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Novorossiysk Port

A Russian naval ship has been damaged in a Ukrainian naval drone attack in the Novorossiysk Port in the Black Sea.

The issue

- Russia's defence ministry said it had repelled a Ukrainian attack on its naval base, which involved two sea drones, but did not admit any damage.

  Sea drones are small, unmanned vessels, which operate on or below the water's surface.

- The Olenegorsky Gornyak is a landing ship, designed to launch amphibious forces close to shore for beach landings but also to dock and quickly unload cargo at ports.

The Port

- The Novorossiysk commercial seaport is one of Russia’s largest by volume and among the biggest in Europe.
- It is a major node in the export of Russian grain, oil, and other products to countries around the world.
- It has been a hub of international commerce for Russia since the 19th century and the city was the site of the first Pepsi factory in Russia, opened in the Soviet Union in the early 1970s during the Cold War.
- The port is one of the country’s main naval hubs for the Black Sea.

  At a summit with African leaders, Russia promised free grain to a number of African nations, grain that likely would be exported from Russia via Novorossiysk.

The impact of the attack

- The attack and the subsequent pause in maritime traffic at the port, prompted wheat futures to rise.

  Russia is the world’s largest wheat exporter.

- The Caspian Pipeline Consortium, which operates an oil terminal at Novorossiysk, said the attack caused a temporary halt on the movement of ships in the port.
- It was unclear whether any oil export infrastructure was damaged in the attack.

References

1. BBC – Russian ship hit in Novorossiysk, Black Sea drone attack
2. NY Times – Novorossiysk, the Russian Port Attacked by Ukraine

Amrit Bharat Station Scheme

Prime Minister Narendra Modi will lay the foundation stone for the redevelopment of 508 railway stations spread across the country.

- **Re-development –** The Amrit Bharat Station Scheme is a plan that envisions the re-development of railway stations.
- It aims to improve the infrastructure of selected railway stations on a continuous basis.
- The identified stations include 87 in Gujarat, 83 in Rajasthan, 80 in Madhya Pradesh and 34 in Haryana.
- **Integrate stations –** The scheme also aims to integrate the railway stations with urban areas, improve connectivity and provide facilities for specially-abled individuals.
- **Master Plan –** The scheme aims at preparing a master plan for the stations and the work on the master plan will be completed in phases.
- **Lounges –** The scheme hopes to enhance the information system for passengers and also provide executive lounges.
- **Amenities –** The plan will improve amenities such as a waiting hall, toilets, cleanliness, free Wi-Fi and local product vending machines in the stations under the 'one station one product' scheme.
- The platforms will also be revamped under the scheme.

References

1. The Hindu – PM Modi to launch revamp of 508 railway stations
2. CNBC – PM Modi likely to lay foundation stone of 500 railway stations

Bhu-Vision (Krishi-RASTAA)

Bhu-Vision (Krishi-RASTAA), an IOT-based Automated Soil Testing and Advisory Platform was launched.

- **AI-IoT –** Artificial intelligence and Internet-of-Things (IoT) have been revolutionizing several sectors such as manufacturing and retail.
- **Precision agriculture –** The KRISHI-RASTAA Soil Testing System represents a new era in precision agriculture.
- The technology is a testament to the power of collaboration, having been jointly developed by ICAR-IIRR and KrishiTantra.

The 12 parameters tested by the machine include pH value (acidity or alkalinity); electrical conductivity (a measure to test the ability of a substance to conduct an

electrical current. In soil testing, EC is used to measure the amount of soluble salts in the soil); organic carbon, phosphorus, potassium, Sulphur, nitrogen and zinc.

- **Manufactured –** By HiMedia Laboratories and marketed by BhoomiSeva (HCF Tech Services Pvt. Ltd.).
- **Soil Health Map –** This platform will play a vital role in completing the nation's soil health map and gaining a more nuanced understanding of our agricultural scenario.

References

1. APN News – Revolutionizing Agriculture
2. The Hindu Business Line – This machine, backed by AI-IoT, transforms the way we test soil

Age of Consent

House panel recommends lowering of Assembly poll contesting age to 18.

- A Parliamentary panel on Friday recommended lowering the minimum age for contesting an Assembly election from 25 years to 18 years.
- The move would widen the viewpoints in policy debates, thereby improving the credibility of the political process.
- The Parliamentary Standing Committee on Personnel, Public Grievances, Law and Justice presented its report on aspects of election process and their reform to the Rajya Sabha.
- The committee also recommended increasing the punishment for a candidate filing a false affidavit from six months to up to two years and a fine, depending on the severity of the offence.

Stand of ECI

- The Election Commission, however, did not agree with the need to change the minimum age.
- In its input to the committee, the poll panel said it has considered the issue and found it unrealistic to expect 18-year-olds to possess the necessary experience and maturity for these responsibilities.

Age of Consent

- India's age of consent for sex is set at 18 years under the Criminal Law (Amendment) Act, 2013, regardless of gender.
- In 1892, the marital rape and subsequent death of a 10-year-old girl, Phulmoni Dasi, caused the age of consent to be raised from 10 to 12 years.
- In 1949, it was raised to 16 years after agitation from women's groups about the adverse effect of early pregnancy.
- The Criminal Law (Amendment) Act, of 2013 increased the legally permissible age for sexual consent from 16 to 18.

References

1. The Indian Express – House panel recommends lowering of Assembly poll contesting age to 18
2. The Indian Express – The case against lowering age of consent

Coronal Mass Ejection (CME)

Giant solar eruption that hit Earth, Moon, and Mars was first to do so.

- A coronal mass ejection (CME) exploded from the Sun and it was spread so wide that it was detected on both Mars and Earth.
- The two planets were on opposite sides of the Sun, around 250 million kilometres apart, and yet, they still received the blast of energetic particles.
- This is the first time that a solar event was recorded on Earth, on the Moon and on Mars simultaneously.

The solar event described in the study is a ground level enhancement, which is the name for the rare event when particles from the Sun are energetic enough to pass through our planet's protective magnetic field.

- Neither the Moon nor Mars generate their own magnetic fields and therefore, solar particles can easily reach their surfaces.
- However, Mars does have a thin atmosphere that stops a lot of the lower-energy solar particles and slows down the higher-energy ones.

CME

- CMEs are large expulsions of plasma and magnetic field from the Sun's corona.
- They can eject billions of tons of coronal material and carry an embedded magnetic field (frozen in flux) that is stronger than the background solar wind interplanetary magnetic field (IMF) strength.
- CMEs travel outward from the Sun at speeds ranging from slower than 250 kilometers per second (km/s) to as fast as near 3000 km/s.
- The fastest Earth-directed CMEs can reach our planet in as little as 15-18 hours. Slower CMEs can take several days to arrive.
- They expand in size as they propagate away from the Sun and larger CMEs can reach a size comprising nearly a quarter of the space between Earth and the Sun by the time it reaches our planet.

References

1. The Indian Express – Giant solar eruption hit Earth, Moon, and Mars
2. Live Science – Massive solar explosion felt on Earth, the moon and Mars simultaneously



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