UPSC Daily Current Affairs | Prelim Bits 19-11-2020

UNESCO Global Geopark

- UNESCO Global Geoparks are single, unified geographical areas where sites and landscapes of international geological significance are managed with a holistic concept of protection, education and sustainable development.
- A UNESCO Global Geopark uses its geological heritage, in connection with all other aspects of the area's natural and cultural heritage, to enhance awareness and understanding of key issues.
- A UNESCO Global Geopark is given this designation for a period of four years after which the functioning and quality of each UNESCO Global Geopark is thoroughly re-examined during a revalidation process.
- UNESCO Global Geopark status does not imply restrictions on any economic activity inside a UNESCO Global Geopark where that activity complies with indigenous, local, regional and/or national legislation.
- UNESCO Global Geoparks give local people a sense of pride in their region and strengthen their identification with the area.
- Recently INTACH is pushing to get recognition of a UNESCO Global Geo Park for Visakhapatnam consisting of

1. Erra Matti Dibbalu (red sand dunes),
2. Natural rock formations at Mangamaripeta,
3. Million-years-old Borra Caves,
4. Volcanic ash deposits in Araku Valley.

- India does not have any UNESCO Global Geo Park as of now.

Erra Matti Dibbalu

- Erra Matti Dibbalu is dissected and stabilized coastal red sediment mounds.
- It is located between Visakhapatnam and Bheemunipatnam in Andhra Pradesh.
- It is belived to be formed around 12,000 years ago due to sea-land interaction.
- It comprises a mixture of sand (40-50%), silt and clay (another 50%) with

oxidation imparting the unique red colour.
- They are geologically important as they represent the geological history of the late Quaternary period and carry the imprints of the fall of sea level and its subsequent rise, the impact of climate, monsoon and geological processes on the sediments.
- They are anthropologically and archeologically important as they possibly contain mesolithic and neolithic cultural materials as well.
- It was recognised as a national geo-heritage site in 2014 and as a protected site by the Andhra Pradesh Government in 2016.
- The Geological Survey of India (GSI) declares geo-heritage sites/ national geological monuments for protection and maintenance
- The only other place in the country to have a similar stretch of red sand dunes is Tamil Nadu, which has the Teri dune complex, Tuticorin District.

Thotlakonda Buddhist Complex

- Thotlakonda Buddhist Complex is situated on a hill near Bheemunipatna, closer to Mangamaripeta arch formation.
- Thotlakonda was well within the influence of ancient Kalinga, which was an important source of dissemination of Buddhism to Sri Lanka and various parts of Southeast Asia.
- It provides an insight into the process of transoceanic diffusion of Indic culture, especially Buddhism.
- A hill on the sea coast with salubrious climate was an ideal attraction for the Buddhist monks to build a monastery complex here.
- Nikaya Buddhism appears to have been practiced here, including the worship of Gautama Buddha through symbols such as padukas and other material remains rather than using human representation.
- Excavations established the existence of a Hinayana Buddhist complex which flourished 2000 years ago.
- The excavations reveal Satavahana dynasty lead and Roman silver coins indicating foreign trade.
- Thotlakonda's peak activity was between the 2nd century BCE and the 2nd century CE owing to brisk Roman trade and religious missions sent abroad.

m-RNA Vaccine

- It is a coronavirus vaccine based on mRNA, once injected into the body, will instruct the body’s cells to create copies of the spike protein.
- The mRNA is coded to tell the cells to recreate the spike protein of the

coronavirus SARS-CoV-2, which causes Covid-19.

- It is the spike protein which appears as spikes on the surface of the coronavirus that initiates the process of infection and it allows the virus to penetrate cells, after which it goes on to replicate.
- The mRNA vaccines work by using mRNA or messenger RNA, which is the molecule that essentially puts DNA instructions into action.
- The mRNA vaccines have the advantage that scientists are not growing the virus in the lab, which has been a hindrance sometimes to create enough virus or viral particles to give in a vaccine.
- Recently, US based pharma company announced results of human trials on the mRNA vaccine, it is found the vaccine 94.5 per cent effective.

