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## Prelim Bits 08-10-2023 & 09-10-2023 | UPSC Daily Current Affairs

### Critical Minerals and Clean Energy Summit, 2023

*The 1<sup>st</sup> edition of the International Energy Agency's Critical Minerals and Clean Energy Summit was held recently at Paris, France.*

- **Aim** - To discuss the challenges and opportunities behind rising demand for [critical minerals](#) by sharing experiences.

*Critical minerals are minerals like copper, lithium, nickel and cobalt that are essential for developing clean energy technologies, economic development and national security.*

#### 6 Key Action Areas of the Summit

- Accelerating progress towards diversified minerals supplies.
- Unlocking the power of technology and recycling.
- Promoting transparency in the markets.
- Enhancing the availability of reliable information.
- Creating incentives for sustainable and responsible production.
- Strengthening efforts on international collaboration.

*IEA's 2024 Ministerial Meeting will be held in Paris, France and will be co-chaired by Ireland and France.*

#### International Energy Agency (IEA)

- The IEA was founded in **1974** to ensure the security of oil supplies.
- It is a **Paris** based autonomous intergovernmental organization established in the framework of the Organisation for Economic Co-operation and Development (OECD).
- **Only OECD member** states can become members of the IEA and India is an associate member of IEA.
- The IEA acts as a policy adviser to its member states, but also works with non-member countries, especially China, India, and Russia.

*Based on the 'Report of the Committee on Identification of Critical Minerals'*

constituted by the Ministry of Mines, India classifies **30 critical minerals** as essential for its economic development and national security.

## References

1. [The Indian Express | Critical Minerals & Clean Energy Summit 2023](#)
2. [International Energy Agency | Critical Minerals summit](#)

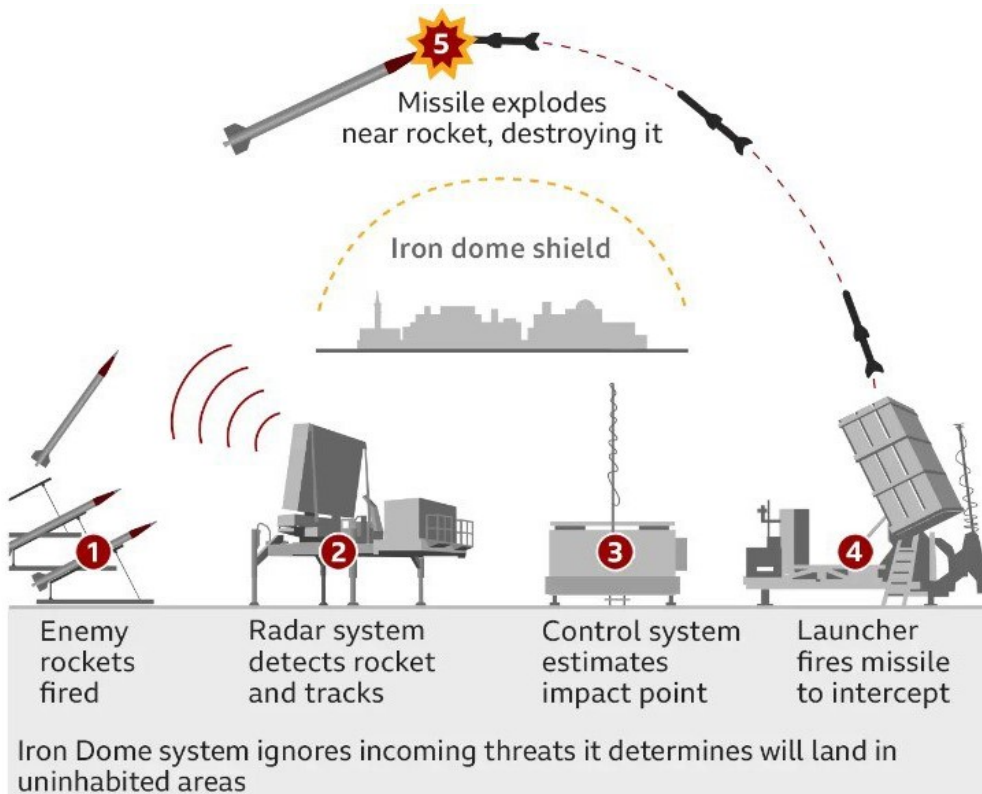
## Iron Dome

*Hamis militant group of Palestine in their attack against Israel since 1948 were able to breach Israel's renowned Iron Dome defense system.*

- **Developed by** - The state-owned Rafael Advanced Defence Systems with the backing of the United States during *2006 Israeli-Lebanon war*.
- **Operational** - It became operational in 2011.

Features	3 Main Systems
<ul style="list-style-type: none"><li>• Short range</li><li>• Ground-to-air defence</li><li>• Laser Controlled Fuse</li><li>• Tamir interceptor missiles</li></ul>	<ul style="list-style-type: none"><li>• <b>Detection and tracking radar</b> - To spot any incoming threats</li><li>• <b>Battle management and weapon control system (BMC)</b> - It basically coordinates between the radar and the interceptor missile.</li><li>• <b>Missile Firing Unit</b> - Neutralise any rockets or missiles.</li></ul>
Iron dome is capable of being used in all weather conditions, including during the <b><i>day and night</i></b> .	

