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COP 25 Ends Without Concrete Outcome

Why in News

The 25th edition of the **Conference of the Parties (COP25)** to the United Nations Framework Convention on Climate Change (UNFCCC) ended without any outcome on the **creation of a system of credits for reduction of emissions** for the second year in a row.

- Earlier, COP24 at Katowice (Poland) 2019 also couldn't decide on issues like the creation of new carbon markets, emission reduction targets, etc.
- This was the **longest climate COP meeting** ever in 25 nearly annual editions.

Key Points

- **"Chile-Madrid Time for Action" declaration:**
 - The summit passed the declaration calling on countries to **improve** their current pledges to **reduce greenhouse gas** emissions.
 - It also endorsed to help poor countries that are suffering the effects of climate change, although **any new funds were not allocated for the purpose**.
 - It called on the **"urgent need" to cut planet-heating greenhouse gases** in line with the goals of the 2015 Paris climate change accord.
 - The Paris Accord established the common goal of **avoiding a temperature increase of more than 1.5 degrees Celsius** by the end of the century.
 - So far, the world is on **course for a 3 to 4 degree Celsius rise**, with potentially dramatic consequences for many countries, including rising sea levels and fiercer storms.

- **Disagreements:**
 - The Summit **couldn't** reach a **final agreement on Carbon markets**.
Carbon markets allow for buying and selling of carbon emissions with the objective of reducing global emissions.
 - On the definition and composition of **Climate finances**.
Climate finances refer to local, national or transnational financing—drawn from public, private and alternative sources of financing to support mitigation and adaptation actions that will address climate change.
 - The **voluntary commitments** to be made by nations towards emission reductions.
 - The key **polluting countries** responsible for **80% of the world's** emissions **did not make any substantial announcement** while smaller countries announced their targets to reduce emissions in the coming years.
It backtracks on a principle of the **1992 convention of the Earth Summit (Rio de Janeiro, Brazil)** that states that rich countries have the biggest historical responsibility for emissions and should pay to help the poor to fix the problem.
- The **next Climate Summit will be held in Glasgow (Scotland) in 2020** which will decide about the liability for damages caused by rising temperatures.

Source: TH

First Meeting of National Ganga Council

Why in News

Recently, the Prime Minister chaired the **first meeting of the National Ganga Council at Kanpur, Uttar Pradesh**.

- The **first meeting** of the Council was aimed at reinforcing the importance of a '**Ganga-centric**' approach in all departments of the concerned states as well as relevant Central Ministries.
- The National Ganga Council, also known as the National Council for Rejuvenation, Protection, and Management of River Ganga was set up in **2016**. It **replaced the National River Ganga Basin Authority (NRGBA)**.

Key Points

- The '**Namami Gange**' should holistically evolve to '**Arth Ganga**' i.e. a sustainable development model with a focus on economic **activities related to Ganga**.

- **Setting up of a digital dashboard** where data from villages and urban bodies to be **monitored** on a daily basis by **NITI Ayog and Ministry of Jal Shakti**.
- The need to increase the efficiency of **district Ganga committees** for effective implementation of the **Namami Gange Programme**.
- The **potential of religious and adventure tourism** in the Ganga river basin area to be explored in future. As the income generated from tourism activities would help to generate sustainable income for cleaning the Ganga.

National Ganga Council

- The National Ganga Council is **chaired** by **Prime Minister**.
- The National Ganga Council is formed under the **Environment (Protection) Act (EPA), 1986**.
- It has been given overall responsibility for the superintendence of pollution prevention and rejuvenation of River Ganga Basin, including Ganga and its tributaries.
- National Mission for Clean Ganga (NMCG) acts as an implementation arm of the National Ganga Council.
 - NMCG was established in the year 2011 as a registered society.
 - It has a two-tier management structure and comprises of Governing Council and Executive Committee.
 - The aims and objectives of NMCG are:
 - To ensure effective control of pollution and rejuvenation of the river Ganga by adopting a river basin approach to promote inter-sectoral coordination for comprehensive planning and management.
 - To maintain minimum ecological flows in the river Ganga with the aim of ensuring water quality and environmentally sustainable development.

Source: TH

Disha Bill, 2019

Why in News

The **Andhra Pradesh Disha Bill, 2019** i.e. **Andhra Pradesh Criminal Law (Amendment) Bill, 2019** which provides for death sentence for offences of rape and gangrape has been passed recently.

