Prelim Bits 13-12-2023 | UPSC Daily Current Affairs

Global Partnership on Artificial Intelligence (GPAI) Summit

Prime Minister has inaugurated the Global Partnership on Artificial Intelligence (GPAI) Summit at Bharat Mandapam.

GPAI

- **Launch -** It was launched in 2020.
- GPAI is a 29 member multi-stakeholder initiative.
- **Aim -** GPAI aims to bridge the gap between theory and practice on AI by supporting cutting-edge research and applied activities on AI-related priorities.
- It is built around a shared commitment to the Organisation for Economic Co-operation and Development (OECD) Recommendation on Artificial Intelligence.
- **India -** India is a ***founding*** member of GPAI, having joined the multi-stakeholder initiative in June 2020 and the lead chair of GPAI in 2024.
- **Previous summits -** The first three GPAI summits were held in Montreal, Paris and Tokyo, respectively.

References

1. The Indian Express - India hosts Global Partnership on AI Summit
2. PIB - Global Partnership on Artificial Intelligence (GPAI) Summit
3. GPAI – About GPAI

Demaorchestia Alanensis

Researchers at Berhampur University, Odisha have discovered a new species of marine amphipod found in Chilika Lake.

Amphipods

- They are commonly called Scuds or side swimmers.
- They are found commonly in *both surface and subterranean* freshwater habitats.
- They constitute the most diverse and ubiquitous (being everywhere) group in freshwater.
- Amphipods are a significant group in the marine ecosystem and play a vital role in the marine food chain.
- They also serve as indicators for studying the impact of climate change and health of coastal ecosystems.

Demaorchestia alanensis

- It is a shrimp-like crustacea of genus Demaorchesti and was named Demaorchestia alanensis after global expert professor Alan Myers.
- **Features -** The new species is white in colour and less than 15 millimetres in length and has 13 pairs of legs.
- While three pairs are used for swimming in the water, eight pairs are used for walking on land.
- The other two pairs are used for capturing prey and feeding.
- The species can be distinguished from the other members of the genus by two to three strong, hair-like structures or setae on the anterior margin of the propodus of the gnathopod.
- It belongs to the subfamily Platorchestiinae found along the Indian coast.

Other such amphipods found in India are Quadrivisio Chilikensis from the seaweeds near Nalaban and the Talorchestia buensis from the West Bengal coastal area.

References

1. Down To Earth – New marine amphipod species found in Chillika Lake
2. Britannica – Amphipods

Saiga Antelope

Saiga Tatarica was changed from Critically Endangered to Near Threatened by the International Union for Conservation of Nature (IUCN).

- The Saiga, the odd-faced antelope has roamed the earth since the last Ice Age.
- They are medium sized hoofed mammal that belongs to the family Bovidae.
- They lives in herds in treeless steppe country.

Hoofed mammal are animals with a hard, nail-like case called a hoof covering each toe on their feet.

- **Sub-species -** The Saiga has two sub-species
  - **Saiga tatarica** (found in most of the range) and
  - **Saiga tatarica mongolica** (found only in Mongolia).
- The antelope were once found throughout the Eurasian Steppe, the great band of grassland that stretches from Hungary in Europe to Manchuria in Asia.
- Today, the animal is found in fragmented populations within Kazakhstan, Mongolia, the Russian Federation and Uzbekistan, according to the Saiga Conservation Alliance (SCA).
- Since 2002, the Saiga has been considered by the International Union for Conservation of Nature (IUCN) to be critically endangered.

Steppes

- A steppe is a dry, grassy plain which occur in temperate climates, which lie between the tropics and polar regions.
- Temperate regions have distinct seasonal temperature changes, with cold winters and warm summers.
- The Steppe, belt of grassland that extends from Hungary in the west through Ukraine and Central Asia to Manchuria in the east.
- Climate is continental with extremes of temperature varying greatly between summer and winter.



References

1. Down To Earth – Saiga has beaten extinction
2. Britannica – Saiga Antelope
3. SCA – Saiga Conservation Alliance

Google Gemini

Alphabet, Google's parent company came out with its most advanced AI model, called Gemini.

- It a new multimodal general and flexible AI model, which comes in three sizes.
- Multimodal means it can work, understand, and operate across text, code, audio, image, and video.

  ChatGPT cannot work on video at the moment, at least not natively.

- Gemini can understand, explain and generate high-quality code in the world's most popular programming languages, like Python, Java, C++ and Go.
- **Gemini ultra -** Gemini Ultra is the first model to outperform human experts on massive multitask language understanding (MMLU), which uses a combination of 57 subjects.

The three sizes of Gemini

- The three sizes are Ultra (which is yet to be launched), Pro and Nano.
- Gemini Ultra, the largest and most capable model, will be for highly complex tasks.
- Gemini Pro will be best at scaling across a wide range of tasks and is now available in Bard for regular users across the world.
- Gemini Nano will manage on-device tasks, and is already available on Pixel 8 Pro.

References

1. The India Express – Google Gemini
2. The Hindu – Google Gemini, Race of chat bots

3. Business Standard - Google's Gemini

Regional Overview of Food Security and Nutrition 2023: Statistics and Trends

The Food and Agriculture Organisation (FAO) of the United Nations launched the Regional Overview of Food Security and Nutrition 2023: Statistics and Trends report.

- The FAO report is a glimpse on the progress in meeting Sustainable Development Goals and World Health Assembly (WHA) global nutrition targets.

