

## Prelim Bits 14-02-2023 | UPSC Daily Current Affairs

### MIIRA

*India is planning to propose the launch of a global initiative to encourage the consumption and production of millets.*

- ‘MIIRA’ or ‘**Millet International Initiative for Research and Awareness**’ will be launched by India during its G20 Presidency.
- MIIRA is aimed at coordinating millet research programmes at the international level.
- It is in line with the [International Year of Millets](#) and the Centre’s plan to make India a global hub for millets.

*The United Nations declared 2023 as the International Year of Millets.*

- **Aim** - MIIRA will aim to connect the millet research organisations across the world while also supporting research on millet crops.
- **Functions** - MIIRA will set up a web platform to connect researchers and hold international research conferences.
- It also plans to promote millet consumption by raising awareness.
- It will reemphasize the nutritional value and the climate resilient nature of millets.
- **Secretariat** - The MIIRA secretariat will be in Delhi.
- **Funding** - India will contribute the “seed money” for MIIRA.
- Each G20 member contributes to its budget in the form of a membership fee.

### References

1. [IE - MIIRA: India readies plan to popularise millets on world stage](#)

### Quasicrystal

*Scientists have discovered a new type of quasicrystal, one with 12-fold symmetry, in Nebraska, USA.*

- Quasicrystal is essentially a crystal-like substance.
- But a quasicrystal consists of atoms that are arranged in a pattern that doesn’t repeat itself regularly.
- The pattern repeats itself at irregular, yet predictable, intervals.
- In crystals atoms are arranged in a repeating pattern.
- Quasicrystals can be easily produced and scientists have been producing them in laboratories for years.
- It’s rare to discover naturally occurring quasicrystals.

- Quasicrystals are found in meteorites or the debris from nuclear blasts.
- Until the new discovery, 3 varieties of quasicrystals are found in nature:
  1. Icosahedrite (5-fold symmetry in 2D)
  2. Decagonite (10-fold symmetry)
  3. Proxidecagonite (quasicrystal approximant)

*The first one was identified in a meteorite, found in 2009 near the Khatyrka River in Chukhotka, Russia.*

*The second one was discovered in 2021 in the debris of the world's first nuclear explosion, which took place in 1945 in New Mexico.*

- For the first time that researchers have found a quasicrystal elsewhere.
- The **dodecagonal** quasicrystal (12-fold symmetry) was formed during an accidental electrical discharge in the sand dune.

## References

1. [IE - Scientists discover new 'quasicrystal' in Nebraska, US](#)
2. [The Hindu - Third source of natural quasicrystals](#)

## Diyodar Meteorite

*A meteorite streaked over India, breaking apart as it descended through the air to scatter over two villages in Banaskantha, Gujarat.*

- The pieces that fell have been dubbed the Diyodar meteorite, after the taluka in which the villages are located.
- This is the second recorded crash of an aubrite in India. The last was on December 2, 1852, in Basti, Uttar Pradesh.

*Worldwide, aubrites have crashed in at least 12 locations since 1836, including three in Africa and six in the U.S.*

- The meteorite is a rare, unique specimen of aubrite whose origin is not sure.
- **Aubrites** - Aubrite is a type of meteorite.
- They are coarse-grained igneous rocks that form in oxygen-poor conditions.
- It contains a variety of exotic minerals that are not found on Earth.
- The meteorite is also classified as a monomict breccia.
- It consisted of several pyroxene-bearing pieces held together by a scaffold of rocky material.
- This pyroxene didn't contain any iron but was rich in magnesium.
- Around 90% of the meteorite was composed of orthopyroxene.

