Prelim Bits 22-11-2023 | UPSC Daily Current Affairs

International Tropical Timber Council (ITTC)

The 59th International Tropical Timber Council (ITTC) was held at Pattaya, Thailand in 2023.

- **ITTC** – It is the *governing body* of the International Tropical Timber Organisation (ITTO) which ***meets once a year***.
- **Objectives –** To promote *sustainable tropical forest management* and the trade of sustainably produced tropical timber.
- To develop *forest-related policies* and approve and *finance field-level projects*.
- **Membership** – It comprises all the 75 ITTO's members.
- **Assisted by 4 committees**
  - Committee on Economics, Statistics and Markets.
  - Committee on Reforestation and Forest Management.
  - Committee on Forest Industry.
  - Committee on Finance and Administration.

International Tropical Timber Organisation (ITTO)

- It is an intergovernmental organization based on ***International Tropical Timber Agreement, 2006*** that entered into force in 2011.
- **Objectives** – To promote sustainable forest management (SFM) and conservation of tropical forests.
- To expand and diversify international trade in tropical timber from sustainably managed and legally harvested forests.
- **Membership** – It consists of ***75 members including India and EU***.
- ITTO's membership represents about *90% of the global tropical timber trade and more than 80% of the world's tropical forests.*

References

1. Down To Earth| 59th ITTC meeting
2. ITTO| ITTC

Atmospheric Waves Experiment (AWE)

Atmospheric Waves Experiment will determine the combination of forces that drive space weather in the upper atmosphere.

- AWE is a Mission of Opportunity under ***NASA's Heliophysics Explorers Program***

that studies the Sun and its interactions with the Earth and the solar system, including space weather.

- **Objectives**
  - To study the interactions between terrestrial and Space weather
  - To study colourful bands of light in Earth's atmosphere, called ***airglow***
- **Features - *Advanced Mesospheric Temperature Mapper (ATMT)*** will be mounted on the exterior of the Earth-orbiting International Space Station (ISS) to record the airglow at mesopause in the infrared bandwidth.

Mesopause *is a region between the mesosphere and thermosphere at about 85 to 87 km above the Earth's surface where the atmospheric temperature dips to -100° C.*

- **Functions**
  - Continuously image airglow in Earth's atmosphere
  - Study *atmospheric gravity waves (AGW)* which are *vertical wave of displaced stable air* produced during thunderstorms, hurricanes, tornadoes, regional orography, etc. in the lower atmosphere and continue all the way to Space contributing to the Space weather

Space weather

- It is the *environment around the earth and other planets*.
- They remains constantly under the influence Sun-bound emissions along with other matters surrounding the space.
- **Earth's influence** – When the weather over Earth turns rough or extreme, space weather too can suffer extreme events.
- **Importance** – They have a direct impact on vital installations on Earth, like satellite-based communication, radio communication, and Space-based aircraft orbits or stations.

References

1. Indian Express| Atmospheric Waves Experiment of NASA
2. NASA | Space Weather

Southern Annular Mode (SAM)

Indian National Centre for Ocean Information Services (INCOIS) has discovered that the Southern Annular Mode (SAM) plays a pivotal role in shaping the sea conditions across the Indian Ocean.

- **SAM** – It refers to the ***north-south movement of Southern Westerly Winds*** over timescales of 10s to 100s of years.

- They blow almost continuously in the mid- to high-latitudes of the southern hemisphere and so called as ***Antarctic oscillations***.
- It is usually defined as the difference in the zonal mean sea level pressure at 40°S (mid-latitudes) and 65°S (Antarctica).
- **Importance** – It shapes the wave patterns over extended time frames and a climate driver by influencing rainfall and temperature.

Swell waves *are the regular, longer period waves which are self-sustaining and generated by energy beneath the ocean's surface, no longer needing local wind. The 2 crucial swell generation regions in the Indian Ocean are the extratropical southern Indian Ocean (ETSI) and the tropical southern Indian Ocean (TSIO).*

Positive SAM phase	Negative SAM phase
There is *lower anomalous air pressure over Antarctica*, and higher anomalous air pressure over the mid-latitudes.	The *Southern Westerly Winds expands northwards towards equator*, bringing cold, wet weather to Patagonia and decreased Circumpolar Deep Water upwelling on the Antarctic Continental Shelf.
Increased wave activity is witnessed in Indian Ocean with *increased wave height* in the Arabian Sea.	*Reduced wave heights* are witnessed in the Arabian Sea.

- **Significance of SAM study –** Predicting the phases of SAM helps in identifying the fair Sea state windows in monsoons that can be utilised by oil and shipping industries for their operations.
- It helps in better coastal planning, resource management and also in disaster preparedness.

References

1. The Hindu| Impact of Southern Annular Mode (SAM) in IO region
2. Antarctic Glaciers | SAM

Mosquitofish

A new study has revealed that two species of mosquitofish (Gambusia) have invaded various ecosystems across India.

- **Gambusia fish** – An ***insectivorous fish*** that is found mostly in *fresh and brackish, and occasionally marine waters* and has a high breeding capacity.
- When released into freshwater system, they *feed on mosquito larvae* and thus act as *biocontrol agent to control mosquitoes*.
- Commonly used Gambusia species includes
  - ***Gambusia affinis***
  - ***Gambusia holbrooki*** (eastern mosquito fish)

Guppy fish (Poecilia reticulate) is also deployed as a mosquito predator.

