Prelim Bits 08-06-2023 | UPSC Daily Current Affairs

Varunastra

Indigenously made Varunastra was successfully test-fired with a live warhead against an undersea target, by the Indian Navy.

- Varunastra is a ship launched, heavy weight, electrically-propelled anti-submarine torpedo.
- It is capable of targeting quiet submarines, both in deep and shallow waters in an intense countermeasure environment.
- **Agencies** - It was designed and developed by Vizag-based Naval Science and Technological Laboratory (NSTL) under the Defence Research and Development Organisation (DRDO).
- **Manufacturer** - It is manufactured by Bharat Dynamics Ltd (BDL).
- **Induction** - Inducted by Indian Navy in 2016.
- It can be fired from all Anti-submarine warfare (ASW) ships capable of firing heavy weight torpedoes.
- **Warhead & Range** - It can carry a warhead weighing *250 kg* and has an operational range of *40 km*.
- **India** is in a group of 8 countries that have the capability to manufacture heavyweight torpedoes.
- **Torpedo** – It is cigar-shaped, self-propelled underwater missile, launched from a submarine, surface vessel, or airplane and designed for exploding upon contact with the bodies of surface vessels and submarines.
- The *anti-submarine electric torpedo* is 7 to 8 metres long with a diameter of 533 mm.

Reference

The Hindu | Varunastra was successfully test-fired

Mission on Advanced and High-Impact Research (MAHIR)

The Ministry of Power and the Ministry of New and Renewable Energy have jointly launched a National Mission - MAHIR

- **Aim -** To facilitate indigenous research, development and demonstration of the latest and emerging technologies in the power sector.
- **Ministry** - Ministry of Power and the Ministry of New and Renewable Energy.
- **Fund** - Funds will be given by Ministry of Power, Ministry of New and Renewable Energy and the Central Public Sector Enterprises under 2 Ministries.
- Planned for an initial period of 5 years from 2023-24 to 2027-28.

- The Mission will follow the technology life cycle approach of Idea to Product.

Areas Identified for Research

1. Alternatives to Lithium-Ion storage batteries
2. Modifying electric cookers / pans to suit Indian cooking methods
3. Green hydrogen for mobility (High Efficiency Fuel Cell)
4. Carbon capture
5. Geo-thermal energy
6. Solid state refrigeration.
7. Nano technology for EV battery
8. Indigenous CRGO technology

> *Indian power sector is going to grow at more than 7% in coming years against the increase in the electricity demand close to 10%.*

Reference

PIB | MAHIR launched to leverage Emerging Technologies in Power Sector

International Covenant on Civil and Political Rights (ICCPR) Act

Nathasha Edirisooriya, a Sri Lankan standup comic, was arrested under the International Covenant on Civil and Political Rights (ICCPR) Act.

- The ICCPR is a multilateral treaty that deals with human rights.
- **Adoption** - The Act was adopted by the United Nations (UN) General Assembly on 1966 and came into force in 1976.
- The Covenant respects civil and political *rights of individuals*, including right to life, freedom of religion, freedom of speech, freedom of assembly, electoral rights, and rights to due process and a fair trial.
- The ICCPR is part of the International Bill of Human Rights, along with the International Covenant on Economic, Social and Cultural Rights (ICESCR) and the Universal Declaration of Human Rights (UDHR).
- **Monitoring Authority** - The *UN Human Rights Committee* reviews regular reports by state parties on how human rights are being implemented.
- Today, the covenant has 173 parties and 6 more signatories without ratification.
- India ratified this treaty in 1979.

Section 3 of the ICCPR Act

- A section that has been used time and time again to restrict freedom of expression.
- The section prohibits the propagation of war or advocacy of national, racial or religious hatred that constitutes incitement to discrimination, hostility or violence.
- Offences under this section are cognizable as well as non-bailable.
- The section is based on Article 20 of the ICCPR.

Reference

Indian Express | Sri Lanka is using a human rights law to stifle free speech

Variable Rate Reverse Repo (VRRR)

Despite having surplus liquidity, there was muted response from banks to the Variable reverse repo (VRRR) auction that recently held by RBI.

Repo Rate

- The rate at which the RBI issues loans to commercial banks when there is a shortage of funds is the repo rate.
- It is used by monetary authorities to control inflation.
- Current repo rate announced by monetary policy committee is 6.50%.

Reverse repo rate

- It is the variable or fixed interest rate the RBI pays to commercial banks when they store excess cash reserves with the central bank.
- It is a monetary policy instrument which can be used to control the money supply in the country.
- Current reverse repo rate is at 3.35%.

Variable Rate Reverse Repo (VRRR)

- A reverse repo is a fixed or variable interest rate at which banks lend to RBI.
- It is the subdivision of reverse repo.
- The VRRR auction is undertaken to reduce surplus liquidity in the system by withdrawing existing cash.

Reference

The Hindu Businessline | RBI’s VRRR auction gets tepid response, again

India-U.S. Strategic Trade Dialogue (IUSSTD)

India and the U.S. pledged to streamline their export control regimes for critical technologies at the inaugural India-U.S. Strategic Trade Dialogue (IUSSTD).

- It is an initiative on Critical and Emerging Technologies (iCET) between India and U.S.
- It focused on ways in which both the governments can facilitate the development and trade of technologies in critical domains.
- **Critical Domains** - Semiconductors, space, telecom, quantum, AI, defence, biotech and others.
- Both sides agreed to enhance awareness among the industry, academia and other

stakeholders about the export control regimes through workshops and other activities.

- **Monitoring Group** - They agreed to set up a regular monitoring group which will review progress in deepening cooperation in the bilateral high-tech trade and technology partnership.
- They agreed to continue the dialogue with the objective of strengthening the India-US Comprehensive Global Strategic Partnership.

Reference

The Hindu | India-U.S. strategic trade dialogue