*Pyroxenes are silicates consisting of single chains of silica tetrahedra (SiO<sub>4</sub>).*

*Orthopyroxenes are pyroxenes with a certain structure.*

## References

1. [The Hindu - 'Rare, unique': Diyodar meteorite](#)

## Global Biofuel Alliance

*India will work together with Brazil and the United States during the next few months towards the development of a Global Biofuels Alliance.*

*Brazil, India, and the United States are leading biofuel producers and consumers in the world.*

- The Global Biofuel Alliance is one of the priorities under India's G20 Presidency.
- Global Biofuels Alliance will be developed by Brazil, India, and the United States together.
- The Global Biofuel Alliance will also be joined by other interested countries.
- **Aim** - Facilitating cooperation and intensifying the use of sustainable biofuels, including in the transportation sector.
- **Emphasis** - It will place emphasis on strengthening markets, facilitating global biofuels trade and developing concrete policy lesson-sharing.
- It will also emphasize the already implemented best practices and success cases.
- **Work** - In collaboration with and complement the relevant existing regional and international agencies as well as initiatives such as
  1. The Clean Energy Ministerial Bio-future Platform,
  2. The Mission Innovation Bioenergy initiatives, and
  3. The Global Bioenergy Partnership (GBEP).

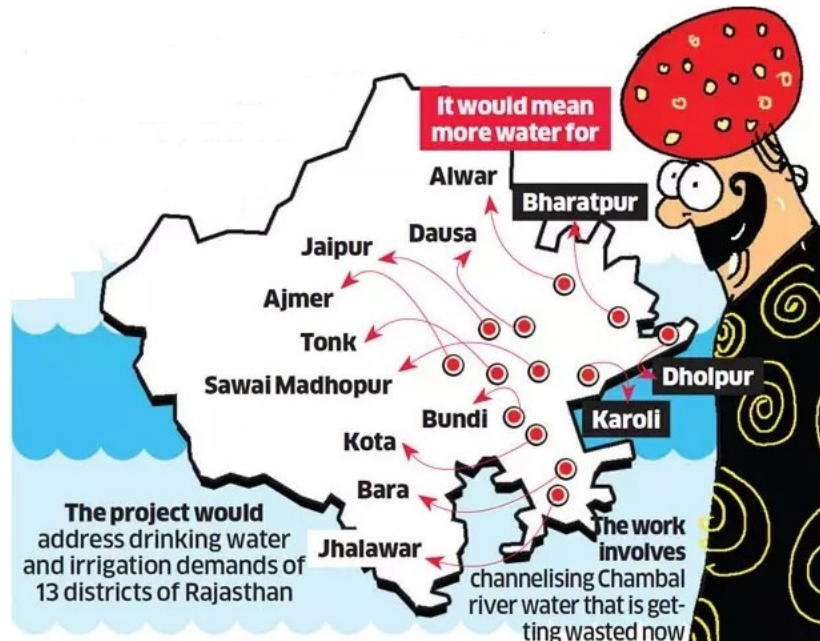
## References

1. [PIB - India, US and Brazil to establish Global Biofuel Alliance](#)
2. [Business Line - Global Biofuel Alliance](#)

## Eastern Rajasthan Canal Project

*The Rajasthan Chief Minister has once again urged the Prime Minister to decide on declaring ERCP as National Project.*

- The Eastern Rajasthan Canal Project (ERCP) is planned to meet the drinking and irrigation needs of the 13 districts of south-eastern Rajasthan.
- ERCP was first announced in the Rajasthan state Budget for 2017-18.
- The project was approved by the Central Water Commission in 2017.



- ERCP aims to harvest surplus water available during the rainy season in rivers in southern Rajasthan, such as the Chambal and its tributaries Kunnu, Parvati, and Kalisindh.
- The harvested thus water is used in the 13 water-scarce south-eastern districts of the state.
- Among the state's water bodies, only the Chambal river basin has surplus water, but this water cannot be tapped directly.
- The water is tapped through the help of diversion structures, intra-basin water transfers, linking channels, and building pumping main feeder channels.
- **State's Proposal** - The state wants the Centre to declare this as a national project so that the cost-sharing ratio between the Centre and the state becomes 90:10.

*The ERCP aims to create a network of water channels that will cover 23.67% of the area and 41.13% of the population of the state.*

## References

- [IE - What is the ERCP?](#)
- [IE - What is Eastern Rajasthan Canal Project?](#)