

1. BrahMos Missile

Why in News?

- BrahMos Supersonic Cruise Missile was successfully test-fired by DRDO from the Indian Navy destroyer INS Vishakhapatnam off the Western Coast.

About the BrahMos Missile:

- A combination of the names of Brahmaputra and Moskva rivers, BrahMos missiles are designed, developed and produced by BrahMos Aerospace, a joint venture company set up by DRDO and Mashinostroyeniya of Russia.
- It is a two-stage missile with a Solid Propellant booster as the first stage and liquid ramjet as the second stage.
- The cruise missiles like BrahMos are a type of systems known as the 'standoff range weapons' which are fired from a range sufficient to allow the attacker to evade defensive fire from the adversary.
- Brahmos is a multiplatform it can be launched from land, air, and sea and multi capability missile with pinpoint accuracy that works in both day and night irrespective of the weather conditions.
- It operates on the "Fire and Forgets" principle it does not require further guidance after launch.
- Brahmos is one of the fastest cruise missile currently operationally deployed with speed of Mach 2.8, which is 3 times more than the speed of sound.
- These weapons are in the arsenal of most major militaries in the world.
- The range of the missile was originally capped at 290 km as per obligations of the Missile Technology Control Regime (MTCR). Following India's entry into the club in June 2016, officials said the range would be extended to 450 km and to 600km at a later stage. An extended range missile had been tested earlier.
- INS Visakhapatnam, with a displacement of 7,400 tonnes, is the first of four ingeniously Designed and built Project-15B class stealth Guided missile destroyers and was Commissioned in November 2021.

2. Darvaza Gas Crater

Why in News?

- Turkmenistan President has ordered experts to find a way to extinguish a fire in a huge natural gas crater, the Darvaza gas crater also known as the ‘Gateway to Hell’.

Darvaza Gas Crater:

- Located in the Karakum desert, 260 kilometres away from Turkmenistan’s capital, Ashgabat, the crater has been burning for the last 50 years.
- The crater is 69 metres wide and 30 metres deep.
- While the details of the origin of the crater are contested but it has been said that the crater was created in 1971 during a Soviet drilling operation.
- In 1971, Soviet geologists were drilling for oil in the Karakum desert when they hit a pocket of natural gas by mistake, which caused the earth to collapse and ended up forming three Huge Sinkholes.



Why is it Flamed?

- This pocket of natural gas contained methane, hence to stop that methane from leaking into the atmosphere, the scientists lit it with fire, assuming the gas present in the pit would burn out within a Few Weeks.
- The scientists seemed to have misjudged the amount of gas present in the pit, because the crater has been on fire for five decades now.

A Popular Tourist Attraction:

- The crater has become a significant tourist attraction in Turkmenistan.
- In 2018, the country’s president officially renamed it as the “Shining of Karakum”.
- Why did Turkmenistan order to extinguish it?
- Calling it a human-made crater, it has negative effects on both environment and the health of the people living nearby.
- It also ends up losing valuable natural resources for which could fetch significant profits.

How Harmful are Methane Leaks?

- Methane is the primary contributor to the formation of ground-level ozone, a hazardous air pollutant and greenhouse gas, exposure to which causes 1 million premature deaths Every Year.
- Methane is also a powerful greenhouse gas. Over a 20-year period, it is 80 times more potent at warming than carbon dioxide.

3. MHA seeks more time to frame CAA rules

Why in News?

- The Ministry of Home Affairs (MHA) has sought another extension from parliamentary committees to frame the rules of the Citizenship (Amendment) Act (CAA), 2019.

What is Citizenship Amendment Act (CAA), 2019?

- The act is sought to amend the Citizenship Act, 1955 to make Hindu, Sikh, Buddhist, Jain, Parsi, and Christian illegal migrants from Afghanistan, Bangladesh, and Pakistan, eligible for citizenship of India.
- In other words, it intends to make it easier for non-Muslim immigrants from India's three Muslim-majority neighbours to become citizens of India.
- Under The Citizenship Act, 1955, one of the requirements for citizenship by naturalization is that the applicant must have resided in India during the last 12 months, as well as for 11 of the previous 14 years.
- The amendment relaxes the second requirement from 11 years to 6 years as a specific condition for applicants belonging to these six religions, and the aforementioned three countries.
- It exempts the members of the six communities from any criminal case under the Foreigners Act, 1946 and the Passport Act, 1920 if they entered India before December 31, 2014.