The Bill amends relevant provisions of the Indian Penal Code, 1860 and the Code of Criminal Procedure Act, 1973.

Features Different from Existing Laws

- A **Women & Children Offenders Registry** is to be established, operated and maintained by the Andhra Pradesh Government in an electronic form. This registry will be made public and will be available to law enforcement agencies.

The Government of India has also launched a **National Registry of Sexual offenders** but the database is not digitized and is not accessible to the public.

- **Exclusive punishment of death penalty in cases relating to rape and murder of a woman** where there is adequate conclusive evidence.

At present, provision for punishing an offender in a rape case is a fixed jail term leading to life imprisonment or the death sentence.

- **Reduces the judgment period:** The judgment will have to be pronounced in **21 working days** from date of offence in cases of rape crimes with substantial conclusive evidence.

The **existing** judgment period as per the Nirbhaya Act, 2013 and Criminal Amendment Act, 2018 is **4 months** (two months of investigation period and two months of trial period).

- **Stringent punishment for sexual offences against children:** The Bill prescribes life imprisonment for sexual offences against children.

Under the **POCSO Act, 2012**, the punishment ranges from a minimum of three years to a maximum of seven years of imprisonment.

- **Punishment for harassment of women through social media:** In cases of harassment of women through email, social media, digital mode or any other form, the guilty shall be punishable with imprisonment.

At present, **no such provision exists in the Indian Penal Code.**

- **Investigation Related Provisions**

- **Exclusive special courts** in each district of the State to ensure speedy trial. These courts will exclusively deal with cases of offences against women and children including rape, acid attacks, stalking, voyeurism, social media harassment of women, sexual harassment and all cases under the POCSO Act.
- Constitution of **special police teams** and appointment of the special public prosecutor in special courts. There is **no such provision in existing laws.**

Source: TH

Ajanta and Ellora Caves

Why in News

Two tourist visitor centres set up at Ajanta and Ellora caves by the Maharashtra government have been shut due to their pending water and electricity dues worth ₹5 crore.

Ajanta Caves



- **Location:** Ajanta is a series of rock-cut caves in the **Sahyadri ranges (Western Ghats)** on Waghora river near Aurangabad in **Maharashtra**.
- **Number of Caves:** There are a total of **29 caves** (all buddhist) of which 25 were used as Viharas or residential caves while 4 were used as Chaitya or prayer halls.
- **Time of Development**
 - The caves were developed in the period between **200 B.C. to 650 A.D.**
 - The Ajanta caves were inscribed by the Buddhist monks, under the patronage of the **Vakataka kings** – Harishena being a prominent one.
 - Reference of the Ajanta caves can be found in the travel accounts of **Chinese Buddhist travellers Fa Hien** (during the reign of Chandragupta II; 380- 415 CE) and **Hieun Tsang** (during the reign of emperor Harshavardhana; 606 - 647 CE).
- **Painting**
 - The figures in these caves were done using **fresco painting**.
 - The outlines of the paintings were done in red colour. One of the striking features is the **absence of blue colour** in the paintings.
 - The paintings are generally **themed around Buddhism** – the life of Buddha and Jataka stories.
- **UNESCO Site:** The caves were designated a UNESCO World Heritage site in **1983**.

Ellora Caves



- **Location:** It is located nearly 100 Kms away from Ajanta caves in the **Sahyadri range of Maharashtra**.

- **Number of Caves:** It is a group of **34 caves** – 17 **Brahmanical**, 12 **Buddhist** and 5 **Jain**.
- **Time of Development**
 - These set of caves were developed during the period between the **5th and 11th centuries A.D.** (newer as compared to Ajanta Caves) by various guilds from Vidarbha, Karnataka and Tamil Nadu.
 - That is why the caves reflect a natural diversity in terms of theme and architectural styles.
- **UNESCO Site:** The Ellora complex was designated a UNESCO World Heritage site in 1983.
- The most remarkable of the cave temples is Kailasa (**Kailasanatha; cave 16**), named for the mountain in the Kailasa Range of the Himalayas where the Hindu god Shiva resides.

