Prelim Bits 02-01-2022 & 03-01-2022 | UPSC Daily Current Affairs

IAC-1 Vikrant

The Vice President of India visited India's first indigenous aircraft carrier (IAC-1) INS Vikrant in Kochi.

- IAC-1 Vikrant is the largest and most complex warship built in India.
- [Currently, India has only one aircraft carrier - INS Vikramaditya.
- INS Vishal, proposed to be India's 2nd IAC has stalled since 2017 awaiting defence ministry's clearance.]
- IAC-1 Vikrant was designed by the Navy's Directorate of Naval Design (DND) and built by India's state-run Cochin Shipyard Limited (CSL).
- Vikrant has a top speed of around 28 knots and a cruising speed of 18 knots with an endurance of about 7,500 nautical miles.
- It will operate MiG-29K fighter jets, Kamov-31 helicopters, MH-60R multi-role helicopters.
- The construction of Vikrant propelled India into a select group of countries having capabilities to build state-of-the-art aircraft carriers.

Reference

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2. https://www.thehindu.com/news/national/indias-first-indigenous-aircraft-carrier-ins-vikrant-begins-second-phase-of-sea-trials/article37150139.ece
3. https://www.wionews.com/photos/exclusive-an-on-board-look-at-the-reborn-ins-vikrant-indias-first-ever-indigenous-aircraft-carrier-426128#a-floating-fortress!-426104

One Nation One Grid One Frequency

The POWERGRID Corporation of India Ltd (PGCIL) celebrates the first anniversary of One Nation-One Grid-One Frequency.

> One Nation One Grid shall synchronously connect all the regional grids and there will be one national frequency (frequency band of 49.90-50.05 Hz).

- **Evolution** - Grid management on regional basis started in 1960s.
- Initially, State grids were inter-connected to form 5 regional grids - Northern, Eastern, Western, North Eastern and Southern regional grids.
- In 1991, North Eastern and Eastern grids were connected. In 2003, WR and ER-NER were interconnected.
- In 2006, North and East grids were interconnected.
- Thereby 4 regional grids Northern, Eastern, Western and North Eastern grids are synchronously connected forming central grid operating at one frequency.

- In 2013, Southern Region was connected to Central Grid in Synchronous mode with the commissioning of 765kV Raichur-Solapur Transmission line thereby achieving 'One Nation-One Grid-One Frequency'.
- **Benefits** - Synchronisation of all regional grids will help in optimal utilization of scarce natural resources by transfer of Power from Resource centric regions to Load centric regions.
- Further, this shall pave way for establishing a vibrant Electricity market facilitating trading of power across regions.

Reference

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2. https://www.powergrid.in/one-nation-one-grid
3. https://www.livemint.com/companies/news/pgcil-celebrates-first-anniversary-of-one-nation-one-grid-one-frequency-11640953805979.html

Solatium

Tamil Nadu Chief Minister announced Rs. 3 lakh in solatium to the families of each of the deceased in a blast at a fireworks unit from the Chief Minister's Public Relief Fund and Rs. 1 lakh to the injured.

- Solatium, which first appeared in English in the early 19th century, is from Latin sōlātium or sōlācium. It means "solace" or "to console".
- Solatium is a form of compensation for emotional rather than physical or financial harm.
- It is a payment made to a victim as compensation for injured feelings or emotional pain and suffering (such as the trauma following the wrongful death of a relative).

Reference

1. https://www.thehindu.com/todays-paper/tp-national/tp-tamilnadu/solatium-for-victims-of-fireworks-unit-blast/article38096086.ece
2. https://www.merriam-webster.com/dictionary/solatium

IndiGau Chip

- IndiGau is the world's largest cattle genomic chip launched by the National Institute of Animal Biotechnology (NIAB), Hyderabad.
- IndiGau is India's first Single Nucleotide Polymorphism (SNP) based chip for the conservation of pure varieties of indigenous cattle breeds like, Gir, Kankrej, Sahiwal, Ongole, etc.
- **Significance** - This chip will have practical utility in the Governments schemes to achieve the goal of conservation of our own breeds with better characters and help towards doubling of farmers' income by 2022.

Reference

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Dark Genome

Scientists investigating the 'dark genome' have discovered recently evolved regions that code for proteins associated with schizophrenia and bipolar disorder.

- **Dark genome** - Human genome is conventionally divided into,
    1. Coding genome, which generates the ~20,000 annotated human protein coding genes, and
    2. Dark genome, which does not encode proteins.
- Dark genome is a vast space, accounting for the ~98.5% of genomic space where repeat elements, enhancers, regulatory sequences, and non-coding RNAs reside.
- It comprises the DNA outside our genes. These are the regions, not classed as genes in the traditional sense, which create proteins.
- **Study** - The scientists say that these new proteins can be used as biological indicators to distinguish between the two conditions - schizophrenia and bipolar disorder.
- It can also be used to identify patients more prone to psychosis or suicide.
- **Related Links** - Genome India Project

Reference

1. https://www.sciencedaily.com/releases/2021/12/211223225442.htm
2. https://bioengineeringcommunity.nature.com/posts/d

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