

## UPSC Daily Current Affairs | Prelim Bits 29-03-2021

### Suez Canal Blocked

- Due to the blockage of the Suez Canal, the \$200 billion of India's trade flows with Europe, North America and South America is at risk.
- So, the Department of Commerce has worked out an action plan to cope with the crisis, including possibly re-routing shipments through the Cape of Good Hope (Re-routing may take 15 additional days' time.)
- To know more about the issue, [click here](#).

### Suez Canal

- Opened in 1869, it is an artificial sea-level waterway in Egypt.
- It connects the Mediterranean Sea to the Red Sea through the Isthmus of Suez in Egypt, and divides Africa and Asia.
- It offers watercraft a more direct route between the North Atlantic and northern Indian oceans, avoiding the South Atlantic and Indian oceans.
- It extends from the northern terminus of Port Said to the southern terminus of Port Tewfik at the city of Suez.
- It provides the shortest maritime route between Europe and the lands lying around the Indian and western Pacific oceans.

### Cape of Good Hope

- The Cape of Good Hope is a rocky headland on the Atlantic coast of the Cape Peninsula in South Africa.
- There is a misconception that the Cape of Good Hope is the southern-most point of Africa. But the Cape Agulhas is the southern-most point.
- The currents of the Atlantic and Indian Oceans meet at the point where the warm-water Agulhas current meets the cold-water Benguela current and turns back on itself.
- That oceanic meeting point fluctuates between Cape Agulhas and Cape Point (about 1.2 kms east of the Cape of Good Hope).

### New Red Algae Species

- Two new species of red seaweed - *Hypnea indica* and *Hypnea bullata* - have been discovered by marine biologists from Central University of Punjab (The genus *Hypnea* includes red seaweeds.)

- *Hypnea indica* - Discovered from Kanyakumari in Tamil Nadu, and Somnath Pathan and Sivrajpur in Gujarat.
- *Hypnea bullata* - Discovered from Kanyakumari and Diu island of Daman and Diu.
- Another species, *Hypnea nidifica*, has been found for the first time in Indian coasts.
- Including the two new species, there are 63 species in the genus *Hypnea* globally.
- The genus *Hypnea* consists of calcareous, erect, branched red seaweeds.
- They grow in the intertidal regions of the coast, namely the area that is submerged during the high tide and exposed during low tides.
- **Uses** - Species of *Hypnea* contain the biomolecule carrageenan, which is widely used in the food industry.
- **Threat** - Algae with calcareous mineral deposits are prone for the damage from ocean acidification, an aftermath of climate change.

## Whale Shark

- A whale shark was rescued by fishers in Odisha coast, which is very important for marine megafauna like turtles, whales and sharks.
- The dotted whale shark is the largest fish in the ocean and often called 'Gentle Giant' in fishing parlance.
- It is a 'filter feeder shark' which means it does not eat meat like other sharks. They filter sea water and feed on tiny planktons.
- The largest whale shark aggregation in India is along the Gujarat coasts. On the Bay of Bengal coast, the only aggregation is in Andhra Pradesh.
- Whale sharks are found in all the tropical oceans of the world.
- They are a protected species under the,
  1. Indian Wild Life (Protection) Act, 1972 - Schedule I
  2. International Union for Conservation of Nature's (IUCN) Red List - Endangered
  3. Convention on International Trade in Endangered Species (CITES) - Appendix II
- **Threat** - Accidental entanglement in fishing nets, Oil and gas drilling, shipping lanes, etc.,

## Most Distant Quasar

- The most distant 'radio-loud' quasar was discovered with the help of European Southern Observatory's Very Large Telescope (ESO's VLT).
- [VLT, which is the world's most advanced optical telescope, is located at Paranal Observatory in the Atacama Desert.]
- Named P172+18, the quasar took 13 billion years for the quasar's light to

reach earth. It emitted wavelengths with a gravitational redshift of 6.8.

- Only 3 other 'radio-loud' sources with redshift greater than 6 have been discovered so far and the most distant one had a redshift of 6.18.
- [Redshift of the radio wavelength occurs when light particles (photons) climb out of a gravitational well like a black hole and the light's wavelength gets drawn out.
- Higher the redshift, the farther away is the source.]
- P172+18 quasar appears to the scientists as it was when the universe was just around 780 million years old.
- The glowing disc around a blackhole 300 million times more massive than our Sun, thus, holds clues about the ancient star systems and astronomical bodies.

