citizen with a shareholding of at least 51%
- **Fiscal Incentive** - Projects up to INR 10 Crores are eligible for funding; subject to a maximum of 90% of the entire cost of the project. However, 100% of funding may be considered on a case-to-case basis.
- In the event of research organisations or academia being involved in the work, their contribution is limited to 40% of the efforts.

Source: PIB, The Indian Express

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