Prelim Bits 23-12-2021 | UPSC Daily Current Affairs

Pralay

Defence Research & Development Organisation (DRDO) successfully conducted maiden flight test of indigenously developed surface-to-surface missile 'Pralay', from Dr A P J Abdul Kalam Island off the coast of Odisha.

- 'Pralay' is India's first conventional ballistic missile and is an answer to any conventional missile attack from northern or western borders.
- Pralay is a solid-fuel, surface-to-surface battlefield missile developed by DRDO based on Prithvi Defence Vehicle from the Indian ballistic missile programme.
- 'Pralay' is a 350-500 km short-range missile with a payload capacity of 500-1,000 kg. It can be launched from a mobile launcher.
- The missile guidance system includes state-of-the-art navigation system and integrated avionics.

Reference

1. https://pib.gov.in/PressReleasePage.aspx?PRID=1784136
2. https://economictimes.indiatimes.com/news/defence/india-successfully-tests-pralay-missile-off-odisha-coast-drdo/articleshow/88427914.cms
3. https://www.hindustantimes.com/india-news/pralay-india-s-second-conventional-ballistic-missile-testfired-101640235805392.html

Beej Gram Yojana

- The Ministry of Agriculture & Farmers Welfare, Government of India, is implementing Beej Gram Yojana (Seed Village Programme) since 2014-15 to upgrade the quality of farmer's saved seeds.
- **Objectives** - To improve the stock of farm saved seeds for enhancing crop production/productivity.
- So, seed production, seed distribution and other aspects must be strengthened at the farmers' level. The seed produced in these seed villages will have to be preserved/ stored till the next sowing season.
- To encourage farmers to develop storage capacity of appropriate quality, assistance will be given to farmers for making/procuring of Pusa Bin/Mud bin/Bin made of paper pulp to store seeds on their farms.
- **Financial assistance** for distribution of foundation/certified seeds is available for up to one acre per farmer These seeds are distributed at
    a. 50% of seed cost for cereal crops and
    b. 60% for pulses, oilseeds, fodder and green manure crops.

- The assistance will also be given to train the farmers on seed production and seed technology @ Rs.15000/- for a group of 50-150 farmers.
- To the encourage farmers to develop storage capacity of appropriate quality,
    - Assistance @ 33% subject to a maximum of Rs. 3000/- for SC/ST farmers and @ 25% subject to maximum of Rs. 2000/- for other farmers for procuring seeds storage bin of 20 qtl. capacity
    - Assistance @ 33% subject to maximum of Rs. 1500/- to SC/ST farmers and @ 25% subject to maximum of Rs. 1000/- for other farmers for making seeds storage bin of 10 qtl. capacity in the seed villages where seed village scheme is being implemented.
- **Implementing agencies** - State Departments of Agriculture, State Agriculture Universities, KVKs, State Seeds Corporation, National Seeds Corporation, State Farms Corporation of India, State Seeds Certification Agencies, Dept of Seed Certification.
- One implementing agency will be identified for the area/locality and is to be authorized by the State Government.

Reference

1. https://pib.gov.in/PressReleasePage.aspx?PRID=1783875
2. https://vikaspedia.in/agriculture/policies-and-schemes/crops-related/schemes-on-seeds
3. https://seednet.gov.in/PDFFILES/Guidelines%20for%20seed%20village%20sceme.pdf

National Retail Trade Policy

- A draft National Retail Trade Policy has been prepared by the Ministry of Commerce & Industry to streamline retail trade and development of all formats of retail trade sector in a harmonious manner.
- Objectives of the National Retail Trade Policy
    1. To promote e-commerce all over the country.
    2. To leverage retail trade as a tool for the socio-economic development of the country.
    3. To encourage skill development and create more employment opportunities for all sections of society involved in retail trade.
    4. To identify and address existing infrastructure gaps affecting the retail trade industry.
    5. To accelerate investment flow to underdeveloped regions across the country.
- This Policy aims at improving the ease of doing business by ensuring easy and quick access to affordable credit.
- It also aims at providing an effective consultative and grievance redressal mechanism for the retail sector, for welfare of traders & their employees.
- It will also address the issue of physical infrastructure in setting up of data centres along with power supply, connectivity etc,
- It also aims to encourage foreign investment in the marketplace and e-commerce platform, in which foreign investment has been made.

