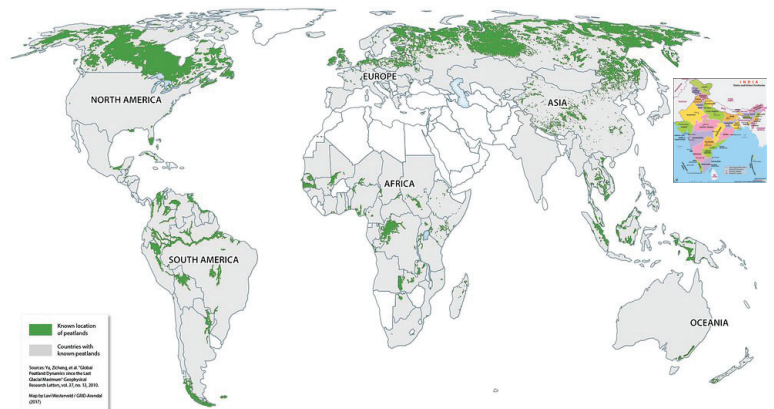


# NEWS TODAY

## PERMAFROST PEATLANDS IN EUROPE, WESTERN SIBERIA NEARING TIPPING POINT: STUDY

- A recent study has found that by 2040, **northern Europe** might become **too wet and warm** to support **permafrost peatlands** (frozen, carbon-storing expanses of land).
  - By 2060, **Europe and western Siberia** could lose **75 per cent permafrost** peatlands under moderate efforts to mitigate climate change.
- Peatlands are a **class of wetlands**. Term 'peatland' refers to the **peat soil** and the wetland habitats growing on the surface.
  - Some peatlands are **buried under frozen ground or permafrost** and exist as **permafrost peatlands**. They are found in the **northern parts of Alaska, Canada, Russia and parts of northern Europe**.
  - Permafrost is any ground that remains completely frozen - **32°F (0°C) or colder** - for at least two years straight.
- Significance: Critical** for preventing and mitigating the effects of **climate change**, preserving biodiversity, minimising **flood risk**, and ensuring safe **drinking water**.
  - Peatlands occupy **only 3 per cent of the global land surface** but store **twice as much carbon as all the world's forests**.
- Threats: Drainage and burning for agricultural**, climate change, deforestation, destroyed by the extraction of peat, which is used as a source of energy etc.

Global distribution of peatlands



### Global Peatlands Initiative

It was launched at **United Nations Climate Change Conference in Marrakech (2016)** as an international partnership to **save peatlands as the world's largest terrestrial organic carbon stock**.

## GREEN HYDROGEN-BASED ADVANCED FUEL CELL ELECTRIC VEHICLE (FCEV), TOYOTA MIRAI LAUNCHED

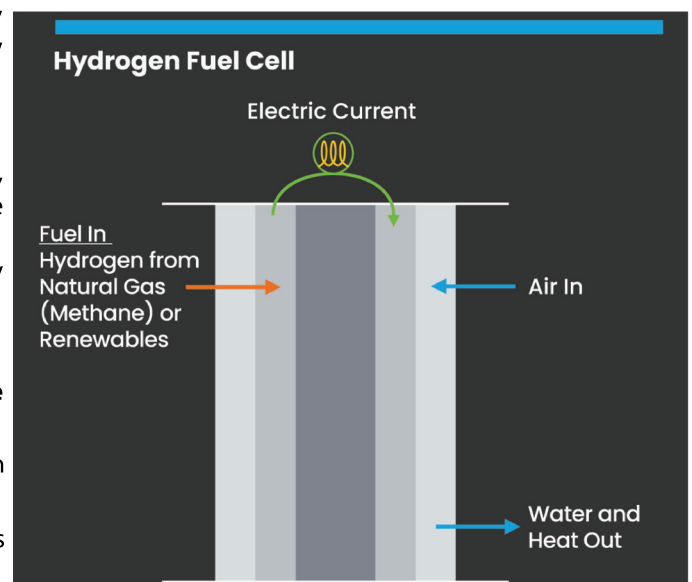
- This is a **first of its kind project** in India which aims to create a **Green Hydrogen based ecosystem** in the country.
  - Green hydrogen** is hydrogen produced by **splitting water into hydrogen and oxygen using renewable electricity**.
  - It will promote **clean energy and environmental protection** by reducing dependence on fossil fuels and thereby make **India 'Energy Self-reliant' by 2047**.

