Prelim Bits 20-10-2023 | UPSC Daily Current Affairs

Regional Rapid Transit System - NaMo Bharat

India's first indigenous mass rapid system, RRTS covering Delhi-Ghaziabad-Meerut section was inaugurated recently.

- **RRTS** - Regional Rapid Transit System (RRTS) is a new rail-based, semi-high-speed, high-frequency commuter transit system dedicated to regional connectivity.
- RRTS, now called as **NaMo Bharat**, was designed with a speed of _180 kmph_.
- It is modelled on systems such as the RER in Paris, Germany, Austria and USA.
- **Aim -** To ensure balanced and sustainable urban development through better connectivity across the National Capital Region (NCR).
- **Coverage** - _8 RRTS corridors_ have been identified for development in the NCR.
- **Phase - I** - Out of 8, 3 corridors have been prioritised to be implemented in Phase-I
    - Delhi-Ghaziabad-Meerut Corridor
    - Delhi-Gurugram-SNB-Alwar Corridor
    - Delhi-Panipat Corridor

- **Construction & Implementation** - National Capital Region Transport Corporation (NCRTC), a joint venture of Union government and the governments of Delhi, Haryana, Rajasthan and Uttar Pradesh.
- NCRTC comes under the _Ministry of Housing and Urban Affairs_.

References

1. [The Hindu | Delhi-Ghaziabad-Meerut RRTS Corridor](#)
2. [The Indian Express | RRTS](#)

NGT report on sinking Island

National Green Tribunal (NGT) has issued an order to the Coastal Zone Management Authorities (CZMAs) of coastal States and UT's to consider the expert panel recommendations into the Integrated Island Management Plans (IIMPs).

- An expert panel was constituted by the Principal Bench of the NGT to frame policies and measures to protect submerging islands due to the rise of sea level and global warming.

Recommendations of the NGT on Sinking Islands

- **Policy Reforms**
    - Formulate Island-specific sustainable development and tourism policies.

- **Protection measures**
    - Controlled nature-based activities on marine and coastal fronts.
    - Follow alternative climate-resilient practices in the islands.
    - Explore nature-based ecosystem restoration and diversify economic development.
    - Protect coral reefs during coral bleaching.
    - Construction of coastal structures for the protection of highly eroded shoreline zones.
- **Technological measures**
    - Install GPS/GNSS station in each tide gauge station to accurately quantify the future sea-level rise.
    - Monitor shoreline change rate to identify hotspot zones.
    - Conduct field-based topographic surveys to map the accurate inundation of islands.
    - A nationwide Island assessment study to understand accurate vulnerability of the coastal areas.

Indonesia's capital 'Jakarta' is rapidly sinking into the Java Sea and is described as world's most rapidly sinking city.

In India, Munroe Thuruthu, a string of 8 islets at the confluence of the Ashtamudi Lake and the Kallada River in Kerala is slowly sinking.

References

1. [The Hindu| Recommendation of NGT on Sinking Islands](#)
2. [The Hindu | NGT asks coastal zone to integrate recommendations](#)

India-UK 2+2 dialogue

Recently, the inaugural India-UK 2+2 Foreign and Defence Dialogue was held in New Delhi in 2023.

- **2+2 Dialogue** - It is a format of meeting of the ***foreign and defence ministers*** of India and its allies on strategic and security issues.
- It enables the partners to better understand and appreciate each other's strategic concerns.

At present, India has 2+2 dialogue with UK (2023), Australia (2021), Russia (2021), Japan (2019) and USA (2018).

- **India-UK 2+2 dialogue** - A mechanism to discuss and review all aspects of *India-UK Comprehensive Strategic Partnership*.
- They agreed to hold the 2nd 2+2 Dialogue in United Kingdom (UK) in 2024.

