Prelim Bits 14-10-2021 | UPSC Daily Current Affairs

Lyocell Fibre

The Lenzing Group has partnered with Italy's Orange Fiber to create the lyocell fibre made from orange peels.

- **Lyocell Fibre** is a semi-synthetic fabric that is commonly used as a substitute for cotton or silk.
- This fabric is a form of rayon, and it is composed primarily of cellulose derived from wood.
- Originally developed by American Enka in 1972, lyocell burst into popularity in the latter decades of the 20th century.
- Since it is primarily made from organic ingredients, this fabric is seen as a more sustainable alternative to fully synthetic fibers.
- **Orange Fibre** is a lyocell fibre that is produced from '**Pastazzo'.**
- [Pastazzo is the by-product of the citrus processing industry.]
- Orange Fibre could help to put citrus waste to use. Also, the material contains essential oils and vitamin C, is lightweight and absorbs moisture. It can be used in combination with wood pulp.

Refibra

- Refibra technology involves **upcycling cotton scraps** from garment production. These cotton scraps are transformed into cotton pulp.
- Up to one third of the Refibra is added to wood pulp, and the combined raw material is transformed to produce new virgin Lyocell fibers to make fabrics and garments.

Ecovero

- Ecovero is a **viscose natural fiber**, which are environmentally responsible and have a low environmental impact.
- They are derived from **sustainable wood and pulp**, coming from certified and controlled sources.

PM GatiShakti

In a historic event for the infrastructure landscape of the country, Prime Minister launched PM GatiShakti - National Master Plan for multi-modal connectivity.

- PM GatiShakti will institutionalize the holistic planning for stakeholders for major infrastructure projects.
- Instead of planning & designing separately in silos, the projects will be designed and executed with a common vision.
- PM GatiShakti is the result of Prime Minister's constant endeavour to build Next Generation Infrastructure which improves Ease of Living as well as Ease of Doing Business.
- **Coverage** - PM GatiShakti will incorporate the infrastructure schemes of various Ministries

and State Governments like UDAN, Bharatmala, Sagarmala, inland waterways, dry/land ports, etc.

- Economic Zones like textile clusters, pharmaceutical clusters, defence corridors, electronic parks, industrial corridors, fishing clusters, agri zones will also be covered.
- PM GatiShakti will also leverage technology extensively including spatial planning tools with ISRO imagery developed by Bhaskaracharya National Institute for Space Applications & Geoinformatics (BiSAG-N).
- **Six pillars of PM GatiShakti:**
    a. **Comprehensiveness** in coverage of all the existing departments and ministries, and projects,
    b. **Prioritization** of projects through cross-sectoral interactions,
    c. **Optimization** of projects by identification of critical gap,
    d. **Synchronization** of the activities of each department, as well as of different layers of governance,
    e. **Analytical -** The plan will provide the entire data at one place with GIS based spatial planning and analytical tools having 200+ layers, enabling better visibility to the executing agency.
    f. **Dynamic** - All Ministries and Departments would visualize, review and monitor the progress of cross-sectoral projects, through the GIS platform.
- **Significance** - The multi-modal connectivity will provide integrated connectivity for movement of people, goods and services from one mode of transport to another.
- It will facilitate the last mile connectivity of infrastructure and also reduce travel time for people.

SC120-LOX

Hindustan Aeronautics Ltd (HAL) has delivered the 'heaviest' Semi-Cryogenic propellant tank (SC120-LOX) to the Indian Space Research Organisation (ISRO).

> In 2020, HAL had delivered the biggest ever cryogenic Liquid Hydrogen tank (C32-LH2) which is four metres in diameter and eight metres in length, much ahead of contractual schedule.

- The semi cryo-liquid oxygen (LOX) tank - the first developmental welded hardware - is a part of the SC120 stage.
- SC120 stage is intended for payload enhancement by replacing the L110 stage in the existing GSLV Mk-III launch vehicle.
- HAL, **strategic reliable partner to ISRO**, has delivered critical structures, tankages, satellite structures for the PSLV, GSLV-Mk II and GSLV-Mk III launch vehicles since the last 5 decades.

SCE200

- SCE200 (under development) is an Indian example of **Semi-Cryogenic Engine.**
- This engine is expected to power ISRO's upcoming Unified Launch Vehicle (ULV) and Reusable Launch Vehicle (RLV).
- **Semi-Cryogenic Engine** burns liquid oxygen (LOX) and RP-1 kerosene in an oxidizer-rich staged combustion cycle.
- [A cryogenic engine uses Liquid Oxygen and Liquid Hydrogen (LH2) as propellants.]

Right to Healthcare

The demand for the enactment of legislation on the right to healthcare has been revived in Rajasthan, as such a law would streamline medical services and guarantee the availability of essential facilities to citizens.

- **Constitutional Provisions** - Article 21 (Fundamental Right) says that a right to health is inherent to a life with dignity.
- Articles 38, 39, 42, 43 and 47 (DPSP) are related to the right to health.
- India is a party to the International Covenant on Civil and Political Rights and the International Covenant on Economic, Social and Cultural Rights.
- The Supreme Court (SC) of India held that Article 21 of the Indian Constitution in relation to human rights has to be interpreted in conformity with the international law.
- While upholding the right to health by a worker, the SC cited,
    a. Article 25 [2] of the Universal Declaration of Human Rights and
    b. Article 7 (of the International Covenant on Economic, Social and Cultural Rights.
- **Statutory Provisions** - These covenants find statutory acceptance in the Protection of Human Rights Act, 1993.

Henley Passport Index 2021

Henley Passport Index 2021 was prepared and released by the Henley and Partners, a London-based global citizenship and residence advisory firm.

- The index ranks the passports of countries according to the number of destinations their holders can visit without a prior visa.
- Created in 2006, the index ranks passports based on their power and mobility based on the analysis of exclusive data from the International Air Transport Association (IATA).
- [IATA maintains the world's largest and most accurate database of travel information.]
- The index is updated in real time according to countries' visa policy changes and it covers 227 destinations and 199 passports.
- It assumes only the passport of citizen of country and it is not for diplomatic, emergency or temporary in nature.
- **Findings** - India's rank has slipped by 6 places from the year 2020 to 90th position on the Henley Passport Index.
- For the third consecutive year, Japan has secured the top position. The first position is shared by both Japan and Singapore.
- Meanwhile, Afghanistan, Iraq, Syria, Pakistan, and Yemen are among the least powerful.

Source: PIB, The Hindu, The Indian Express, Economic Times

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