- **Native to** – ***U.S.A***
- **Reasons for its spread** - High breeding capacity, robust adaptability and high tolerance for fluctuating environmental conditions.
- **Impact** – They displace and prey on native fauna, leading to the extinction of native fish, amphibians, and various freshwater communities.
- **In India** – Gambusia was 1st introduced *during British rule in 1928* for mosquito control and now inhabits all around India.
- **Actions taken** – Multiple countries, including India have listed Gambusia as invasive species.
- The ***World Health Organisation (WHO)*** has stopped recommending Gambusia as a mosquito control agent in 1982.
- ***International Union for Conservation of Nature (IUCN)*** has declared Gambusia as one of the 100 worst invasive alien species in the world.

References

1. The Hindu| Mosquitofish
2. Down to Earth | Gambusia fish

Production Gap Report 2023

Recently, the 4th edition of the Production Gap Report was issued (1st in 2019).

- **Prepared by** – Stockholm Environment Institute (SEI), Climate Analytics, E3G, and the International Institute for Sustainable Development (IISD) and the UN Environment Programme (UNEP).
- It is *externally peer-reviewed*, with additional guidance from UNEP and review by the UNFCCC's government focal points.
- **Objective** – To *assess the production gap (*discrepancy between governments' planned/projected fossil fuel production and global production levels consistent with limiting warming to 1.5°C or 2°C)
- **2023 report** – It provides newly expanded country profiles for 20 major fossil-fuel-producing countries, including India.
- It provided for new mitigation scenarios database and changes in government plans and projections since August 2021.
- **Tagline for 2023** – 'Phasing down or phasing up? Top fossil fuel producers plan even more extraction despite climate promises'.

Soon after the release of the 2021 Production Gap Report, governments agreed to accelerate efforts towards "the phasedown of unabated coal power" at the 26th COP to the UNFCCC in Glasgow.

Findings of the report

- Almost *90%* of global carbon dioxide emissions come from *fossil fuels,* rising to record high in 2021–2022.
- There will be increased global coal production *until 2030*, and increased global oil and gas production *until at least 2050.*
- The global production gap has *remained largely unchanged* since 2019.
- While 17 of the 20 countries profiled have pledged to achieve net-zero emissions, *none have committed* to reduce coal, oil, and gas production in line with limiting warming to 1.5°C.

References

1. The Hindu| World will overshoot fossil fuel production
2. Production Gap| Production Gap Report 2023

Other Important News
VAJRA PRAHAR • 14th Edition of the exercise "VAJRA PRAHAR 2023" commenced in ***Umroi, Meghalaya*** recently. • It is a joint military special force exercise between ***India and U.S.A***
PARAKH • **P**erformance **A**ssessment, **R**eview, and **A**nalysis of **K**nowledge for **H**olistic **D**evelopment (PARAKH) is India's first national assessment regulator. • PARAKH was established in 2020 as a standard-setting body in line with the National Education Policy (NEP). • It will create standards and criteria for student assessment and evaluation for ***all nationally recognized educational boards***. • It aims to help remove disparities in scores of students enrolled with different State boards.
Malligyong-1 satellite • North Korea recently claims that it has successfully placed a ***1st military spy satellite***, Malligyong-1 into orbit. • The satellite was launched on a new carrier rocket, ***"Chollima-1"***. • North Korea has also developed a class of experimental satellites called the Kwangmyongsong program.
Lashkar-e-Taiba • Ahead of the 15th anniversary of the 26/11 Mumbai attacks, ***Israel*** has declared the Pakistan-based terror outfit Lashkar-e-Taiba as a terror organization. • Lashkar-e-Taiba is an Islamist militant group particularly active in the Kashmir region.

SATHEE (Self-Assessment Test and Help for Entrance Exams)

• SATHEE is an open learning platform to help students prepare for competitive exams at no cost.
• It has been launched by the ***Ministry of Education and IIT-Kanpur***.
• The preparation material will be available in English, Hindi and other regional languages.

Mayuram Samuel Vedanayagam Pillai

• Samuel Vedanayagam Pillai (1826–1889), also known as Mayavaram Vedanayagam Pillai, was an Indian civil servant, Tamil poet, novelist and social worker.
• He is remembered for the authorship of ***Prathapa Mudaliar Charithram***, recognized as the **"1st modern Tamil novel".**
• He is also a great connoisseur of Carnatic music.
• His religious works are Kochakappa, Mata Patikankal, Tayabarakanni, Deva Thothiramalai, Tiruvarul Malai, Deva Mata Antati, and Tiruvarul Antati.
• His musical works include Sarva Samaya Samarasa Kirtanai, Satya Veta Kirtanai, Periyanayaki Amma Patikam, and Pen Mati Malai.

Chandra

• The ICAR-Indian Institute of Spices Research (ICAR-IISR), Kozhikode, has developed a high-yielding variety of black pepper named ***'IISR Chandra'***.
• The 'IISR Chandra' variety has a long spike, compact setting, and bold berries.

Project Collaboration Agreement

• WHO and the Ministry of AYUSH signed the Traditional and Complementary Medicine 'Project Collaboration Agreement' recently.
• It aims to standardize Traditional and Complementary Medical Systems, integrate their quality and safety aspects into the National Health System, and disseminate them at the international level.

Yuva Tourism Clubs

• The Yuva Tourism Club is a program launched by the **Ministry of Tourism** as part of the India@75 campaign.
• The program's goal is to ***develop young ambassadors*** for Indian tourism.
• The program is "of the youth, by the youth, for the youth".

India's 1st urban ropeway project

• India's 1st urban ropeway project in Shimla will begin in September 2024 and is expected to be completed by 2029.
• It is the world's second longest, after ***La Paz*** in Bolivia.

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