



CROSS & CLIMB
MAKING THE ELIGIBLE ENTITLED

CROSS & CLIMB ROHTAK

School of Research Based Learning & Competition



CROSS & CLIMB
MAKING THE ELIGIBLE ENTITLED

Current Affairs - 21 October 2024

NATIONAL WATER AWARDS 2023



The Hon'ble President of India will confer the 5th National Water Awards 2023 on October 22nd 2024 at

Vigyan Bhawan, New Delhi.

- The first edition of the National Water Awards was introduced by the Department of Water Resources, River Development and Ganga Rejuvenation in 2018.
- The award focuses on the good work and efforts made by individuals and the organizations across the country in attaining the government's vision of a 'Jal Samridh Bharat'.
- The awards are for creating awareness among the people about the importance of water and motivating them to adopt best water usage practices.
- The 5th National Water Awards, 2023, is given for 09 categories viz Best State, Best District, Best Village Panchayat, Best Urban Local Body, Best School or College, Best Industry, Best Water User Association, Best Institution (other than school or college), and Best Civil Society.
- In the category of Best State, the first prize has been conferred upon Odisha, with Uttar Pradesh securing the second position, and Gujarat and Puducherry jointly securing the third position.
- Each award winner will be conferred with a citation and a trophy as well as cash prizes in certain categories.

WHAT IS THE MOONLIGHT PROGRAMME?



- The programme will have a constellation of about five lunar satellites (one for high data rate communications and four for navigation) that will allow accurate autonomous landings, high-speed communication, and surface mobility.



CROSS & CLIMB
MAKING THE ELIGIBLE ENTITLED

CROSS & CLIMB ROHTAK

School of Research Based Learning & Competition



CROSS & CLIMB
MAKING THE ELIGIBLE ENTITLED

Current Affairs - 21 October 2024

- It is Europe's first-ever dedicated satellite constellation for telecommunication and navigation services for the Moon.
- These satellites will reportedly enable data transfer over 2,50,000 miles or 4,00,000 kilometres between the Earth and the Moon.
- The prime focus of the Moonlight programme will be to offer coverage at the Moon's South Pole.
- The South Pole of the moon is a key area for many missions owing to lighting conditions and the potential presence of water ice within craters that perpetually remain in the shadows.
- As part of the programme, the first step will be the launch of Lunar Pathfinder, a communications relay satellite built by Surrey Satellite Technology LTD, in 2026.
- The initial services of the programme will reportedly begin by the end of 2028, and the system is said to be fully operational by 2030.
- The ESA is working with NASA and the Japanese space Agency JAXA on LunaNet, which is essentially a framework to standardise communication and navigation for the Moon.

PROHIBITION OF CHILD MARRIAGE ACT (PCMA), 2006



- PCMA came into force in 2006 to prevent child marriage and ensure the eradication of the practice.
- It replaced the Child Marriage Restraint Act of 1929.
- The primary object of the Act is to prohibit solemnization of child marriage.
- This Act is armed with enabling provisions to prohibit child marriages, provide relief to victims, and enhance punishment for those who abet, promote, or solemnize such marriages.
- As per the act, the age of marriage for boys is 21, and for girls, it is 18, and any marriage of people below this age will be considered a child marriage which is illegal, an offence, and is punishable under the law.



CROSS & CLIMB
MAKING THE ELIGIBLE ENTITLED

CROSS & CLIMB ROHTAK

School of Research Based Learning & Competition



CROSS & CLIMB
MAKING THE ELIGIBLE ENTITLED

Current Affairs - 21 October 2024

- Any person can report an incidence of child marriage before or after it has been solemnized.

Nodal Officer:

- The District Collector is the Nodal Officer at the district level for the purpose of implementation of the Act.
- He/she shall periodically review the implementation of the Act within the respective district and take all necessary measures for the proper and effective implementation of the Act.
- Child Marriage Prohibition Officers (CMPO) are to be appointed in every state to prohibit child marriages and ensure the protection of the victims as well as prosecution of the offenders.

Punishments:

- Child marriage is an offence punishable with hard imprisonment, or with fine or both.
 - The courts can issue injunctions prohibiting solemnization of child marriages.
 - The offences under the Act are cognizable and non-bailable.
-

CLIMATE FINANCE TO DEVELOPING NATIONS

- According to the **United Nations Framework Convention on Climate Change (UNFCCC)**, climate finance refers to **local, national, or transnational financial flows** that support efforts to **mitigate** and **adapt** to climate change.
- These funds can come from **public, private, and alternative sources**.
- Key uses of climate finance include:
 - **Mitigation:** Reducing or preventing greenhouse gas emissions.
 - **Adaptation:** Helping vulnerable regions and communities adapt to the impacts of climate change.
- **Developed countries** are expected to contribute the bulk of climate finance, given their historical responsibility for emissions, while **developing nations** need this support to manage both their developmental needs and climate action.

