Prelim Bits 15-12-2021 | UPSC Daily Current Affairs

M-Sand

TN M-Sand Manufacturers' Welfare Association has filed a writ petition to declare the TN Prevention of Illegal Mining, Transportation and Storage of Minerals & Mineral Dealers Rules of 2011 illegal and unconstitutional.

- Manufactured Sand (M-Sand) is artificial sand produced from crushing hard granite stones into sand sized angular shaped particles, washed and finely graded to be used as construction aggregate.
- M-Sand is the most effective and efficient substitute for river sand as it is the most robust sand. The size of M-Sand is less than 4.75mm.
- M-Sand is used for the production of concrete for construction purpose.
- The demand for M-Sand is high due to the depletion of river sand and fast-growing construction industries.

P-Sand

- Plastering M Sand (P Sand) is a very fine grade of sand. It is free of silt and clay particles and has denser particle packing than natural sand.
- It is used for wall plastering and brickwork purpose. It will provide plastering strength to the construction structure.
- The proper and fine quality of sand material is a must when it comes to providing strength to any sort of building and construction structure.
- Plastering M Sand is produced from hard granite stone which is cubically in shape with round edges washed and graded with consistency.
- P Sand is used as a substitute for river sand which is used for preparing concrete, plastering and also other non-concrete constructions like flooring works, etc.

Reference

1. https://www.thehindu.com/sci-tech/health/two-common-drugs-found-effective-against-covid-19-in-early-testing/article37923226.ece
2. https://www.stonasand.com/predominant-differences-between-the-plastering-m-sand-and-m-sand/

Animal Husbandry Infrastructure Development Fund

- This Fund has been set up by the Government as MSMEs & Private companies need to be promoted and incentivized for their involvement in processing and value addition infrastructure.
- The fund is Central Sector Scheme that had been proposed as part of the Aatmanirbhar Bharat.
- **Beneficiaries** - Farmer Producer Organizations (FPOs), MSMEs, Section 8 Companies,

Private Companies and individual entrepreneurs.

- **Benefits** - The beneficiaries are to contribute a minimum of 10% margin money as investment.
- The balance 90% would be the loan component to be made available by scheduled banks.
- The Government of India will provide **3% interest subvention** to eligible beneficiaries.
- There will be **2 years moratorium period** for principal loan amount and **6 years repayment period** thereafter.
- From the Credit Guarantee Fund, Credit guarantee would be provided to those sanctioned projects which are covered under MSME defined ceilings.
- Guarantee Coverage would be upto 25% of Credit facility of borrower.

Reference

1. https://pib.gov.in/PressReleasePage.aspx?PRID=1781383
2. https://vikaspedia.in/schemesall/schemes-for-entrepreneurs/animal-husbandry-infrastructure-development-fund

National Mission for Sustainable Agriculture

- Department of Agriculture and Farmers Welfare in implementing the National Mission for Sustainable Agriculture (NMSA) as one of the Missions under the National Action Plan on Climate Change.
- NMSA has been formulated for enhancing agricultural productivity especially in rain-fed areas focusing on integrated farming, water use efficiency, soil health management & synergizing resource conservation.
- The Activities of the NMSA includes components to minimize the carbon footprint of agricultural activities.
- NMSA includes programmatic interventions like,
    1. Soil Health Card (SHC),
    2. Paramparagat Krishi Vikas Yojana (PKVY),
    3. Mission Organic Value Chain Development for North-Eastern Region (MOVCDNER),
    4. Rain-fed Area Development (RAD),
    5. National Bamboo Mission (NBM) and
    6. Sub-mission on Agro Forestry (SMAF).
- These and other programmes including Prime Minister Krishi Sinchayee Yojana (PMKSY).
- NMSA aims to evolve and implement strategies to make Indian Agriculture more resilient to the changing climate.
- The progress of the 10 identified deliverables is being monitored regularly. The deliverables include,
    1. Area under organic farming; Production of Bio-fertilizers;
    2. Precision Irrigation;
    3. SRI / Direct Seeded Rice from Transplantation;
    4. Crop diversification;
    5. Additional Area under plantation in Arable land;
    6. Climate Resilient Varieties (CRV) Identified/ Released;
    7. Identification of genotypes of crops with enhanced CO2 fixation potential and less water consumption & Nutrients;
    8. Climate Resilient genotypes with greater adaptation to drought, flood, salinity and high temperature;
    9. Coverage of milch animals under ration balancing programme;
    10. Establishment of bypass protein feed making unit.
- ICAR has launched a flagship network project 'National Innovations in Climate Resilient

Agriculture' (NICRA) in 2011.

Reference

1. https://pib.gov.in/PressReleasePage.aspx?PRID=1781437
2. https://nmsa.dac.gov.in/
3. https://vikaspedia.in/agriculture/policies-and-schemes/crops-related/krishi-unnati-yojana/national-mission-for-sustainable-agriculture-1/national-mission-for-sustainable-agriculture

Supersonic Missile Assisted Torpedo System

Defence Research and Development Organisation (DRDO) developed Supersonic Missile Assisted Torpedo (SMART) System gets successfully launched from Wheeler Island in Odisha.

- The SMART system is a next generation long-range missile-based standoff torpedo delivery system.
- [A torpedo is an underwater ranged weapon launched above or below the water surface, self-propelled towards a target, and with an explosive warhead designed to detonate either on contact with or in proximity to the target.]
- The SMART system has been designed to enhance anti-submarine warfare capability far beyond the conventional range of the torpedo.
- This **canister-based missile system** consists of advanced technologies viz. 2- stage solid propulsion, electro-mechanical actuators and precision inertial navigation.
- The missile can cover a range of distances.

Wheeler Island

- Dr. Abdul Kalam Island, formerly known as Wheeler Island, is an island off the coast of Odisha, India, around 150 kms east of Bhubaneswar.
- The island was originally named after English commandant Lieutenant Hugh Wheeler.
- Odisha government has formally renamed it as APJ Abdul Kalam island as a tribute to the former President of India on his 2nd death anniversary (2017).
- The Integrated Test Range missile testing facility is located on the island, and serves as the test facility for most of India's missiles.

Reference

1. https://pib.gov.in/PressReleasePage.aspx?PRID=1780944
2. https://www.thehindu.com/news/national/supersonic-missile-assisted-torpedo-system-successfully-launched-drdo/article37945095.ece
3. https://timesofindia.indiatimes.com/india/drdo-successfully-tests-supersonic-missile-assisted-torpedo-system/articleshow/88257794.cms

Black Box of the Earth

A steel vault that will record the Earth's warming weather patterns is being built in Tasmania Australia, an Australian island state off the south coast.

- This vault is dubbed as the 'Black Box of the Earth', is a 33-foot-long box made of 3-inch-thick steel.
- The Earth's Black Box will operate much like a plane's Black Box, which records an aircraft's final moments before crashing.

- It will listen to what we say and do.
- It will create an archive that could be critical to piecing together the missteps that should humanity be destroyed by climate change.
- **Data** - The box will record leaders' actions (or inaction) by scraping the internet for keywords relating to climate change from newspapers, social media and peer-reviewed journals.
- It will collect daily metrics - average oceanic and land temperatures, atmospheric carbon dioxide concentration and biodiversity loss.
- Eventually, the data will be stored on a giant, automated, solar-powered hard drive with a capacity to collect information for about 50 years.
- **Tasmania was chosen** for its relative geopolitical and environmental safety.
- The vault will be designed to be resilient against threats including cyclones, earthquakes and, with its sloped walls, attacks by vandals.

Reference

https://indianexpress.com/article/world/earth-black-box-climate-change-7666757/

