



## Daily Current Affairs Prelims Quiz 17-03-2023 (Online Prelims Test)

- 1) Which of the following is the objective of Mission Sahbhagita, sometimes seen in the news recently?
- To promote mother tongue education up to 8 years of age
  - To protect the Maritime boundaries of India
  - To conserve identified wetlands of India
  - To promote climate resilient agriculture

Answer : c

### Mission Sahbhagita

- **Aim** - It is a mission for conservation and management of identified wetlands (includes lakes) in the country.
- It aims to enable a society ownership approach for participatory conservation and wise use of Wetlands.
- **'Save Wetlands Campaign'** is a part of this mission.
- This campaign is structured on a "whole of society" approach for wetlands conservation, enabling affirmative actions for wetlands conservation at all levels of the society and involving all strata of the society.
- This campaign over next one year will include sensitizing people of the value of wetlands, increasing the coverage of wetland mitras and building citizen partnerships for wetlands conservation.

### National Plan for Conservation of Aquatic Ecosystems (NPCA)

- **Aim** - Holistic conservation and restoration of wetlands for achieving the desired water quality enhancement, besides improvement in biodiversity and ecosystems.
- **Funding** - It is a centrally sponsored scheme.
- **Implementation Agency** - Wetlands Division of MoEFCC.

### Wetlands Rejuvenation Programme

- **Aim** - To undertake systematic rejuvenation of selected wetlands on the basis of well-defined and targeted management plans and with active stakeholder collaboration.
- **Duration** - 100 days programme
- **Implementing Agency** - State Wetlands Authorities and wetlands managers

### Wetlands of India Portal

- A publicly available information and knowledge platform, in order to facilitate knowledge sharing, information dissemination, host capacity building material.
- It provides a single-point access data repository with the features of Management Information System (MIS) login for each and every state/UT for uploading of information from time to time.

## World Wetlands Day - 2nd February

2) Consider the following statements

1. Rifting is a geological process in which a single tectonic plate is split into two or more plates by convergent plate boundaries.
2. East African Rift was formed due to the convergence of Nubian, Somalian and Arabian Plates.

Which of the statements given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : d

### Rifting

*Scientists have predicted that a new ocean would be created as Africa gradually splits into two separate parts.*

- **Rifting** - The Earth's lithosphere is comprised of the crust and upper part of the mantle.
- Lithosphere is divided into several tectonic plates that are not stationary and move in relation to each other at varying speeds.
- Tectonic forces not only move the plates but also have the potential to cause them to rupture.
- These ruptures result in the formation of a rift and potentially leading to the creation of new plate boundaries.

*Rifting refers to the geological process in which a single tectonic plate is split into two or more plates separated by divergent plate boundaries.*

### East African Rift

- The three plates, the Nubian African Plate, Somalian African Plate and Arabian Plate, are separating at different speeds.
- The Arabian Plate is moving away from Africa at a rate of about an inch per year, while the two African plate are separating even slower, between half an inch to 0.2 inches per year.



- East African Rift was formed due to the separation of Somalian African Plate from the Nubian and Arabian plate.
- East African Rift is the oldest and best defined rift occurs in the Afar region of Ethiopia and this rift is usually referred to as the Ethiopian Rift.
- Further to the South a series of rifts occurs which includes:
  - **Western branch** - Lake Albert Rift or Albertine Rift which contains the East African Great Lakes
  - **Eastern branch** - Kenya Rift or the Gregory Rift, roughly bisects Kenya north-to-south on a line slightly west of Nairobi.

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- These two branches together have been termed the East African Rift (EAR).
- As the Somali and Nubian tectonic plates continue to pull apart from each other, a smaller continent will be created from the rift, which will include present-day Somalia and parts of Kenya, Ethiopia, and Tanzania.
- The EAR will further triggers the formation of a new sea, according to a recent study.
- This geological process will inevitably divide the continent, resulting in currently landlocked

countries, such as Uganda and Zambia, obtaining their own coastlines in due time, which would take *five to 10 million years*.

3) The term *Kappaphycus alvarezii*, sometimes seen in the news recently, refers to?

- a. It is a rare seacow that inhabited only in the Gulf of Mannar Marine National Park
- b. It is an exotic seaweed species introduced for commercial cultivation
- c. It is a rare coral species endemic to Lakshadweep that declined significantly due to climate change
- d. It is a new subspecies of the common bottlenose dolphin discovered from the eastern tropical Pacific.