Current Affairs - 21 October 2024

Why Do Developing Nations Need Climate Finance?

- Developing countries are among the **most vulnerable** to climate change due to:
 - **Geographical factors:** Many are located in regions more prone to extreme weather conditions.
 - **Economy reliance on agriculture:** Sectors like agriculture, which are particularly sensitive to climate change, are often the backbone of their economies.
 - **Limited resources:** These nations have fewer financial and technological resources to adapt to climate change or recover from climate-related disasters.
- For example, the **International Energy Agency (IEA)** reported that in **2021**, around **675 million people** in the developing world lacked access to electricity.
- These countries face not only developmental challenges but also the urgent need for climate-friendly energy solutions, which are often more expensive.

India's Climate Finance Needs:

- India is a prime example of a country with ambitious climate goals but significant financial needs. India's climate targets include:
 - **500 GW of non-fossil fuel capacity by 2030.**
 - **5 million metric tonnes of green hydrogen (GH₂) production capacity annually.**
 - **Electric Vehicle (EV) penetration** across various categories by 2030.
- The cost to achieve these goals is enormous:
 - An estimated **₹16.8 lakh crore** will be required for renewable energy projects by 2030.
 - India's **Green Hydrogen Mission** alone requires an additional **₹8 lakh crore** in investments.
 - To meet its **electric vehicle (EV)** targets, consumers will need to spend **₹16 lakh crore** on EVs.



CROSS & CLIMB
MAKING THE ELIGIBLE ENTITLED

CROSS & CLIMB ROHTAK

School of Research Based Learning & Competition



CROSS & CLIMB
MAKING THE ELIGIBLE ENTITLED

Current Affairs - 21 October 2024

Challenges in Climate Finance:

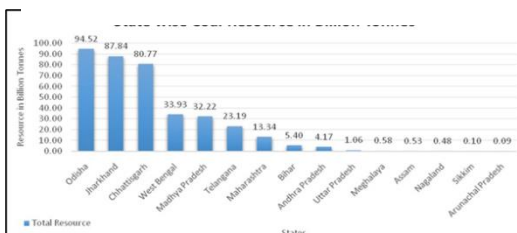
- The road to securing adequate climate finance for developing countries is fraught with challenges:
 - **High capital costs:** Developing countries often face **twice the cost** of capital for green technologies, such as solar photovoltaics, compared to developed nations.
 - **Competing developmental needs:** Developing nations need to balance economic growth with climate action, often needing external financial support to do so.

Conclusion:

- As the world prepares for **COP29**, climate finance remains at the forefront of global negotiations.
- Developing countries, including India, need substantial external financial assistance to meet their climate goals and adapt to the growing impacts of climate change.
- The ongoing debate around the **\$100 billion commitment** and the push for a more ambitious **NCQG** highlights the urgency for **developed countries** to fulfil their responsibilities and ensure that **vulnerable nations** have the resources they need to fight climate change effectively.

THE HUGE COST OF MOVING AWAY FROM COAL

A recent study by iForest (International Forum for Environment, Sustainability and Technology) reveals that India will need over \$1 trillion (Rs 84 lakh crore) over the next 30 years for a just transition away from coal. The study, the first of its kind, estimates the costs of phasing down coal mines and plants while ensuring socio-economic stability in coal-dependent regions.



Coal Resource in India

- According to the National Coal Inventory of 2023, the total estimated coal reserve (resource) of India is **378. 21 billion tonnes as of 01.04.2023.**

Current Affairs - 21 October 2024

- **Coal Production**

- The All-India Production of coal during 2023-24 was 997.83 MT with a positive growth of 11.71%.

- **Coal Import**

- As per the present Import policy, coal can be freely imported (under Open General Licence) by the consumers themselves considering their needs based on their commercial consideration.
- Coking Coal is being imported by Steel sector mainly to bridge the gap between the requirement and indigenous availability and to improve the quality.
- Other sectors like Power sector, cement etc. and coal traders are importing non-coking coal.
- Total coal import during 2023-24 was 261 million tonnes.

Ensuring a Just Energy Transition in India

- A "just" energy transition refers to an equitable and inclusive shift towards a low-carbon economy that takes into account the needs of workers and communities dependent on fossil fuels.
 - As the world's second-largest coal producer, India employs a vast number of individuals in coal mining, thermal power plants, logistics, and related sectors.
 - Public sector coal companies alone employ over 3.6 lakh workers, with many more in the private sector.
 - As India aims for net-zero emissions by 2070, growing its renewable energy capacity will be crucial.
- **Costs associated with a just transition**
 - A study on India's just transition from coal, based on assessments of coal-dependent districts and international examples from South Africa, Germany, and Poland, identified eight key cost components.