Global Centre for Traditional Medicine

- Recently, the World Health Organisation (WHO) has announced that it will set up a Global Centre for Traditional Medicine in India.
- The Traditional Medicine Centre will be aimed at strengthening the evidence, research, training and awareness of traditional and complementary medicine.
- The new centre will support WHO's efforts to implement the WHO traditional medicine strategy 2014-2023.
- The traditional systems of medicine such as Ayurveda can play an important role in integrated people-centric health services and healthcare.

WHO traditional medicine strategy 2014-2023

- It was developed in response to the World Health Assembly resolution on Traditional Medicine (TM).
- The goals of the strategy are to support Member States in:

1. Harnessing the potential contribution of TM to health, wellness and people-centred health care;
2. Promoting the safe and effective use of TM by regulating, researching and integrating TM products, practitioners and practice into health systems, where appropriate.
3. The strategy aims to support Member States in developing proactive policies and implementing action plans that will strengthen the role TM plays in keeping populations healthy.
4. Traditional medicine refers to Health practices, Approaches, knowledge and beliefs incorporating plant, animal and mineral based medicines, spiritual therapies, manual techniques and exercises, applied singularly or in combination to treat, diagnose and prevent illnesses or maintain well-

being.

INS- Vagir

- Recently Indian Navy's fifth Kalvari-class Diesel Electric attack submarine INS Vagir was launched.
- The features of the vessel are as follows

1. Superior stealth features such as advanced acoustic absorption techniques, low radiated noise levels, and hydro-dynamically optimised shape.
2. The submarine is designed to operate in all theatres of operation, showcasing interoperability with other components of a Naval Task Force.
3. It can launch attacks with both torpedoes and tube launched anti-ship missiles, whilst underwater or on surface.
4. It can undertake multifarious types of missions i.e Anti-Surface warfare, Anti-Submarine warfare, Intelligence gathering, Mine Laying, Area Surveillance, etc.

- The design of Kalvari class of submarines is based on Scorpene class of submarines designed and developed by French defence major Naval Group.
- This class of submarines have Diesel Electric transmission systems and these are primarily attack submarines or 'hunter-killer' type which means they are designed to target and sink adversary naval vessels.
- The modern variants of the Scorpence class of submarines have what is called the Air Independent Propulsion (AIP) which enables non-nuclear submarines to operate for a long time without access to surface oxygen.
- Indian Naval Ship (INS) Vagir is the fifth among the six Kalvari-class submarines being constructed by the public sector shipbuilder Mazagon Dock Ltd (MDL) in Mumbai.
- The other vessels in the class are INS Kalvari, INS Khanderi, INS Karanj, INS Vela and INS Vagsheer.

Meanings of Name of Indian Naval Vessels

1. INS Kalvari – Named after Tiger Shark,
2. INS Vagir – It has been named after a Sand Fish, a predatory marine species.
3. INS Khanderi – It has been named after an Island Fort built by Chhatrapati Shivaji, which played a key role in his Navy.
4. INS Karanj – It has also been named after an Island located South of

Mumbai.

Tristan da Cunha

- Tristan da Cunha is a remote group of volcanic islands in the south Atlantic Ocean.
- It is the most remote inhabited archipelago in the world
- Tristan da Cunha is a British Overseas Territory with its own constitution.
- It is declared as the largest fully protected marine reserves in the Atlantic Ocean at 687,000 square kilometres.
- The mountainous archipelago Tristan da Cunha is home to tens of millions of seabirds and several unique land birds.
- The island group is also home to the World Heritage Site of Gough and Inaccessible Islands, which is one of the most important seabird islands in the world.
- UK's Blue Belt Programme supports the UK Overseas Territories with the protection and sustainable management of their marine environments.
- After joining the UK's Blue Belt Programme, Tristan da Cunha will become the largest no-take zone in the Atlantic and the fourth largest on the planet.
- This means fishing, mining and any such activities will not be allowed.
- This will close over 90 percent of their waters to harmful activities such as bottom-trawling fishing, sand extraction and deep-sea mining.

Source: PIB, the Hindu, Indian Express

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