



Green Hydrogen: Fuel Of The Future

❖ Context:

- Recently **Minister of Petroleum and Natural Gas** had said India will emerge as the leader of **Green Hydrogen** by taking advantage of the current **energy crisis** across the globe.
- His assertion came almost a month after **Oil India Limited (OIL)** commissioned **India's first 99.99% pure green hydrogen** plant in **eastern Assam's Jorhat**.

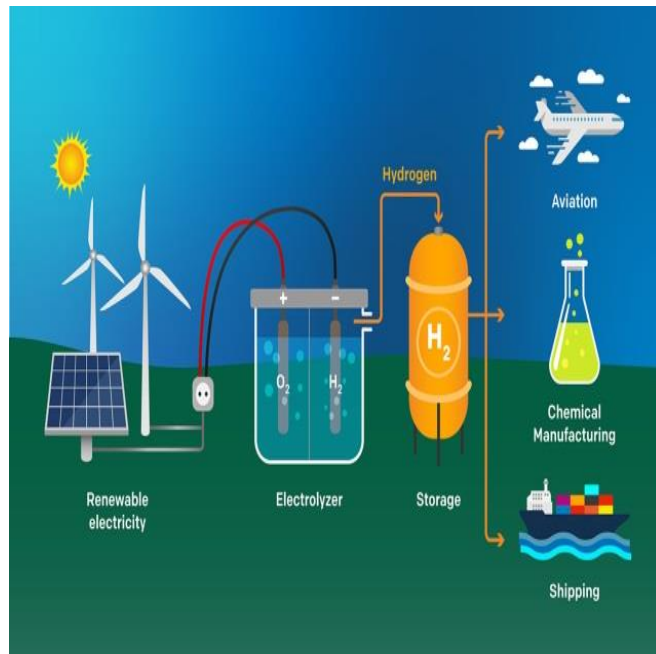
❖ What is Green Hydrogen?

- A **colourless, odourless, tasteless, non-toxic and highly combustible gaseous substance, hydrogen is the lightest**, simplest and most abundant member of the family of chemical elements in the universe.
- But a colour - green - prefixed to it makes hydrogen the **"fuel of the future"**. The **'green' depends on how the electricity is generated** to obtain the hydrogen, which does not emit greenhouse gas when burned.
- **Green hydrogen** is produced through electrolysis using renewable sources of energy such as **solar, wind or hydel power**.
- **Hydrogen can be 'grey' and 'blue' too**.
- Grey hydrogen is generated through **fossil fuels** such as coal and gas and currently accounts for **95%** of the total production in **South Asia**.
- Blue hydrogen, too, is produced using electricity generated by burning fossil fuels but with technologies to prevent the carbon released in the process from entering the atmosphere.

❖ Production of Green Hydrogen in India:

- India has just begun to **generate green hydrogen** with the objective of **raising non-fossil energy capacity** to 500 gigawatts by 2030.
- Powered by a 500 KW solar plant, the green hydrogen unit has an installed capacity to produce 10 kg of hydrogen per day and scale it up to 30 kg per day.

❖ Advantages of Hydrogen as a Fuel:



- The intermittent nature of renewable energy, especially wind, leads to grid instability.
- Green hydrogen can be stored for long periods of time.
- The stored hydrogen can be used to produce electricity using fuel cells.
- Hydrogen, can act as an energy storage device and contribute to grid stability.

Supreme Court Recognises Sex Work As A 'Profession'

❖ Context:

- The **Supreme Court** has directed that police should neither interfere nor take criminal action against adult and consenting sex workers.
- A **three-judge Bench** led by Justice L. Nageswara Rao directed in an order which was passed after **invoking special powers** under **Article 142** of the Constitution.

❖ Key Highlights of the Judgement:

- **Sex workers are entitled to equal protection of the law.** Criminal law must apply equally in all cases, on the basis of **'age' and 'consent'**.
- **Child of a sex worker:** A child of a sex worker should not be separated from the mother merely on the ground that she is in the sex trade, the court held. "Basic protection of human decency and dignity extends to sex workers and their children.
- **Medico-legal care:** Sex workers who are victims of sexual assault should be provided every facility including immediate medico-legal care.
- **Role of Police:** The Bench ordered that sex workers should not be **"arrested or penalised or harassed or victimised"** whenever there is a raid on any brothel, "since voluntary sex work is not illegal and only running the brothel is **unlawful**".

- **Role of Media:** The court said media should take "utmost care not to reveal the identities of sex workers, during **arrest, raid and rescue operations**, whether as **victims or accused and not to publish or telecast any photos** that would **result in disclosure of such identities**".

❖ Article 142:



- **Article 142:** provides discretionary power to the Supreme Court as it states that the Supreme Court in the exercise of its jurisdiction may pass such decree or make such order as is necessary for doing complete justice in any cause or matter pending before it.

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News in Between the Lines

Where Tortoise Conservation Is Devotion



❖ Context:

- **World Tortoise Day** was recently observed to emphasise the **need to protect turtles and tortoises** and their **disappearing habitats**.
- A temple in Kasaragod has been protecting and conserving various tortoise species for several centuries.