Sahyadri Range

- Western Ghats are locally known by different names such as **Sahyadri in Maharashtra, Nilgiri hills in Karnataka** and **Tamil Nadu** and **Anaimalai hills and Cardamom hills in Kerala**.
- The Western Ghats are a north-south chain of mountains or hills that mark the western edge of the Deccan plateau region.
- Western Ghats are comparatively higher in elevation and more continuous than the Eastern Ghats. Their average elevation is about 1,500 m with the height increasing from north to south.
- **Anaimudi (2,695 m)**, the highest peak of Peninsular plateau is located on the Anaimalai hills of the Western Ghats followed by Dodabetta (2,637 m) on the Nilgiri hills.
- Most of the Peninsular rivers such as **Krishna and Cauvery** have their origin in the Western Ghats.

Source: TH

Britain Elections

Why in News

Britain elected Boris Johnson of the Conservative Party as its Prime Minister in the recently concluded elections. This victory gives Boris Johnson a clear mandate to take the United Kingdom out of the **European Union** without any delay.

Key Points

Johnson called for an early election after reaching a new **divorce deal** with the EU. He turned the poll into a de facto **Brexit referendum**.

His strategy was to consolidate the pro-Brexit vote, get a fresh mandate in Parliament and then quicken the Brexit process.

The Brexit Financial Settlement (Divorce Bill) is a sum of money UK needs to pay to the EU for settling all shares of the financial obligations undertaken while being a member of the EU.

- **Brexit:** In 2016, a referendum was held by the U.K. government and the nation voted to leave the EU. Now the process is under the U.K. Parliament for formal withdrawal from the EU.
- **Brexit** supporters wanted Britain to take back full control of its borders and reduce the number of people coming here to live and/or work.
- **Impact on Britain:**
 - It will give a boost to the nationalism with tougher laws on immigration.
 - Britain will also have to deal with Brexit's effect on its economy, including the long process of new bilateral trade agreements with many other countries, including India.

Challenges

The road ahead is not smooth even after a timely exit. The **Brexit agreement** itself is **controversial** and it could **erect an effective customs border** between **Britain** and the **island of Ireland** after implementation.

It raises the concern on Brexit's impact on the **Good Friday Agreement**.

The Good Friday Agreement or the Belfast Agreement: It was a peace agreement between the British and Irish governments and most of the political parties in Northern Ireland, on how Northern Ireland should be governed.

- **Negotiating an agreement** on the U.K.'s future relationship with the EU is an equally challenging task.
- The **Scottish National Party** swept Scotland's seats which might revive pro-independence sentiments in Scotland.
 - Scotland had a **referendum in 2014** on whether it should stay in the U.K. or be independent of it. The referendum **rejected independence** and the Scottish population was in favour of remaining in the European Union.
 - Scotland rejected independence by **55% to 45%**.

Source: TH

Fuel Cell Electric Vehicle

Why in News

Recently, the **Supreme Court** of India has directed the government to look into the feasibility of **Fuel Cell Electric Vehicle (FCEV)** to deal with air pollution.

- Research is ongoing at the **International Research Center for Hydrogen Energy at Kyushu University, Japan** on FCEVs based on **hydrogen cell technology**, also known as '**fuel cells**'.
- In this context the Indian government is the The research is being studied closely by the as it readies a hydrogen-fuelled blueprint.

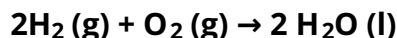
Fuel Cell

- Fuel cells and batteries convert chemical energy into electrical energy and are very useful forms of galvanic cell.
A galvanic or voltaic cell is an electrochemical cell that converts chemical energy into electrical energy through the redox reactions that occur within the cell.
- Galvanic cells that are designed to convert the energy of combustion of fuels like hydrogen, methane, methanol, etc. directly into electrical energy are called fuel cells. One of the most successful fuel cells uses the reaction of hydrogen with oxygen to form water.

Key Points

Mechanism: The **Fuel Cell Electric Vehicle (FCEV)** combines hydrogen and oxygen to generate an electric current and **water is the only byproduct.**

Hydrogen + Oxygen = Electricity + Water Vapour



- **Fuel Cell Electric Vehicle (FCEV)** engines are **similar to the conventional internal combustion engines** because they also **rely on a constant supply** of fuel (hydrogen) and oxygen.
However, there are **no moving parts** in the fuel cell, so they are **more efficient and reliable.**
- **Stationary fuel cells** are the **largest and most powerful** fuel cells. These are being designed to provide a cleaner, reliable source of on-site power to hospitals, banks, airports and homes.
- The successful development of the technology would **provide energy for transportation and electric power.**

- **Hydrogen fuel tanks** are made from **highly durable carbon fibre**. Some FCEVs have a triple-layer hydrogen tank made of woven carbon fibre.