The "India-UK Roadmap 2030" is a practical plan adopted in 2021 to transform the relationship between United Kingdom and India.
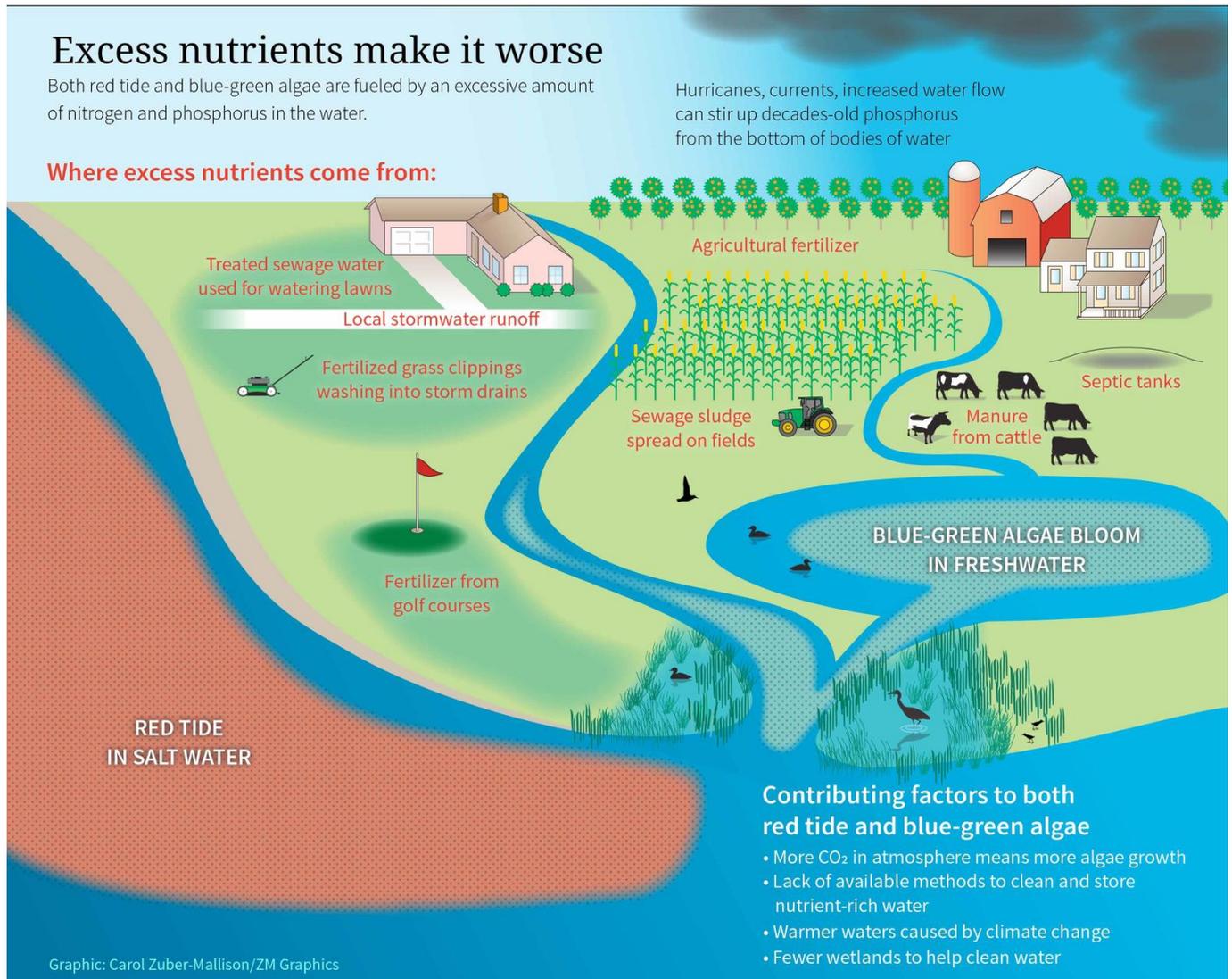
References

1. [The Hindu| Inaugural Indo-UK 2+2 Dialogue](#)
2. [Indian Express| 2+2 Dialogue of India](#)

Red Tide

The National Centre for Coastal Research (NCCR) has started the investigation on the issue of sea turning red in Puducherry.

- **Cause** – *Harmful algal bloom (HABs)* which are red in colour.
- It is caused by *dinoflagellates (microscopic algae)*.
- **Impact** – HAB's produce *toxins* that kill fish and make shellfish dangerous to eat.
- It depletes levels of oxygen in the water, which can kill the living creatures.
- It can block sunlight from reaching organisms deeper in the water.
- **Reason for Red Tide in Puducherry**
    - Anthropogenic influences like sewage mixing into the sea
    - Reversal of ocean currents
    - Increased concentration of nutrients in the coastal waters

Algal bloom is a rapid increase in the population of algae in freshwater or marine water systems. While most of them are beneficial as they form basis of ocean food web, some are harmful and toxic.

