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China's New Maritime Rules

China's new maritime rules are likely to escalate the existing tension with the US and its neighbouring countries in the region.

- It is designed to control the entry of foreign vessels in China's disputed territorial waters covering South China Sea, East China Sea and Taiwan Strait.
- Both military and commercial foreign vessels will be required to report their detailed information upon their visits to these regions.
- It covers submersibles, nuclear vessels and ships carrying radioactive materials, bulk oil, chemicals, liquefied gas and other toxic harmful substances.
- The range of information to be provided varies based on the kind of vessels.
    1. The vessels viewed as endangering China's maritime traffic safety should report their name, call sign, current position, next port of call and estimated time of arrival.
    2. The name of shipborne dangerous goods and cargo deadweight will also be required.
- This is seen as violating the United Nations Convention on the Law of the Sea (UNCLOS) guidelines.

  According to UNCLOS, states have the right to implement territorial rights up to 12 nautical miles into the sea.

  It also states that that all vessels have the right of "innocent passage" through this region of territorial waters.

Indian Royal Jelly

For the first time, Indian Royal Jelly has been found to surpass top-quality global sellers.

- It is a pearly white or pale yellow-coloured cohesive mixture of honey and secretions from worker honeybees.
- Composition –

    1. Moisture Or Water (60-70%),
    2. Lipids (1-10%),
    3. Minerals (0.8-3 %),
    4. Proteins (9-18 %),
    5. Sugar (7 %)

- **Artificial Production** – The bee colonies grown outside its natural habitat are stimulated to produce queen bee.
- The larvae in the queen bee are then fed with nutritious royal jelly, which gets accumulated in maximum amount upon 5th day.
- In a season of 5 to 6 months, a well-maintained hive can produce an estimated 900gms of royal jelly.

- The quality and protein content of the jelly varies from the plant and their respective pollen.
- Honeybees that gather pollen from mustard, coconut and multi-flora variants produce top international quality jelly whereas maize pollens were not as good.

Hives include one queen, 100s of drones, and 1000s of worker bees.

The worker bees are female, but they do not breed. The queen bee is female and creates all the babies for the hive. The drone bees are male and do not have a sting.

- **Requirements –**
    1. Recommended Temperature is below –20^{0}c
    2. A special machine called Freezee drier to remove moisture from the fresh produce.
    3. It needs to be stored in sub-zero temperatures immediately after production and throughout its supply chain.
- **Uses** – It is highly nutritious and a good antioxidant. It helps women with fertility issues.
- **Standards** - It meets the ISO-prescribed standards imposed by the Food Safety and Standards Authority of India in 2019.
- It is based on the concentration of moisture, sugars, protein and Hydroxy acids with 10 carbon atoms (10 HDA), a fatty acid found in the jelly.
- Presently, country specific standards are available only in Switzerland, Bulgaria, Brazil and Uruguay.
- Indian royal jelly is been found as better in quality than jelly produced from Thailand and China and almost same as the Italian royal jelly.

Ubreathe Life

Indian Scientists have recently developed World's first state-of-the-art 'Plant based' air purifier.

- Ubreathe Life is a living-plant based air purifier that amplifies the air purification process in the indoor spaces like hospitals, schools, offices and homes.
- It uses Smart Bio-Filter that removes particulate, gaseous and biological contaminants and increases the oxygen levels in the indoor space.
- It works through leafy plant in which the room air interacts with its leaves and goes to the soil-root zone where pollutants are purified.
- The novel technology used in this product is 'Urban Munnar Effect' along with patent pending "Breathing Roots" to amplify phytoremediation.

Phytoremediation is a process by which plants effectively remove pollutants from the air.

- It has specific plants, UV disinfection and a stack of Pre-filter, Charcoal filter and HEPA (high efficiency particulate air) filter fitted in a specially designed wooden box.
- Peace Lily, Snake Plant, Spider plant are some of the specific plants tested for it and given good results.
- It has been incubated at IIT Ropar by the Department of Science and Technology, Govt. of India.

According to a WHO report, the indoor air spaces are five times more polluted than outdoor air space.

Source: PIB, The Indian Express