Advantages

- FCEVs produce much **smaller quantities of greenhouse gases** and none of the air pollutants that cause health problems.
- Fuel cells **emit only heat and water as a byproduct** and are **far more energy-efficient** than traditional combustion technologies.
- FCEVs **do not need to be plugged in for charging**, like battery-powered EVs.
- There is a **wide availability of resources for producing hydrogen**.

Disadvantages

- The **process of making hydrogen needs energy**, often from **fossil fuel** sources, which raises questions over hydrogen's green credentials.
- Handling of hydrogen is a safety concern because it is **more explosive** than petrol.
- These vehicles are expensive and fuel dispensing pumps are scarce.

Status in India

- In India, so far, the definition of **Electric Vehicles only covers Battery Electric Vehicles (BEVs)**.
BEVs have **no internal combustion engine or fuel tank** and run on a **fully electric drivetrain powered by rechargeable batteries**.
- The Government of India has launched **FAME India Scheme** with the objective to support hybrid/electric vehicles market development and manufacturing ecosystem. It also covers Hybrid & Electric technologies like Mild Hybrid, Strong Hybrid, Plug in Hybrid & BEVs.
- The **Ministry of New and Renewable Energy**, under its **Research, Development and Demonstration (RD&D) Programme**, has been supporting various projects on hydrogen and fuel cells.
- The **Ministry of Science and Technology** has supported two networked centres on **hydrogen storage** led by IIT Bombay and Nonferrous Materials Technology Development Centre, Hyderabad.

Source: IE

Government Instant Messaging System

Why in News

Government Instant Messaging System (GIMS) is a prototype of an Indian equivalent of popular messaging platforms, such as WhatsApp and Telegram for secure internal use.

- GIMS seeks to replace existing platforms like WhatsApp, Telegram and Signal which are being used by a majority of government departments and organisations.
- It will be used by **employees of Central and state government departments and organisations for secure intra and inter organisation communications.**
 - It employs **end-to-end encryption for one-to-one messaging.**
 - The **server** hosting GIMS is installed **within the country** and the information stored would be in the government-based cloud — NIC-operated data centres that are only meant for use by the government and its departments.
 - **GIMS Portal** will **administer and monitor** the working of an app.
 - Besides, **one-to-one messaging and group messaging**, it also provides for **documents and media sharing** in keeping with the hierarchies in the government system.
 - GIMS is designed and developed by the **Kerala unit of National Informatics Centre (NIC).**
- The launch of the new app comes after the recent controversy over the WhatsApp breach of some Indian users' mobile devices due to Pegasus.

Source: IE

StrandHogg

Why in News



The Union Home Ministry has alerted States, warning them about the vulnerability of the **Android operating system** to a bug called '**StrandHogg**'.

About StrandHogg

- It is a vulnerability in android which allows **real-time malware applications** to pose as genuine applications and access user data of all kinds.

- It can **listen** to the conversations, access photo album, read/send messages, **make calls, record** conversations, **get login credentials** to various accounts, access private images, files, contact details, call logs and location information without being apparent to the affected users.

Source: TH

Sustainable Development Cell for Coal Mining

Why in News

The **Ministry of Coal** has decided to establish a 'Sustainable Development Cell (SDC)' in order to promote environmentally sustainable coal mining in the country.

The Cell envisages to provide a better environment to people working and residing in the vicinity of Mines.

Role of the SDC

- It will advise, mentor, plan and monitor the mitigation measures taken by the coal companies for maximising the utilisation of available resources in a sustainable way, minimising the adverse impact of mining and mitigating it for further ecosystem services and will act as nodal point at Ministry of Coal level in this matter.
- It will also monitor the effective utilisation of the Mine Closure Fund and environment budgets of different coal companies.
- The SDC will focus on land amelioration and afforestation, air quality, emission and noise management, mine water management, sustainable overburden management, sustainable mine tourism, planning and monitoring.

Source: PIB
