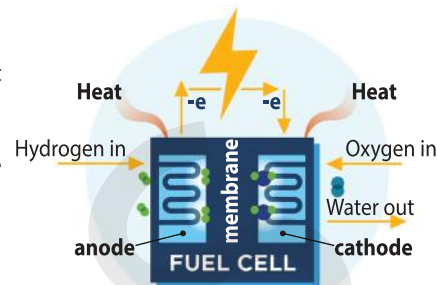


# NEWS TODAY

## ROAD TRANSPORT AND HIGHWAYS MINISTRY NOTIFIED STANDARDS FOR SAFETY EVALUATION OF HYDROGEN FUEL CELLS-BASED VEHICLES

- It would **facilitate the promotion of Hydrogen Fuel Cell (HFC) based vehicles** which are energy efficient and environment friendly.
  - HFC vehicles are **powered by an electric motor and are therefore classified as e-cars.**
  - Unlike other electric vehicles, HFC vehicles don't get its power from a built-in battery but instead have their own power plant on board - the **fuel cell.**
- HFC is a **fuel cell that combines hydrogen and oxygen** to produce electricity with water and steam as the only by products.
  - Fuel cells are electrochemical devices to convert chemical energy into electrical energy.
- They **do not need periodically recharging** like batteries and produce electricity as long as they are supplied with a hydrogen and oxygen (usually air) source.
- Benefits:** eliminates pollution, reduces dependence on oil and gas imports, higher electrical efficiency, noise-free operation etc.
- Limitations of HFC:** high cost of equipment, issues with storage of hydrogen gas, maintenance issues (like corrosion) etc.
- Applications:** Stationary sector (to power buildings, isolated houses etc), Portable sector (military applications like portable soldier power, electronic devices etc), Transport market etc.



## LABOURE CODE GIVES MORE POWER TO STATES ON LABOUR LAW

- Under new Labour codes approved by Parliament centre has bestowed more power to **states to make amendments through executive route.**
  - Labour as a subject falls under Concurrent list** wherein both the central and state governments can legislate.
- Under the **Industrial Relations Code, 2020** that governs retrenchment, layoffs, trade unions, and industrial disputes.
  - States can exempt new industrial units** from "any or all provisions" of the code "unconditionally" for a specific period of time.
    - States can take such a step in "public interest", which is not broadly defined.
  - States can increase the threshold (300 Workers) to higher numbers** by a notification for retrenchment, layoffs or closure norms.
- In **Occupational Safety, Health and Working Conditions Code, 2020** dealing with safety, welfare and workplace-related norms in establishments.
  - States have been empowered to **exempt new factories from any provisions of law** to create more economic activities and employment opportunities.
  - No timeline for giving exemption** to factories as against maximum 3 months at present.
  - Working conditions and welfare facilities to be framed **through rules, instead of laws.**

## 15TH CII - EXIM BANK DIGITAL CONCLAVE ON INDIA-AFRICA PROJECT PARTNERSHIP

- During the conclave, External Affairs Minister informed that **India has implemented 194 developmental projects in 37 African countries** and is working on 77 more in 29 countries with a total outlay of \$11.6 billion.
  - These projects are in sectors such as infrastructure, ICT, power generation, water, roads, railways and agriculture.
  - Compared to China, **India's projects are to foster entrepreneurship and empower** rather than extract from local communities.
- Significance of Africa for India**
  - Africa is crucial **source for natural resources and for developing new markets.**
  - Africa's oil and gas provides India to **diversify its supply away from Middle East** stranglehold.
  - Cooperation in the field of terrorism and organized crime** (including piracy) as there are security threats emerging from Africa.
  - Cooperation for **democratic reforms in global institutions.**
- Steps taken by India**
  - India-Japan-Africa Growth Corridor** aims at building infrastructure and achieving closer developmental cooperation with Africa.
  - India-Africa Forum Summit**, an official platform for India-Africa relations
  - Indian **lines of credit totaling \$11 billion** had been extended to 41 African countries.
  - Digital initiatives, such as e-Vidya Bharati and the e-Aarogya Bharati, **focusing on education and medicine.**