### About FCEVs

- FCEVs use a **propulsion system** similar to that of **electric vehicles**, where **energy stored as hydrogen** is converted to electricity by the fuel cell.
- Unlike conventional internal combustion engine vehicles, they produce **no harmful tailpipe emissions**.

### How Fuel Cells Work?

- Most fuel cell for vehicle applications is the **polymer electrolyte membrane (PEM) fuel cell**.
- In a PEM fuel cell, an **electrolyte membrane** is sandwiched between a **positive electrode (cathode)** and a **negative electrode (anode)**.
- Hydrogen** is introduced to the **anode**, and **oxygen (from air)** is introduced to the **cathode**.



- Hydrogen molecules break apart into **protons and electrons** due to an **electrochemical reaction** in the fuel cell catalyst.

# HAZARDOUS UNION CARBIDE WASTE TO BE BURNT AFTER 37 LONG YEARS

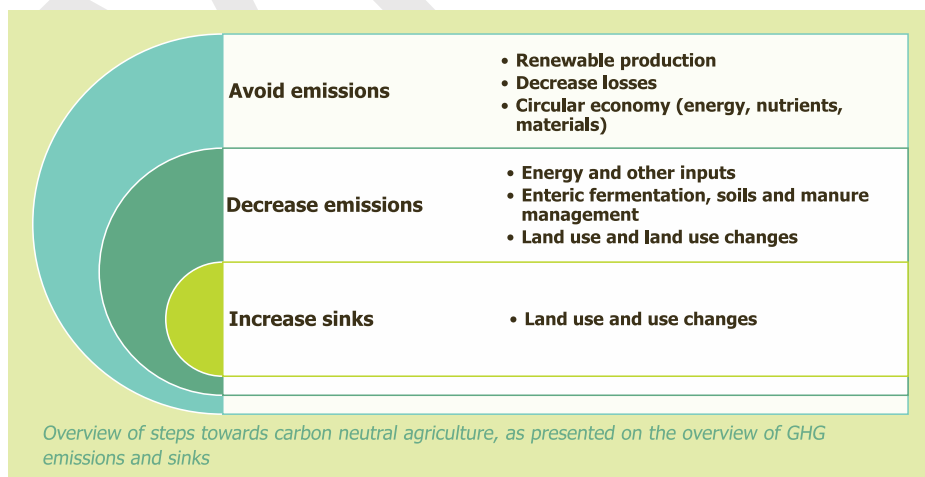
- The **337 tonnes of hazardous waste** at Union Carbide India Limited's (UCIL's) in **Bhopal** will be burnt at an incinerator at Pithampur industrial areas in Indore.
  - The waste was dumped after **leakage of at least 30 tonnes of Methyl Isocyanate (MIC)** from the plant in **1984 (Bhopal gas Tragedy)**.
  - The hazardous waste at the plant have **contaminated ground water in and around the plant causing chronic illness** to several people still living around it.
- In 1984, **chemical named methyl isocyanate** spilt out from UCIL's pesticide factory, that turned the Bhopal city into a colossal gas chamber.
  - It was India's **first major industrial disaster**.
- Methyl Isocyanate (MIC) is a **colourless liquid** used for making pesticides. It is a highly toxic gas.
  - The chemical is **highly reactive to heat**. When exposed to water, the compounds in MIC react with each other causing a heat reaction.
  - MIC is **no longer in production**, although it is still used in pesticides.
  - Immediate health effects include **ulcers, photophobia, respiratory issues, anorexia, persistent abdominal pain, genetic issue etc**, and long-term health effects include chronic conjunctivitis, decreased lung function, increased pregnancy loss, increased infant mortality, etc.