❖ Key Highlights:

- **Devotees of Thoroth Addukath Bhagavathi Temple** at Molothumkavu in **Bedadukka panchayat** believe that offering rice (nivedya chor) to tortoises will redeem them of their sins and cure their skin-related ailments.
- The tortoises are protected and conserved in the naturally formed pond (**aamakulam**), spread over **two acres** of temple land.
- The temple is several centuries old and it is believed that the custom of offering prayers to the tortoises is as old as the temple.
- The **tortoises** are an attraction not only for the devotees but also for researchers and officials of the Forest department, who come to study the various species here.

'Tomb Of Sand' Wins International Booker Prize



❖ Context:

- Hindi author **Geetanjali Shree's** novel **Ret Samadhi**, "**Tomb of Sand**" has won the **International Booker prize**, becoming the **first novel translated from Hindi to do so**.

❖ Key Highlights:

- **Geetanjali Shree** is not only the award's first Hindi winner, but also it is for the first time a book originally written in any Indian language has won the booker prize.
- A Report Geetanjali Shree's Tomb of Sand translated from Hindi by Daisy Rockwell has won the prestigious Booker prize, the prize money of 50,000 Pounds will be shared between the author and translator equally.

❖ International Booker Prize:

- The International Booker Prize (formerly known as the Man Booker International Prize) is an international literary award hosted in the United Kingdom.
- The introduction of the International Prize to complement the Man Booker Prize was announced in June 2004.
- Sponsored by the Man Group, from 2005 until 2015 the award was given every two years to a living author of any nationality for a body of work published in English or generally available in English translation.
- Since 2016 the award was given annually.

Purple Revolution



❖ Context:

- A **purple revolution** was witnessed in **Bhaderwah, Jammu and Kashmir**. **Union Minister of Science and Technology** inaugurated India's first '**Lavender Festival**'.

❖ Key Highlights:

- **Lavender Festival 2022 at Bhaderwah** under Union Government's **Aroma Mission 2** is being conducted to promote "**One Product one District**".
- The festival is primarily aimed at increasing the income of farmers associated with Aroma Mission by encouraging and motivating them to adopt value addition of the aromatic plant they are growing in their fields.

❖ Aroma Mission:

- Mission was **launched in 2016** to promote the cultivation of lavender plants, which hold aromatic healing effects through advanced technology set by the **CSIR (Council of Scientific & Industrial Research)**.
- The nodal laboratory of Aroma's mission is **CSIR-Central Institute of Medicinal and Aromatic Plants (CSIR-CIMAP)**, Lucknow.

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Operation Namkeen



❖ Context:

- The **Directorate of Revenue Intelligence** has seized 52 kg of cocaine valued at over Rs 500 crore from an import consignment at the **Mundra port in Gujarat's Kutch district**.

❖ Key Highlights:

- Acting on the input, the DRI launched "**Operation Namkeen**" and on May 24, it intercepted a consignment, declared to contain 1,000 bags of common salt having gross weight of 25 MT, which had been imported at Mundra port from Iran.
- The latest seizure came a month after the DRI recovered 260 kg of heroin worth Rs 1,300 crore during a raid at a container station near **Kandla port in Kutch**.

ACCREDITED SOCIAL HEALTH ACTIVIST (ASHA)



❖ Context:

- Recently, Prime Minister hailed ASHA workers after they were conferred with the **World Health Organisation (WHO) Director-General's Global Health Leaders' Award**, and said they are at the forefront of ensuring a healthy India.

❖ Key Highlights:

- **India's ten lakh all-women ASHA volunteers** were honoured by the WHO on Sunday for their crucial role in **providing direct access to healthcare facilities in rural areas** and their **indefatigable efforts** to rein in the coronavirus pandemic in the country.

How ASHA Workers Helped During Covid-19

- India has over **1 million** ASHA workers
- ASHA workers are the first line of defence in India's fight against Covid-19
- During the pandemic, their work included visiting the community, ensuring quarantines, bring medicines and supplies, in addition to taking care of those with palliative needs
- Some **6 lakh** of them went on strike in August to demand better pay and recognition as permanent government employees

- **Accredited Social Health Activists** - or ASHA volunteers - are Indian government's affiliated health-care workers who are the first point of contact in rural India.
- "**ASHA - means 'hope' in Hindi**. These health workers provide **maternal care & immunization for children against vaccine-preventable diseases; community health care; treatment for hypertension & tuberculosis & core areas of health promotion for nutrition, sanitation & healthy living,**"

National Portal for Biotech Researchers and Start-ups (BioRRAP)



❖ Context

- Recently, "**One Nation, One Portal**", Union Minister of State (IC) Ministry of Science and Technology; Minister of State (IC) Ministry of Earth Science; MoS of Prime Minister's Office and Ministry of Personnel, Public Grievances & Pensions, launched **Single National Portal for Biotech researchers and Start-ups**.