## ONLY A FRACTION OF POLLUTED RIVER STRETCHES MAY BE CLEAN BY YEAR END

- In **2018, Central Pollution Control Board (CPCB) had identified 351 stretches of rivers** where the Biological Oxygen Demand (BOD), Dissolved Oxygen (DO) levels, faecal coliform (FC) breached recommended standards.
  - To be considered fit for drinking (without disinfection)**, a river water must have a BOD of <2 milligram per litre, DO >6 milligram per litre, a pH from 6.5 to 8.5 and Total Coliforms Organism MPN/100ml shall be 50 or less.
- Based on this, States were ordered by the National Green Tribunal to ensure that infrastructure to treat 100% of sewage generated be created by March 31, 2021.
- But less than **5% of polluted river stretches identified by CPCB in 2018 are likely to be remedied** by the year end.
- Key reasons for States being unable to ensure unpolluted stretches** are sub-optimal use of sewage treatment plants, COVID-19 pandemic that led to a cessation of sewage treatment infrastructure and non-availability of funds.
- Major source of river pollution:** Raw sewage, plastic and industrial waste such as from leather tanneries, dams and diversions stopping natural flow of the rivers etc.

### ⦿ Main pillars embody India's development partnership approach with Africa:

- Capacity building and training under Indian Technical and Economic Cooperation (ITEC);
- Lines of Credit (LOC) or concessional loans and grant assistance;
- Trade and Investments.

# ISRO'S MANGALYAAN ORBITER COMPLETES SIX YEARS AROUND MARS

• Mars Orbiter Mission (MOM), also called Mangalyaan has completed six years (since September 24, 2014) of orbiting the red planet.

- It was **India's first interplanetary mission**.
- Core objectives of MOM include exploring the **Martian surface features, morphology, mineralogy and Martian atmosphere by indigenous scientific instruments**.

• **Achievements**

- **Helped India's space agency prepare a Martian Atlas** based on the images provided by the orbiter.
- Mars Colour Camera (MCC) onboard MOM has **captured the image of Phobos**, the closest and biggest moon of Mars.
  - Mars has two moons, **the other being Deimos**.
  - Images highlighted craters on Phobos named- Stickney, Shklovsky, Roche & Grildrig.
- First time a **near global albedo map of Mars**, which measures sunlight reflected from the surface to get hints about Mars' surface composition, has been prepared using MOM

• **Issues**

- **Failure of Methane sensor** which aims to **search for methane**, an important chemical in life processes because of a design flaw.
- There are **no published results from the Lyman Alpha Photometer**.
  - It was supposed to analyse how much water Mars lost since its birth and at what rate.

## PAYLOADS

**The five instruments will send home information about Mars**

<p><b>1. MARS COLOUR CAMERA</b> It will take pictures of Mars' surface. The photos will put the information provided by other instruments on the orbiter into context. It will also give information on the dynamic events on the planet such as weather</p>	<p><b>2. LYMAN ALPHA PHOTOMETER</b> It will study the ratio of deuterium and hydrogen. Isotope deuterium is heavier and does not escape from the atmosphere as easily as hydrogen. The data will answer the question if water is present in the planet, or was present in the past</p>	<p><b>3. THERMAL INFRARED IMAGING SPECTROMETER</b> It was readied at Space Applications Centre (SAC), Ahmedabad. It will map the surface composition and mineralogy of the planet by measuring thermal emissions</p>
<p><b>4. MARS EXOSPHERIC NEUTRAL COMPOSITION ANALYSER</b> It will study Martian atmosphere. This will be the first in situ map ping of the atmosphere there. It will measure radial, diurnal and seasonal variations in the Martian exosphere</p>	<p><b>5. METHANE SENSOR</b> It will scan the entire Martian disc within six minutes and measure very low levels of methane - in parts per billion quantities. This is the first time that methane in the atmosphere of the planet will be measured by use of a satellite</p>	