Reference

1. https://pib.gov.in/PressReleasePage.aspx?PRID=1784181
2. https://www.firstpost.com/business/national-retail-trade-policy-how-centre-seeks-to-change-retail-trading-in-the-country-10230621.html

South-South Innovation Platform

Atal Innovation Mission (AIM), NITI Aayog and the United Nations Capital Development Fund

(UNCDF) rolled out their first AgriTech Challenge cohort under the South-South Innovation Platform.

- South-South Innovation Platform was launched by the AIM, NITI Aayog, UNCDF, Bill & Melinda Gates Foundation and Rabo Foundation in 2021.
- This Platform was launched to enable cross-border exchange of innovations, insights and investments.
- Through this platform, cross-border collaborations among emerging markets across India, Indonesia, Malawi, Malaysia, Kenya, Uganda, Zambia would be enabled.

Reference

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2. https://newsexpress.com/niti-aayog-aim-uncdf-announce-first-agritech-cohort-under-south-south-innovation-platform/

Study on Migration of River Delta

In order to understand how their course may change in future, a new study has examined 48 river delta systems across the world from a variety of climatic and socioeconomic contexts.

- The researchers identified 4 aspects that determine the movement and migration of river delta systems:
    a. Interplay between the effects of rivers, tides, and waves
    b. Amount of sediment that the channel carries (aka sediment flux)
    c. Frequency & magnitude of floods that occur
    d. Average size of the channel.
- Also, high tides increase the input of the saline seawater in the delta and interact with the river discharge.
- Researchers hypothesised that increases in the sediment flux will cause greater changes in the delta channel and so, cause it to migrate more.
- The study found that all deltas exhibiting large migration rates, in excess of 3 metres per year, are dominated by river action rather than tides.
- During high tides, there is increased input of seawater in the delta and the sediment that has already flowed out of the channel is pushed back into the delta, 'acting as a stabilising force'.
- However, there are deltas that have a low migration rate but are dominated by river discharge.
- **Reason** - The study argues that the reason could lie in the sediment being transported by the river (**fluvial sediment flux**).
- Merely because the delta is river-dominated and has a significant tendency to change its channel does not necessarily mean it will do so.
- Sediment flux is a key driver for channel migration, as the course of the water naturally changes when sediment gets deposited/ discharged at the mouth of the delta.
- Another reason is the **Biome classification**. River deltas in frigid zones of the Earth will naturally have permafrost balance out all ingredients for a high migration rate.
- Combined effects of all these factors, especially flood forcing, were also considered.
- **Types** - Juxtaposition of all these shows that when there is high sediment flux, high flood frequency, and high degrees of river forcing, the systems have the highest rates of channel migration.
- Examples - The Godavari River, India and the Yellow and Yangtze River deltas in China.
- When there is low sediment flux, low flood frequency, and low degrees of river forcing, the

systems have the lowest rates of channel migration.

- Examples - The Vistula, Poland; Ebro, Spain; Rhine, Germany and Tone, Japan.
- The Ganges river delta is an example of a system where a combination of migration-enhancing and migration-dampening factors balances each other out.
- Ganges has large volume, high sediment flux, and high flood frequency; but, experiences almost 50% tidal forcing, acting as a stabiliser.

This data on the changes delta systems have undergone in the recent past can help governments manage population density and plan future city development.

Reference

https://indianexpress.com/article/technology/science/rivers-moving-global-database-40-years-change-7654552/

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