## Quasars

- Quasars (quasi-stellar radio source) are very luminous objects in faraway galaxies that emit jets at radio frequencies.
- They are found **only in galaxies that have super massive blackholes** which power these bright discs.
- Most active galaxies have a supermassive black hole at the centre which sucks in surrounding objects.
- Quasars are formed by the energy emitted by materials spiralling around a blackhole right before being sucked into it. They are of two types,
  1. **Radio-loud quasars** (10% of quasar population) - Have powerful jets that are strong sources of radio-wavelength emission
  2. **Radio-quiet quasars** (about 90% of quasar population) - Lack powerful jets, and have relatively weaker radio emission than the radio-loud population.

## Social Security Schemes

- As per the Periodic Labour Force Survey (PLFS) carried out by the National Sample Survey Organisation in 2017-18, the total employment in the country was around 47 crores. Out of this,
  1. Around 9 crores are engaged in the organized sector
  2. Around 38 crores are engaged in the unorganized sector.
- The categories of the workers include,
  1. Establishments with 10 or more workers;
  2. Establishments with 20 or more workers;
  3. Workers engaged in unorganised sector
- **ESI Act, 1948** is Social Security legislation applicable to all factories & notified establishments employing 10 or more persons, which are located in ESI notified areas. It does not apply to the unorganised sector as such.

- Employees earning wages up to Rs 21,000 per month (Rs 25,000/- in the case of persons with disability) are coverable under ESI Scheme.
- **Employees' Provident Fund and Miscellaneous Provisions Act, 1952** is applicable to the workers employed in organised sector establishments with 20 or more workers.
- The benefits of the EPF Act, 1952 is also extended through,
  1. The Employees' Provident Funds Scheme, 1952;
  2. The Employees' Pension Scheme, 1995;
  3. The Employees' Deposit Linked Insurance Scheme, 1976.
- **Unorganised Workers' Social Security Act, 2008** empowers the Central Government to provide Social Security benefits to unorganised sector workers by formulating suitable welfare schemes on matters like,
  1. Life and disability cover - PM Jeevan Jyoti Yojana (PMJJBY) and Pradhan Mantri Surksha Bima Yojana (PMSBY),
  2. Health and maternity benefits - Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana (AB-PMJAY),
  3. Old age protection - PM Shram Yogi Maan-DhanYojana (PM-SYM) and National Pension Scheme for Traders, Shopkeeper and Self-Employed Persons (NPS- Traders)
  4. Any other benefit as may be determined by the Central Government.
- Under the Unorganised Workers' Social Security Act, 2008, the State Governments can formulate suitable welfare schemes on the matters like housing, PFs, educational schemes, skill upgradation, old age homes etc.

## Purple Revolution

- Council of Scientific and Industrial Research-Indian Institute of Integrative Medicine, Jammu announced phase 2 of purple revolution under Aroma Mission, after the success of the phase 1 in Doda, Jammu.
- Under the purple revolution, the farmers in Doda district had their incomes quadrupled after shifting from maize to lavender cultivation.
- First-time farmers were given free lavender saplings and those who have cultivated lavender before were charged Rs. 5-6 per sapling.
- The farmers will get help from IIIM-Jammu to sell their produce.
- Farmers could reach the four distillation units set up by CSIR-IIIM Jammu in Doda for extraction of lavender oil.
- At present, large-scale lavender cultivation is limited to J&K but governments in Himachal Pradesh, Arunahal Pradesh and Uttarakhand are also encouraging their farmers to take up lavender.

## Purple Economy

- Lavender oil sells for at least Rs 10,000 per litre
- Lavender water can be separated from lavender oil. It is used to make incense sticks.
- Hydrosol is formed after distillation from the flowers. It is used to make soaps and room fresheners.

### **Aroma Mission**

- In 2016, the Centre launched Aroma Mission to boost cultivation of plants for essential oils which have aromatic medicinal properties.
- The mission supports domestic aromatic crop based agro economy to move from imported aromatic oils to homegrown varieties.
- Nodal laboratory - CSIR-Central Institute of Medicinal and Aromatic Plants (CSIR-CIMAP), Lucknow.
- Participating laboratories - CSIR-Institute of Himalayan Bioresource Technology (CSIR-IHBT), Palampur; CSIR-Indian Institute of Integrative Medicine (CSIR-IIIM), Jammu etc.

**Source: PIB, The Hindu, Down To Earth**