Answer : b

### **Kappaphycus alvarezii**

- *Kappaphycus alvarezii* is a red alga but, its actual live colour is green or yellow.
- **Habitat** - The seaweed is native to the Indo-Pacific region.
- It has been widely introduced and cultivated in tropical regions for commercial purposes.
- **Significance** - It is used in the production of an industrially lucrative polymer called Carrageenan.
- Carrageenan, a substance extracted from red and purple seaweeds, used as a thickening or emulsifying agent in food products.
- **Threat to Coral reefs** - The algae was firmly attached to the coral colonies and started forming a thick gelatinous unbreakable mat over them, eventually smother and kill corals.
- The coral reefs of Valai Island in the Keelakarai group and Krusadai Island of Mandapam group were dying due to stress from *Kappaphycus* invasion.
- **Threat to Dugongs** - The commercial cultivation of *Kappaphycus* in Palk Bay may affect the efforts to conserve the dugong population.
- Seagrass beds, which are Dugong's prime foraging grounds are likely to be impacted.

*Gulf of Mannar Marine National Park is one of the six marine National Parks and only marine Biosphere reserve in India.*

4) Consider the following statements with respect to Barda Wildlife Sanctuary

1. Barda, situated in Gujarat, is considered as the alternative for Kuno National Park for cheetah reintroduction project.
2. Maldharis inhabitates the Gir and the Barda Wild Life Sanctuaries.

Which of the statements given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : b

### **Lion Translocation**

*The Gujarat government has planned to translocate 40 adult and sub-adult lions to the Barda Wildlife Sanctuary, according to the Lion@2047: A vision for Amrutkal Report.*

- As per the last count in 2020, there are 674 lions in Gujarat and Gir has long been overflowing with the big cats.

- A second home would protect the lion population from extinction in case of diseases like the Canine Distemper Virus leads to their deaths.
- To develop Barda as the second home for the Asiatic lion the State Government implemented the 'Gir-Barda Project' in 1979.

### **Barda Wildlife Sanctuary (BWS)**

- BWS is situated 100 kilometres away from Gir National Park, Gujarat.
- It consists of medicinal plants, very high percentage of rare and endangered plants, an important component of the sanctuary.
- **Flora** - The area has maximum floral diversity in the state (650 plant species). Gorad, Babul, Dhav, Rayan, Ber, Jamun, Amla, Dhudhlo, Bamboo etc.
- **Fauna** - Sambar, chital and chinkara were present in the Sanctuary.
- **Inhabitants** - Maldharis are local pastoral communities settled within Gir Protected Areas and the Barda WLS.

5) Consider the following statements regarding Low Temperature Thermal Desalination (LTTD) Technology

1. LTTD is used for conversion of seawater into potable water.
2. It exploits the difference in temperature in ocean water at the surface and at depths.
3. The technology is completely indigenous, robust and environment friendly.

Which of the statements given above are correct?

- a. 1 and 2 only
- b. 1 and 3 only
- c. 2 and 3 only
- d. 1, 2 and 3



Answer : d

*National Institute of Ocean Technology (NIOT) is aiming to set up green, self-powered desalination plant in Lakshadweep using LTTD technology*

### **Working of LTTD**

- LTTD exploits the difference in temperature (nearly 15°C) in ocean water at the surface and at depths of about 600 feet.
- This cold water condenses water at the surface, that is warmer but whose pressure has been lowered using vacuum pumps.
- Such de-pressurised water can evaporate even at ambient temperatures and this resulting vapour when condensed is free of salts and contaminants and fit to consume.

### **Significance of LTTD**

- The LTTD technology does not require any chemical pre and post-treatment of seawater and thus the pollution problems are minimal and suitable for island territories.
- Since no effluent treatment is required, it gives less operational maintenance problems compared to other desalination processes.
- The LTTD technology is completely indigenous, robust and environment friendly.
- Currently, 4 LTTD plants have been successfully commissioned in the country, namely Kavaratti, Minicoy, Agatti of Lakshadweep and one at Northern Chennai Thermal Power Station (NCTPS), Chennai.

## **National Institute of Ocean Technology (NIOT)**

- It is an autonomous body of the Ministry of Earth Sciences.
- It is located in Chennai, Tamil Nadu.
- It has been responsible for design, develop, demonstrate and commission the LTTD plants in selected coastal locations.