## Mechanisms to deal chemical disasters:

- In **M.C. Mehta vs Union of India 1987 (Oleum gas leak case)**, SC found strict liability principle inadequate to protect citizens' rights and replaced it with the **absolute liability principle**.
  - Under **absolute liability principle**, court held that a company in a hazardous industry cannot claim any exemption. It has to **mandatorily pay compensation**, whether or not the disaster was caused by its negligence.
- **Chemical Accidents (Emergency, Planning, Preparedness and Response) Rules, 1996** to effectively deal with Chemical emergency.
- **Manufacture Storage and Import of Hazardous Chemicals Rules, 1989** to deal with the safety and environmental aspects associated with hazardous chemicals.

## KERALA TO INTRODUCE CARBON-NEUTRAL FARMING METHODS

- Kerala is set to become the **first State to introduce carbon-neutral farming methods** in selected locations, for which the government has set aside Rs.6 crore in the 2022-23 Budget.
  - Carbon neutral agriculture refers to the **net zero balance of emissions and sinks of all the greenhouse gases on farms** in terms of their CO2 equivalents, resulting in climate neutral systems.
- **Need for Carbon neutral agriculture**
  - It has the potential to **reduce current carbon footprint of agriculture** – roughly 12% of all greenhouse gas emissions.
  - **Reduce carbon emissions** and help carbon to be stored in the soil.
  - **Enhance food production** while controlling and reducing the GHG emissions from agriculture.
  - Improves **soil fertility and nutrient retention**. This, in turn, boosts crop productivity.
- **Strategies towards carbon neutral agriculture**



- **India initiated steps like**, using nitrogen fertilisers more efficiently, adopting zero-tillage farming and improving the management of rice water to reduce carbon footprint.

## PARLIAMENTARY PANEL SUBMITS REPORT ON MAHATMA GANDHI NATIONAL RURAL EMPLOYMENT GUARANTEE ACT (MGNREGA)

- Report presents a **critical analysis of the MGNREGA act, and highlights the concerns and recommendations**:
  - Issues highlighted include, fake job cards, widespread corruption, late uploading of muster rolls, and huge pending payments for wages and materials, insufficient funding etc.
- **Recommendations by the report**
  - Budgetary Allocation should prevent **dearth of funds in mid-year**.
  - **Preventing delay in payment of wages** through effective coordination with States for **timely release of funds**.
  - Increase in wages through linkage with **commensurate inflationary index**
  - **Uniform wages across the country and increase in number of days of work sought**
  - Expanding the **ambit of permissible works** under NREGA.
  - Monitoring of Scheme through **Real Time Assessment Mechanisms, adherence to conduct of Social Audits**.
  - **Focusing on durability of Assets Created** under MGNREGA.
  - Skilling of MGNREGA workers and ensuring **Better Workplace for Women Workers**.
  - **Appointing ombudsmen** and increasing participation of Members of Parliament.
- **MGNREGA, 2005, guarantees 100 (which may extend up to 150 days in drought/natural calamity notified rural areas) of wage employment** in a financial year, **to a rural household** whose **adult members volunteer to do unskilled manual work**.

# AGRIBAZAAR LAUNCHES REMOTE SENSING CROP MODEL TO HELP IN PRECISION FARMING

● India's largest agri-trading marketplace Agribazaar, along with Microsoft have been chosen by the Indian government for its 'Agristack' programme to share the remote sensing crop model with farmers.

○ Remote sensing is the process of **detecting and monitoring the physical characteristics of an area by measuring its reflected and emitted radiation** at a distance (typically from satellite or aircraft).