- On reaching within 10 metres of target, *laser-controlled fuse, activates and blasts* the missile with shrapnel.



- **Targets**

- Rockets, artillery & mortars (C-RAM).
- Aircraft, helicopters and unmanned aerial vehicles.

### Other systems of Israel

- **David's Sling and Arrow** - To identify and eliminate medium-and long-range threats like drones and planes.
- **Arrow-3** - It was designed to intercept and counter ballistic missiles outside the atmosphere of the earth.

### References

[The Indian Express | Israel's Iron Dome](#)

### Dakar Declaration on Climate Change 2023

*Recently, Ministers from 46 Least Developed Countries (LDC) issued a joint Dakar Declaration on Climate Change 2023.*

- **Aim** - To outline the LDC's expectation and priorities for 28th Conference of Parties (COP28) to the UN Framework Convention on Climate Change.

*The Conference of Parties (CoP-28) of [UNFCCC](#) will be held in 2023 at Dubai, UAE.*

*Dakar is the capital city of Senegal located in the West Africa*

### Dakar Declaration calls for

- Urgent global emissions reductions.
- Increased climate finance.
- To operationalise Loss and Damage Fund.
- Global Stocktake to close the gaps in global climate action.

- **Global Emission Reduction** - To revisit and strengthen the 2030 targets in their NDCs to limit warming to 1.5°C.

*IPCC's Synthesis Report for the 6<sup>th</sup> Assessment Reports cycle (IPCC AR6), shows that global greenhouse gas (GHG) emissions have continued to rise and that global warming is rapidly approaching 1.5°C.*

- **Climate Finance** - Developed countries shall deliver at least doubling adaptation finance delivered by 2025 through public, grant-based financing.
- To create a new Collective Quantified Goal on Climate Finance, greater than the current \$100 billion per year floor.
- **Operationalising Loss and Damage Fund** - To operationalise UNFCCC centralised carbon market mechanism by 2024.
- To implement the Article 6 of the Paris Agreement of capacity building programme.
- Global Stocktake - To prepare a roadmap for the period after 2023 to implement the recommendations from the first Global stocktake.

### Status of LDC

- Account for 14% of the global population.
- Contribute about 1% of emissions of the world.
- They bear the least historical responsibility for climate change.
- They are forced to adapt beyond their capabilities.
- They are at the forefront of the climate crisis.

## References

1. [Down to Earth | Dakar Declaration on Climate Change](#)
2. [Least Developing Countries | LDC group Ministerial Declaration](#)

## Reticulated Python

*Recently, a juvenile of world's longest snake species sighted inside IIT Madras.*

- **Scientific name** - *Malayopython reticulatus*
  - World's longest and 3<sup>rd</sup> heaviest snakes ever recorded.
  - Non-venomous, and slow-moving reptile.

- **IUCN status** - *Least concern* (LC).
- **Habitat** - Commonly found in Southeast Asia.
- **Range** - Their range includes Burma through Indochina and Borneo, Sulawesi, Ceram and Timor in Malay Archipelago.
- In India, they are found in the wild only in ***Nicobar Islands***.
- **Growing Conditions**
  - Tropical environments.
  - Heavily dependent on water.
  - Highly adaptable python species.



## Irula Tribes

- **Irula tribes**, also known as Iruliga, are a Dravidian ethnic group inhabiting the Indian states of Tamil Nadu, Kerala and Karnataka who are famously called as **Snake Catchers**.
- **Vadivel Gopal and Masi Sadaiyan** from the Irula community were granted Padma Shri in 2023 for expert snake catchers guiding and teaching people across the globe.

## References

[The Indian Express | Reticulated Python in IIT Madras](#)

## Invasive Mussels

*The National Green Tribunal (NGT) has ordered the government authorities to file a detailed report on the removal of invasive mussel species from Ennore-Pulicat wetland of Tamil Nadu.*

*A small sea creature that has a black shell with two parts that close tightly*

together.

## **Mytella strigata**

- *Scientific name* - *Mytella strigata*
- *Local Name* - *Kakka aazhi*
- *Native* - *South America*
- **Reasons for spread** - It spreads due to the discharge of ballast waters from ships.
- Human interference in the wetlands and pollution promotes a full-fledged infestation.
- After Cyclone Vardah in 2016, they began to intensify and spread far north towards the Pulicat waters.
- The firm, ash-covered riverbed is also helping the kaaka aazhi expand its territory.
- **Threats** - It prevents prawns from grazing or burying themselves in the sediment.
- It wipes out the local species like yellow clams (manja matti) and green mussels (pachai aazhi).

*Ennore-Pulicat wetlands are in the River Kosasthalaiyar basin which is the largest waterscape in Chennai and is mosaic of thriving ecologies.*

- **Issues over NGT Jurisdiction** - Kaaka aazhi is not an alien species as it has an entry in the Wildlife Protection Act, 1972 (WPA).
- NGT does not have jurisdiction over WPA, which is not listed in Schedule I of the NGT Act.

*National Green Tribunal (NGT), a statutory body formed in 2010 for disposal of cases related to environmental protection and other natural resources whose Southern Bench is at Chennai.*

## **References**

1. [The Hindu| NGT's Jurisdiction over Invasive Mussels](#)
2. [The Hindu| Threat of Invasive Mussels](#)



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