❖ About BioRRAP Portal:

- The Portal "**BioRRAP**" will facilitate the regulatory approval for biological research & development activity in the country and thereby extend "**Ease of Science**" as well as "**Ease of Doing Business**".
- India is poised to become a **Global Bio-manufacturing Hub** and will figure among the **top 5 countries of the world by 2025**.
- To provide more credibility and recognition to biological research, the government has **developed a web system** under which each research, requiring regulatory oversight, will be identified by a **unique ID called "BioRRAP ID"**.
- The portal will act as a gateway and will help researchers to see the stage of approval of their **applications for regulatory clearances**.
- The portal is designed to cater to the needs of the Biotechnology sector in India with **about 2,700 start-ups and over 2,500 companies** working in the country.
- This portal will strengthen interdepartmental **synergies and bring accountability, transparency and efficacy in functioning of agencies regulating various aspect of biological research and issuing permission**.

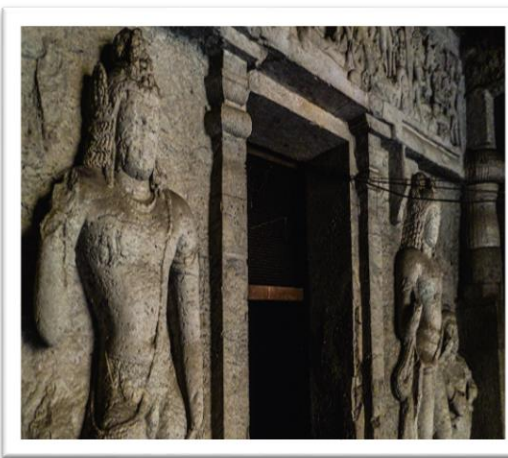
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- This portal is in line with the government's "ease of start-ups" and "ease of doing science and scientific research."

❖ **Do you know?**

- India is among the top 12 destinations for biotechnology globally and 3rd largest biotechnology destination in the Asia Pacific region.

Jogeshwari Caves



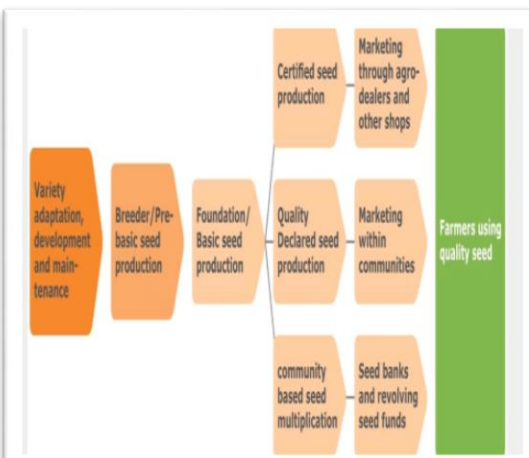
❖ **Context**

- The caves seen in news recently are the last of the Mahayana Buddhist architecture structures, later taken by Hindus; Jogeshwari Caves are at least 1,500 years old, excavated during the unearthing of Ajanta & Elephanta caves

❖ **About:**

- Located in the very heart of Mumbai, The Jogeshwari Caves are some of the oldest cave temples in the entire country, along with being the largest.
- These former Buddhist cave temples date back to the 6th century and now host both Hindu and Buddhist sculptures.
- There are various temples of Lord Hanuman, Shiva, Ganesha, and of Goddess Jogeshwari, also known as Kuladevi within the caves, having locals worship them. This is also an ideal place for history buffs, as the rocks here embed rich past, dating back centuries.

'Seed Chain Development'



❖ **Context:**

- 'Seed Chain Development' forms the key to higher agricultural produce.

❖ **Key Highlights:**

- Amid strenuous efforts to raise farmers' income by the Centre, 'Seed Chain Development' is acquiring greater significance.
- Seed is the basic and most critical input for sustainable agriculture.
- The states should work in a planned manner at the district level on all aspects related to the agriculture sector, so that the farmers do not face any problem.
- Varieties of seeds developed by the Indian Council of Agricultural Research should reach the farmers at the grassroots level. Currently, 61 seed varieties from the public sector, covering 19 crops, are listed in the 2011 OECD.
- Significance:** Availability of good seeds for farming increases production and productivity, resulting in higher income for farmers and raising the share of agriculture in GDP besides benefitting agriculture and the nation's economy.

Sugar Export Ban



❖ **Context**

- The Union Government has decided to put a cap on sugar exports to ensure domestic availability.

❖ **Key Highlights:**

- India is the second largest sugar exporter in the world.
- According to the order, with effect from 1 June, 2022 until 31 October, 2022, or until further order, the export of the sugar will be allowed with specific permission of the Directorate of Sugar, Department of Food and Public Distribution.
- Major sugar importing countries are Indonesia, Afghanistan, Sri Lanka, Bangladesh, UAE, Malaysia, and other African countries.

❖ **Reasons Behind The Curb:**

- The restrictions have been introduced to improve the availability of sugar in the domestic market and also check the rise in prices.
- The restrictions are also another sign of rising food protectionism around the world, as major producers curb agricultural exports, adding to the supply shock triggered by Russia's invasion of Ukraine.
- Note-** India is the world's second biggest producer of sugar after Brazil and Maharashtra is the top sugar producer in the country followed by Uttar Pradesh and Haryana.

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