➤ Objective is to offer the **remote sensing crop model** to help farmers implement **precision farming methods easily and efficiently**.

## ● About Remote sensing crop model

➤ It refers to the **process of collecting information about soil and the land virtually** using ground observation posts and satellites and aircraft observations.

➤ It helps analyse **nutrient deficiencies, water deficiency or surplus, weed infestations, insect damage, hail damage, wind damage, herbicide damage, plant populations and presence of diseases**.

➤ The collection of this data allows for the **easy implementation of precision farming**.

➤ Precision farming refers to a farming management concept where **inputs including fertilisers are carefully chosen to increase average yield per unit of land**.

## ● Agristack




➤ Agristack is government's project that seeks to **build a digital data stack of information, like land records**.

➤ These datasets will be analysed to **recommend seeds to buy, farming best practices, updates on weather**, information about agricultural credit, insurance, and more to improve average farming yields.

## ALSO IN NEWS

 <p><b>National eVidhan Application (NeVA)</b></p>	<ul style="list-style-type: none"> <li>● NeVA (Paperless Assembly or e-Assembly) is a <b>concept involving electronic means to facilitate the work of Assembly</b>.</li> <li>● <b>e-Vidhan is re-designated as NeVA and Ministry of Parliamentary Affairs is Nodal Ministry</b> for rolling out NeVA in all States/ UTs with Legislatures. <ul style="list-style-type: none"> <li>➤ e-Vidhan is a <b>Mission Mode Project</b> included in Digital India Programme.</li> </ul> </li> <li>● NeVA <b>aims to bring all the legislatures of the country together</b>, in one platform thereby <b>creating a massive data depository</b>.</li> <li>● Bihar Legislative Council became <b>first House in country to transit to NeVA platform</b> by conducting Winter Session, 2021 in paperless mode completely.</li> </ul>
 <p><b>Council of Europe</b></p>	<ul style="list-style-type: none"> <li>● Council of Europe has <b>expelled Russia</b> over Russia's invasion and war in Ukraine.</li> <li>● <b>About Council of Europe:</b> <ul style="list-style-type: none"> <li>➤ It is the continent's <b>leading human rights organisation</b>.</li> <li>➤ It includes <b>47 member states</b>, 28 of which are members of the <b>European Union</b>.</li> <li>➤ Founded in: 1949</li> <li>➤ <b>Headquarters:</b> Strasbourg, France</li> <li>➤ <b>Budget:</b> Financed by member states, contributions are based on population and wealth.</li> </ul> </li> </ul>
 <p><b>Credit Guarantee Fund scheme for Micro and Small Enterprises (CGTMSE)</b></p>	<ul style="list-style-type: none"> <li>● The scheme was <b>launched in 2000 jointly by Small Industries Development Bank of India (SIDBI) and Ministry of Micro, Small and Medium Enterprises</b>.</li> <li>● Objective to <b>make available collateral-free credit to the micro and small enterprise sector</b>.</li> <li>● <b>Fund and non-fund based</b> (Letters of Credit, Bank Guarantee etc.) <b>credit facilities</b> up to Rs 200 lakh per eligible borrower are covered.</li> <li>● Trust named <b>Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE)</b> was <b>established to implement the scheme</b>.</li> </ul>
 <p><b>Pradhan Mantri Poshan Shakti Nirman' scheme (PM Poshan)</b></p>	<ul style="list-style-type: none"> <li>● Parliamentary committee flags "gross under-utilisation" of funds to run PM-Poshan.</li> <li>● PM-POSHAN <b>replaced the mid-day meal scheme</b>. It has been launched for an <b>initial period of five years</b> (2021-22 to 2025-26).</li> <li>● Under it, <b>cooked meals are provided to students</b> in schools and enhance the nutrition levels of school children.</li> <li>● Main objective of this scheme is to <b>provide nutritious food to the children studying in government and government aided schools</b>.</li> <li>● Administered by: <b>Ministry of Education</b></li> </ul>
 <p><b>Samagra Shiksha Scheme</b></p>	<ul style="list-style-type: none"> <li>● The vision of the scheme is to <b>ensure inclusive and equitable quality education</b> from pre-school to senior secondary stage in accordance with the Sustainable Development Goal (SDG) for Education.</li> <li>● It <b>subsumes the three schemes</b> of Sarva Shiksha Abhiyan, Rashtriya Madhyamik Shiksha Abhiyan and Teacher Education.</li> </ul>