Defining Illegal Migrants:

- Illegal migrants cannot become Indian citizens in accordance with the present laws.
- Under the CAA, an illegal migrant is a foreigner who: (i) enters the country without valid travel documents like a passport and visa, or (ii) enters with valid documents, but stays beyond the Permitted Time Period.

- Illegal migrants may be put in jail or deported under the Foreigners Act, 1946 and The Passport (Entry into India) Act, 1920.

Exceptions:

- The Bill provides that illegal migrants who fulfil four conditions will not be treated as illegal migrants under the Act. The conditions are:
- They are Hindus, Sikhs, Buddhists, Jains, Parsis or Christians;
- They are from Afghanistan, Bangladesh or Pakistan;
- They entered India on or before December 31, 2014;
- They are not in certain tribal areas of Assam, Meghalaya, Mizoram, or Tripura included in the Sixth Schedule to the Constitution, or areas under the “Inner Line” permit, i.e., Arunachal Pradesh, Mizoram, and Nagaland.

Controversy with the Act:

- **Country of Origin:** The Act classifies migrants based on their country of origin to include only Afghanistan, Pakistan and Bangladesh.
- **Other Religious Minorities Ignored:** It is unclear why illegal migrants from only six specified religious minorities have been included in the Act.
- **Defiance of Purpose:** India shares a border with Myanmar, which has had a history of persecution of a religious minority, the Rohingya Muslims.
- **Date of Entry:** It is also unclear why there is a differential treatment of migrants based on their date of entry into India, i.e., whether they entered India before or after December 31, 2014.

4. Red Sandalwood

Why in News?

- The International Union for Conservation of Nature’s (IUCN) recently categorised the Red Sanders (or Red Sandalwood) again into the ‘endangered’ category in its Red List.

Highlights:

- The species, *Pterocarpus santalinus*, is an Indian endemic tree species, with a restricted geographical range in the Eastern Ghats.
- It was classified as ‘near threatened’ in 2018.
- The species is endemic to a distinct tract of forests in Andhra Pradesh.

- Red Sanders usually grow in the rocky, degraded and fallow lands with Red Soil and hot and dry climate.
- Illicit felling for Smuggling, Forest fires, cattle grazing and other anthropogenic threats.
- Red Sanders, known for their rich hue and therapeutic properties, are high in demand across Asia, particularly in China and Japan, for use in cosmetics and medicinal products as well as for making Furniture, Woodcraft and Musical Instruments.

5. Indigenous Aircraft Carrier (IAC) – INS VIKRANT

Why in News?

- The Indigenous Aircraft Carrier (IAC) 1, which will be called INS Vikrant once it enters service with the Indian Navy, began another set of sea trials.

Highlights:

- An aircraft carrier is “a large ship that carries military aircraft and has a long, flat surface where they take off and land.”
- These floating air bases are equipped with a full-length flight deck capable of carrying, Arming, Deploying and Recovering Aircraft.
- They act as command and control of a naval fleet in times of war and peace.
- A carrier battle Group consists of “an aircraft carrier and its escorts, together making the Group.
- During World War II, the Imperial Japanese Navy was the first to assemble a large number of Carriers into a single task force known as Kido Butai.
- This task force was used during the Pearl Harbour Attack.
- **INS Vikrant (Decommissioned):** Beginning with INS Vikrant which served India from 1961 to 1997.
- India acquired the Vikrant from the United Kingdom in 1961, and the carrier played a stellar role in the 1971 war with Pakistan that led to the birth of Bangladesh.
- In 2014, INS Vikrant, was broken down in Mumbai.
- **INS Viraat (Decommissioned):** INS Vikrant was followed by the Centaur-class carrier HMS (Her Majesty’s Ship) Hermes, which was rechristened in India as INS Viraat and served in the Indian Navy from 1987 to 2016.