CROSS & CLIMB
MAKING THE ELIGIBLE ENTITLED

CROSS & CLIMB ROHTAK

School of Research Based Learning & Competition



CROSS & CLIMB
MAKING THE ELIGIBLE ENTITLED

Current Affairs - 21 October 2024

- These include:
 - mine closures and site repurposing,
 - retiring coal plants and converting them to clean energy,
 - skilling workers for green jobs,
 - fostering new businesses,
 - community support,
 - green energy investments,
 - compensating states for revenue loss, and
 - planning costs.
 - Nearly 48% of the estimated \$1 trillion required over the next 30 years will be needed for green investments to replace coal-based energy infrastructure with cleaner alternatives.
-

SMART INSULIN (NNC2215)



Recently, scientists from Denmark, the UK, and Czechia, and the University of Bristol have developed insulin called NNC2215 that automatically responds to changing blood glucose levels.

- The newly developed insulin named NNC2215 comprises two parts: a ring-shaped structure, and a molecule with a similar shape to glucose called a glucoside.

How does it work?

- When blood sugar levels are low, the glucoside binds to the ring, keeping the insulin in an inactive state to prevent further lowering of blood sugar.
- But, as blood glucose rises, the glucoside is replaced by glucose itself, triggering the insulin to shift its shape and become active, helping bring blood sugar levels down to safer ranges.
- Researchers who developed NNC2215 found it to be as effective as human insulin at lowering blood glucose in rats and pigs.



CROSS & CLIMB
MAKING THE ELIGIBLE ENTITLED

CROSS & CLIMB ROHTAK

School of Research Based Learning & Competition



CROSS & CLIMB
MAKING THE ELIGIBLE ENTITLED

Current Affairs - 21 October 2024

Diabetes

- Diabetes is a chronic disease that occurs when the pancreas can no longer make insulin, or the body cannot make good use of the insulin it produces.
- Insulin is a hormone that regulates blood glucose.

Types of Diabetes

- Type 1 diabetes: It often starts in childhood, occurs when the pancreas do not produce insulin (or enough insulin).
- Type 2 diabetes: It results from the body's ineffective use of insulin that it produces.
- Gestational diabetes (GDM): It is a type of diabetes that consists of high blood glucose during pregnancy and is associated with complications for both mother and child.

INTERNATIONAL ABHIDHAMMA DIVAS



Recently, the Prime Minister of India addressed a ceremony in celebration of International Abhidhamma Divas and recognition of Pali as classical language in New Delhi.

- Abhidhamma Divas commemorates the day when Lord Buddha descended from the celestial realm, Tāvatiṃsa-devaloka, to Sankassiya (now Sankisa Basantapur) in Uttar Pradesh.
- The Asokan Elephant Pillar, a historical marker at the site, marks this significant event.
- According to Theravāda Buddhist texts, Lord Buddha spent three months teaching the Abhidhamma to the deities in Tāvatiṃsa, including his mother.
- This year International Abhidhamma Divas was hosted by the Ministry of Culture in collaboration with the International Buddhist Confederation (IBC).

Teachings of Abhidhamma

- The Abhidhamma adopts a specialized and analytical approach to explore reality.



CROSS & CLIMB
MAKING THE ELIGIBLE ENTITLED

CROSS & CLIMB ROHTAK

School of Research Based Learning & Competition



CROSS & CLIMB
MAKING THE ELIGIBLE ENTITLED

Current Affairs - 21 October 2024

- It offers a detailed framework for understanding the nature of existence, addressing the processes of birth, death, and mental phenomena in a precise and abstract manner.
 - The four ultimate realities in the Abhidhamma are: "citta" (consciousness), "cetasika" (mental factors), "rūpa" (materiality), and "nibbāna" (final liberation).
-

EXERCISE NASEEM-AL-BAHR



- It is a bilateral naval exercise between India and Oman.
 - It was initiated in 1993, symbolises the long term strategic relationship between the two countries.
 - Oman is the first country in the Gulf Cooperation Council (GCC) which has been in conducting bilateral exercises with India jointly.
 - The exercise was conducted in two phases: with the harbour phase followed by the sea phase.
 - As part of harbour activities, personnel from both Navies engaged in professional interactions, including Subject Matter Expert Exchanges and planning conferences. In addition, sports fixtures and social engagements were also held.
 - During the sea phase of the exercise both ships carried out various evolutions, including gun firings at surface inflatable targets, close-range anti-aircraft firings, manoeuvres, and Replenishment at Sea Approaches (RASAPS).
 - The integral helicopter operated from INS Trikand and undertook cross-deck landings and vertical replenishment (VERTREP) with RNOV Al Seeb.
 - Additionally, the Indian Navy's Dornier aircraft provided Over-the-Horizon Targeting (OTHT) data with the participating ships.
 - Significance: The exercise helped strengthen interoperability and enhanced understanding of each other's best practices.
-