Prelim Bits 06-04-2023 | UPSC Daily Current Affairs

Dhawan II Engine

Skyroot Aerospace successfully test-fired 3D-printed engine 'Dhawan-II' for a record 200 seconds.

- In 2021, Skyroot successfully tested India's first privately developed fully Cryogenic rocket engine 'Dhawan-I' which will power Vikram-I.
- 'Dhawan-II' is a 3.5 Kilo Newton (kN) engine which is the successor of 'Dhawan-I' (1.0 kN).
- The endurance test of 'Dhawan-II' was carried out at Solar Industries propulsion test facility in Nagpur.
- The engine was developed by Skyroot Aerospace for its heavier vehicle, Vikram II.
- The Dhawan-II cryogenic engine will be used as the upper stage of the updated version Vikram II.
- Fully cryogenic engines are ideal for the upper stages of a rocket due to their higher specific impulse that enhances payload-carrying capabilities.
- The cryogenic rocket engine uses 2 high-performance rocket fuels which require cryogenic temperatures (below -150° Celsius) for storage and operation.
- Liquid Natural Gas (LNG) and Liquid Oxygen (LoX) are the 2 cryogenic rocket fuels.
- Related Link - Vikram-S

*Skyroot has named its cryogenic engine **'Dhawan'** in honour of ISRO chairman Satish Dhawan, a key architect of India's space programme.*

References

1. IE - Skyroot testfires 3D-printed cryogenic engine
2. Inddia Today - Skyroot successfully test fires 3D-printed rocket engine
3. TOI - Skyroot wraps up endurance test of Dhawan-II cryo engine

Prosopis chilensis

A study has revealed that Prosopis chilensis is threatening to pulverise native vegetation in the Gulf of Mannar Biosphere Reserve (GoMBR).

- *Prosopis chilensis* is a drought-resistant plant.
- It is also commonly known as Chilean mesquite.
- It is a small to medium-sized legume tree
- **Similarity -** It is very similar to *Prosopis Juliflora* (known as Mesquite) in both genetic and physical features.

- **Spread -** It is native to the arid regions of South American countries namely, Argentina, Bolivia, Chile, and Peru.
- The species has migrated to Africa and naturalized in many African countries.
- **Threat -** *Prosopis chilensis* is an alien invasive species in the 21 islands divided into the Tuticorin, Vembar, Kilakkarai, and Mandapam groups in the Gulf of Mannar Biosphere Reserve (GoMBR).
- The invasiveness of this species and how they came to India is not known so far.
- Corals, seagrass, and mangroves are among the 3 unique ecosystems present on the islands.
- Like any invasive species on an island, *Prosopis chilensis* will slowly kill the native trees as well as the mangroves.
- The GoMBR, India's first marine biosphere reserve, is one of the important habitats for coastal birds migrating as far as the Arctic Circle.

References

1. The Hindu - Triple trouble for Gulf of Mannar islands
2. Feedipedia - Chilean mesquite (Prosopis chilensis)

Ladakh's Wood Carving

Ladakh's wood carving has been granted the Geographical Indication (GI) Tag.

> *Last year, the government granted GI Tag for **Raktsey Karpo apricot** of Ladakh, first ever GI tag for Ladakh.*

- Wood carving of Ladakh has been an aesthetically vibrant art form in the Ladakh region.
- Ladakh's wood carving has been known for its intricate designs and unique patterns.
- The designs are mostly inspired by Buddhist themes and motifs.
- The wood carvings are made from local wood such as willow and apricot.
- They are often used for decorating doors, windows, and other household items.
- The most ubiquitous piece of furniture is the '*chokste*', a low heighted wooden table.
- The heavily ornamental carving is either simply polished, or is painted and then varnished.
- The GI tag will make cultural traditions of Ladakh popular and benefit wood carving artisans of Ladakh.

Geographical Indication Tag

- Geographic Indication (GI) is defined under Article-23 and 24 of the Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement of the World Trade Organization (WTO).
- India is a member of the WTO and thus enacted the Geographical Indications of

Goods (Registration & Protection) Act, 1999 which came into force from 2003.
- A geographical indication (GI) is a sign used on products that have a specific geographical origin and possess qualities or a reputation that are due to that origin.
- The qualities, characteristics or reputation of the product should be essentially due to the place of origin.
- The registration of a geographical indication is valid for a period of 10 years.
- Darjeeling tea became the first GI tagged product in India.

References

1. PIB - PM applauds GI Tag for Ladakh's Wood Carving
2. Great Kashmir - Ladakh's wood carving gets GI Tag

India Justice Report 2022

The India Justice Report which ranks individual Indian states in relation to their capacity to deliver access to justice was released for 2022.

- The India Justice Report (IJR) was initiated by Tata Trusts in 2019, and 2022 report is its third edition.
- The report tracks the performance of States in capacitating their justice delivery structures to effectively deliver mandated services.
- for 24 months
- The report also separately assesses the capacity of the 25 State Human Rights Commissions in the country.
- This report is based on overall data of 4 pillars of justice delivery namely ***Police***, ***Judiciary***, ***Prisons***, and ***Legal Aid***.
- The report ranked states in 2 categories -
    1. 18 large and medium sized states with population of over 1 crore
    2. Seven small states with population less than one crore.

- **Ranking for 2022**

Rank	Large and Mid-sized States (18)	Small States (7)
1	Karnataka	Sikkim
2	Tamil Nadu	Arunachal Pradesh
3	Telangana	Tripura
Last	Uttar Pradesh (18th)	Goa (7th)

- **Funding -** Except for 2 union territories, Delhi and Chandigarh, no state spends more than 1% of its total annual expenditure on the judiciary.
- **Vacancy -** The report indicates a vacancy of 22% among the sanctioned posts in judiciary (30% vacancy of judges in HC).
- **Gender disparity -** Only 13% of High Court judges and 35% of Subordinate Court judges are women.
- **Pendency -** One in every four high court cases is pending for more than 5 years.

References

1. The Hindu - India Justice Report 2022
2. IE - Justice system plagued by low budgets: IJR 2022
3. TATA Trusts -India Justice Report 2022

UN Statistical Commission

India has been elected to the highest statistical body of the United Nations for a 4-year term beginning January 1, 2024.

- The United Nations Statistical Commission was established by the UN Economic and Social Council in 1947, as its Functional Commission.
- It is the highest body of the global statistical system.
- It is the highest decision making body for international statistical activities.
- **Functions -** It sets statistical standards and develop concepts and methods, including their implementation at the national and international level.
- The Statistical Commission oversees the work of the United Nations Statistics Division (UNSD).
- **Memberships -** The Commission consists of 24 member countries of the United Nations.
- The term of office of members is four years.
- The members are elected by the United Nations Economic and Social Council on the basis of an equitable geographical distribution.
- India has been elected from the Asia-Pacific States group for a 4-year term beginning January 1, 2024.

References

1. IE - India elected to UN stats panel for 4-year term
2. UN - United Nations Statistical Commission

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