## ALSO IN NEWS

<p><b>RBI releases cybersecurity vision framework for urban cooperative banks (UCBs)</b></p>	<ul style="list-style-type: none"> <li>• It aims at <b>enhancing the cyber security posture of UCB sector</b> against evolving IT and cyber threat environment.</li> <li>• Considering the heterogeneity of UCB in terms of size, regions, financial health and digital depth, it was recognised that a <b>'one size fits all' approach may not be suitable</b> while prescribing cyber security guidelines for UCBs.</li> <li>• It proposed a <b>five-pillared strategic approach GUARD</b>, viz., - Governance Oversight, Utile Technology Investment, Appropriate Regulation and Supervision, Robust Collaboration and Developing necessary IT, cyber security skills set.</li> </ul>
<p><b>Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY)</b></p>	<ul style="list-style-type: none"> <li>• DDU-GKY, a <b>scheme of Ministry of Rural Development</b>, is a part of the National Rural Livelihood Mission.</li> <li>• It is tasked with dual objectives of adding diversity to the incomes of rural poor families and cater to career aspirations of rural youth.</li> <li>• It provides demand led skill training at no cost to <b>rural ural youth from poor families in the age group of 15 to 35 years. (For SC/ST/Women/PVTG/PWD: upto 45 Yrs)</b>.</li> <li>• It seeks to ensure guaranteed placement for at least 75% trained candidates.</li> </ul>
<p><b>Ministry of Agriculture launched Centralized Farm Machinery Performance Testing Portal</b></p>	<ul style="list-style-type: none"> <li>• It aims to <b>improve services of farm machinery testing institutions</b> and bring out transparency in the entire process of testing and evaluation of machines.</li> <li>• This portal will <b>facilitate manufacturers in applying, communicating and monitoring progress of testing</b> of their machines in a seamless manner as it is easily accessible from any location and from any device connected to Internet.</li> </ul>
<p><b>RAISE 2020- 'Responsible AI for Social Empowerment 2020'</b></p>	<ul style="list-style-type: none"> <li>• It is a first of its kind, global meeting of minds on Artificial Intelligence (AI) to drive India's vision and roadmap for social transformation, inclusion and empowerment through responsible AI.</li> <li>• It will facilitate an exchange of ideas <b>to create mass awareness about the need to ethically develop and practice AI</b>.</li> <li>• It will be organized by <b>Ministry of Electronics and Information Technology in collaboration with NITI Aayog</b>.</li> </ul>
<p><b>National Service Scheme (NSS)</b></p>	<ul style="list-style-type: none"> <li>• NSS is a Centrally Sector Scheme (<b>Ministry of Youth Affairs &amp; Sports</b>) which was launched in the year 1969 with the <b>primary objective of developing the personality and character of the student youth</b> through voluntary community service.</li> <li>• <b>NSS volunteers work on issues of social relevance</b>, which keep evolving in response to the needs of the community, through regular and special camping activities.</li> </ul>
<p><b>Passage Exercise (PASSEX)</b></p>	<ul style="list-style-type: none"> <li>• <b>Indian Navy and the Royal Australian Navy conducted PASSEX</b> in Eastern Indian Ocean Region (IOR).                     <ul style="list-style-type: none"> <li>➤ PASSEXs are regularly conducted by the Indian Navy with units of friendly foreign navies.</li> </ul> </li> <li>• It comes in the backdrop of growing activities by the Chinese navy in the IOR.</li> <li>• <b>Other military exercises with Australia:</b> Ex AUSTRA HIND, Ex AUSINDEX, EX PITCH BLACK.</li> </ul>

8468022022, 9019066066
www.visionias.in