Excess nutrients make it worse

Both red tide and blue-green algae are fueled by an excessive amount of nitrogen and phosphorus in the water.

Hurricanes, currents, increased water flow can stir up decades-old phosphorus from the bottom of bodies of water

Where excess nutrients come from:

Treated sewage water used for watering lawns

Local stormwater runoff

Agricultural fertilizer

Fertilized grass clippings washing into storm drains

Septic tanks

Sewage sludge spread on fields

Manure from cattle

Fertilizer from golf courses

BLUE-GREEN ALGAE BLOOM IN FRESHWATER

RED TIDE IN SALT WATER

Contributing factors to both red tide and blue-green algae
• More CO_2 in atmosphere means more algae growth
• Lack of available methods to clean and store nutrient-rich water
• Warmer waters caused by climate change
• Fewer wetlands to help clean water

Graphic: Carol Zuber-Mallison/ZM Graphics

National Centre for Coastal Research (NCCR)

- **Ministry** - *Ministry of Earth Sciences*
- **Origin** - In 1998, the Project Directorate 'Integrated Coastal and Marine Area Management (ICMAM-PD)' was developed in *Chennai.*
- In 2018, ICMAM-PD was designated as the NCCR.
- **Objective** - To develop and improve the country's capabilities in addressing the challenging problems prevailing in the coastal zone.
- To offer scientific and technical support to coastal communities for integrated and sustainable use of resources towards the socio-economic benefit of the society.

References

1. The Hindu| Red Tide in Puducherry
2. Live Mint| Algal Bloom

Other important topics

Kasaragod
• Kasaragod district in Kerala has become the 1st district in India to officially designate its own tree, flower, bird and species.
• **Official Tree -** 'Kanjiram' (Strychnos nux-vomica Linn).
• **Official Bird -** White Bellied Sea Hawk (Haliaeetus leucogaster).
• **Official Species -** Cantor's Giant Softshell Turtle (Bheemanama).
• **Official Flower -** Periya Polathali (Crinum malabarica).

Sakharov Prize for Freedom of Thought
• Mahsa Amini and Iran's Woman, Life and Freedom Movement were awarded the Sakharov Prize, European Union's top human rights prize recently.
• Sakharov Prize, named after Soviet dissident Andrei Sakharov (Nobel Peace Prize laureate), is a European Union award created in 1988.
• It honours individuals or groups who defend human rights and fundamental freedoms.
• Last year it was awarded to the **"brave people"** of Ukraine defending their country against Russia's relentless invasion.

i-Drone
• Indian Council of Medical Research (ICMR) has successfully transported more than 100 units of essential medications in Lahaul and Spiti district using drone.
• I- DRONE stands for ICMR's Drone Response and Outreach in North East.
• **Aim -**To deliver vaccines and medical supply in the inaccessible areas.

Heartland Tripura
• **A project t**o open new career and personal development opportunities for undergraduate students in both engineering and non-engineering fields.
• **Partnership -** Deloitte India and the National Institute of Electronics and Information Technology (NIELIT), Agartala.
• The certification courses offered under this program will cover a wide range of new age technical and professional development skills.

WASP-17b
• Recently astronomers detected the evidence of quartz (pure silicon dioxide) nanocrystals in the exoplanet WASP-17b using the James Webb Space Telescope.
• The detection is the 1st time that silica particles have been detected in the atmosphere of an exoplanet.
• Silicates are minerals rich in silicon and oxygen and they make up a bulk of Earth and the Moon's mass, as well as other rocky objects in the solar system.

BTSbot
• BTSBot (Bright Transient Survey Bot) is an **_Artificial Intelligence (AI)_** system that detects supernovas.
• **Developed by -** International group of researchers led by Northwestern University, U.S.
• BTSbot is a machine-learning algorithm that was trained on over 1.4 million images from nearly 16,000 sources.

6th edition of ISAR Honours
• The Institute of Chartered Accountants of India (ICAI) has been awarded the ISAR Honours 2023 by the UNCTAD for its Sustainability Reporting Standards Board (SRSB) initiative.
• United Nations Conference on Trade and Development (UNCTAD) announced it during the 8th World Investment Forum held recently at Abu Dhabi.

Intifada
• Intifada literally means 'to shake off' in Arabic.
• It was brought to popular movement by the Palestinians in the 1980s, and is used to connote 'righteous rebellion against oppression'.
• Palestine underwent two Intifadas – from 1987 to 93, and from 2000 to 2005.