	<ul style="list-style-type: none"> <li>• <b>Main outcomes envisaged</b> are Universal Access, Equity and Quality, promoting vocationalisation of Education and strengthening of Teacher Education Institutions (TEIs).</li> <li>• Administered by: <b>Ministry of Education</b></li> </ul>
 <p><b>Pradhan Mantri-Dakshta Aur Kushalta Sampann Hitgrahi Yojana (PM-DAKSH) Yojana</b></p>	<ul style="list-style-type: none"> <li>• Ministry of Social Justice and Empowerment is implementing <b>PM-DAKSH</b> from 2020-21 <b>through 3 Corporations</b>: <ul style="list-style-type: none"> <li>&gt; <b>National Scheduled Castes Finance and Development Corporation</b> for Scheduled Caste beneficiaries,</li> <li>&gt; <b>National Backward Classes Finance &amp; Development Corporation</b> for Other Backward Classes/Economically Backward Classes/De-notified tribes beneficiaries and</li> <li>&gt; <b>National Safai Karamcharis Finance &amp; Development Corporation</b> for Safai Karamcharis including Waste Pickers.</li> </ul> </li> <li>• <b>Facilities available</b> to beneficiaries: <ul style="list-style-type: none"> <li>&gt; Free of cost <b>Skill Development Training</b>,</li> <li>&gt; <b>Stipend</b> to the eligible candidates,</li> <li>&gt; Course completion <b>certificates</b>,</li> <li>&gt; Opportunities for <b>job/self-employment</b>.</li> </ul> </li> </ul>
 <p><b>One Rank, One Pension (OROP) Scheme</b></p>	<ul style="list-style-type: none"> <li>• SC ruled that there was <b>"no constitutional infirmity"</b> in the way government had introduced OROP among ex-service personnel.</li> <li>• The Koshiyari Committee has defined OROP as a <b>uniform pension be paid to the Armed Forces Personnel</b> retiring in the same rank with the same length of service regardless of their date of retirement.</li> <li>• Thus, any <b>hike in the pension rates to be automatically passed on to past pensioners</b>.</li> </ul>
 <p><b>Carbon border tariff</b></p>	<ul style="list-style-type: none"> <li>• European Union has planned to impose a <b>world-first carbon dioxide emissions tariff on imports of polluting goods</b>.</li> <li>• CO2 emissions costs will be introduced on <b>imports of steel, cement, fertilisers, aluminium and electricity</b>.</li> <li>• The move is aimed at protecting European industry from being undercut by <b>cheaper goods made</b> in countries with <b>weaker environmental rules</b>.</li> <li>• The costs would not kick in <b>until 2026</b>, but a <b>three-year transition phase</b> would begin in 2023.</li> <li>• <b>Concerns</b>: It may become a <b>protectionist device</b>, unduly shielding local industries from foreign competition in <b>so-called 'green protectionism'</b>.</li> </ul>



/c/VisionIASdelhi



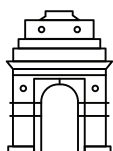
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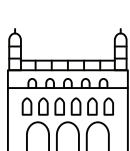
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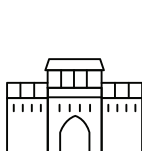
LUCKNOW



JAIPUR



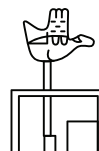
HYDERABAD



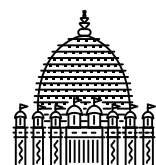
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