UPSC Daily Current Affairs | Prelim Bits 22-12-2020

Advanced Hypersonic Wind Tunnel Test Facility

- Wind Tunnels are tubes with air blowing through them. These tunnels replicate the actions of an object flying through the air.
- DRDO's advanced Hypersonic Wind Tunnel (HWT) test facility was opened in Dr APJ Abdul Kalam Missile Complex in Hyderabad.
- This facility is pressure vacuum driven enclosed free jet facility having nozzle exit diameter of 1 meter.
- It can simulate Mach No 5 to 12 (Mach represents the multiplication factor to the speed of sound).
- After USA and Russia, India is the third country to have such a large facility in terms of size and operating capability.
- It is developed in India in cooperation with Indian industries.
- It can simulate hypersonic flow over a wide spectrum and will play a major role in the realisation of highly complex futuristic aerospace and defence systems.

Assessment of Indian Sharks

- The International Union for Conservation of Nature's (IUCN's) Shark Specialist Group has assessed the sharks, rays and chimaeras in the Indian Exclusive Economic Zone (EEZ).
- This assessment has classified 19 species (11%) of the 170 species of sharks, rays and chimaeras from Indian EEZ as Critically Endangered (CE).
- It marks for the first time Indian swellshark Cephaloscyllium silasi as 'CE' due to very limited geographic range, and population decline.
- Indian swellshark is a deep-water catshark known from the coast of Kerala and Sri Lanka, and also from the Andaman & Nicobar Islands.
- It occurs on the continental slope at depths of 100-500m.
- It is caught as incidental catch by intensive deep-water trawl fisheries.
- Also, there are certain species like the Smooth hammerhead shark and the Oceanic white-tip shark, which are now listed as 'CE'.
- Slow-growing dwarf gulper shark, which has squalene in its liver, has been classified as critically endangered.
- Squalene is a natural organic compound found in shark liver oil and used in pharmaceutical industry.

- The shark and rays numbers in Indian waters have fallen drastically in recent years due to,
    a. Target fishing (when a particular type of fish is targeted) and
    b. By-catch (other fish that get caught alongside).

Khelo India Youth Games

- Sports Ministry included four indigenous sports - Gatka, Kalaripayattu Thang-Ta, Mallakhamba - in Khelo India Youth Games 2021.
    a. Gatka has its origin in Punjab and this traditional fighting style of the Nihang Sikh warriors is used both as self-defense and a sport.
    b. Kalaripayattu has its origin in Kerala.
    c. Thang-Ta ias a Manipur marital art.
    d. Mallakhamba has been well-known across India, and Madhya Pradesh and Maharashtra have been the hotspots of this sport.
- Haryana is going to host the 4th edition of Khelo India Games in 2021.
- The inaugural edition was started held in New Delhi (2018).
- It is normally held for various disciplines in two broad categories - Under 17 and Under 21 Categories.

Great Conjunction

- Jupiter and Saturn will be close in the night sky after nearly 400 years.
- This astronomical event is called ‘Great Conjunction’ or ‘Christmas Star’.
- On December 21, this event coincided with the winter solstice in the Northern Hemisphere and summer solstice in the Southern Hemisphere.
- A conjunction is not unique to Saturn and Jupiter however, it is the name given to any event where planets or asteroids appear to be very close together in the sky when viewed from the Earth.
- Astronomers use the word “great” for the conjunction of Jupiter and Saturn because of the planets’ sizes.

R cluster

- Reliance Industries Ltd (RIL) and British Petroleum (BP) have announced the start of gas production from the R cluster.
- R Cluster, the deepest off-shore gas field in Asia, is expected to have a peak production of about 10% of India’s current natural gas output.
- It is one of the three fields in the Krishna Godavari Basin (KGD6). The other two are the Satellite Cluster and MJ gas fields.
- This field comprises a subsea production system tied back to existing KG D6 Control & Riser Platform (CRP) via a subsea pipeline.
- The three projects are a part of the plan to boost domestic production of

natural gas to increase the share of natural gas in India’s energy basket from 6.2% now to 15% by 2030.

Source: PIB, The Indian Express, The Hindu, Swarajyamag