Findings

- 74.1% of Indians (2020 – 76.2%) were unable to afford a healthy diet in 2021, Pakistan (82.2%), and in Bangladesh (66.1%) of the population faced difficulties in finding healthy food.
- Rising food costs, if not matched by rising income, will lead to more people unable to afford a healthy diet, the report warned.
- The report said during the COVID-19 pandemic and the 5Fs crisis, Food, Feed, Fuel, Fertilizers, and Finance, the region witnessed harrowing statistics.
- The latest statistics indicate that the region, with 370.7 million undernourished people, continues to represent half of the global total.
- Similarly, the Asia and the Pacific region accounts for half of the world's severe food insecurity, with more women than men being food insecure.
- The report said 16.6% of the country's population is undernourished.
- The region, according to the report, had a lower prevalence for both moderate or severe and severe food insecurity when compared with the world prevalence since 2015.

Food and Agriculture Organisation (FAO)

- **Established -** In 1945, in Quebec City, Canada, the first session of the newly created United Nations establishes the Food and Agriculture Organization (FAO).
- The FAO is a specialized agency of the United Nations that leads international efforts to defeat hunger.
- **Aim -** It aims to achieve food security for all and make sure that people have regular access to enough high-quality food to lead active, healthy lives.
- **Members -** With 195 members (194 countries and the European Union), FAO works in over 130 countries worldwide.
- **Headquarters -** During its commencement Washington D.C. was designated as a temporary FAO headquarters, at present the headquarters is at Rome, Italy.

References

1. The Hindu - 74.1% of Indians unable to afford a healthy diet
2. FAO – About Food and Agriculture Organisation (FAO)

Other Important News

Indian Tent Turtles

• Directorate of Revenue Intelligence (DRI) seized 436 baby Indian Tent turtles from a person illegally transporting them in Lucknow recently.
• The Indian tent turtle ***(Pangshura tentoria)*** is a species of turtle that is native to India, Nepal, and Bangladesh.
• Indian tent turtles are mainly ***omnivorous*** and live in freshwater rivers and swamps.
• **Conservation**
  - **IUCN** - Least concern
  - **CITES -** Appendix II
  - Schedule 1 of Wild Life (Protection) Act, 1972.

"SAMUDRA" (Smart Access to Marine Users for ocean Data Resources and Advisories)

• "SAMUDRA" (Smart Access to Marine Users for ocean Data Resources and Advisories) is a mobile app that provides comprehensive information on all ocean-related services.
• The app is useful for ***seafarers and the fishing community***.
• The app was launched by the ***Indian National Centre for Ocean Information Services (INCOIS)***.
• INCOIS is an autonomous body under the Ministry of Earth Sciences located in Hyderabad.

Ceasefire in Gaza

• India and 152 other members vote overwhelmingly at U.N. General Assembly (UNGA) to demand a humanitarian ceasefire in Gaza recently.
• The vote in the ***193-member*** world body was 153 in favor, 10 against (includes ***US and Israel***) and 23 abstentions.
• The resolution is ***non-binding*** but it serves as an indicator of global opinion.
• **UNGA** is one of the 6 principal organs of the United Nations and the main policy making body of UN that votes on the decision that organization makes.

Currency Devaluation in Argentina

• Argentina recently devalues its currency and cuts subsidies as part of shock economic measures because of its 143% annual inflation.
• ***Argentine peso*** will be devalued by 50% to 800 to the U.S. dollar from 400 pesos to the dollar.

5G Radio Access Network (RAN)

• The 5G RAN technology developed by 2 IITs and the R&D arm of Ministry of Electronics and Information Technology was handed over to Indian tech company for commercial applications.
• 5G RAN uses 5G radio frequencies to provide wireless connectivity to devices.
• A radio access network (RAN) is a key component of a mobile telecommunication system that connects devices like smartphones to a network via a radio link.

Kambar

• Kamban is a title of the Occhans, to which caste Tamil epic poet Kamban is reputed to have belonged.
• Uvachar or Occhan is a community in southern districts of ***Tamil Nadu***, a class of temple priests who usually officiate as pujaris at Pidari, Kali and other Amman (Grama Devata) temples.
• The name Kambar in the southern districts of Tamil Nadu and at Thiruvananthapuram in Kerala identifies them with nagaswaram and thavil.
• They wear also known by names such as Parisaivar, Vallavarayar and Sallirayar.

Lyfgenia

• U.S. Food and Drug Administration approved two treatments, Casgevy and Lyfgenia, representing the ***1st cell-based gene therapies*** for the treatment of sickle cell disease (SCD) recently.
• Lyfgenia is a cell-based gene therapy, uses a lentiviral vector (gene delivery vehicle) for genetic modification.
• Lyfgenia modifies a patient's blood stem cells to produce a modified version of the HBB gene.
• It is approved for the treatment of patients 12 years of age and older with sickle cell disease and a history of vaso-occlusive events.

Kazhuveli bird sanctuary

• Kazhuveli Wetland Birds Sanctuary is situated in the Villupuram district of Tamilnadu.
• The Kazhuveli wetland is one of the major wetlands on the Coromandel Coast after the Pulicat Lake.
• The lake is connected to the Bay of Bengal by the ***Uppukalli Creek and the Yedayanthittu estuary*** and is visited for nesting by migratory birds on the Central Asian flyway.
• Listed as one of Tamil Nadu's 141 prioritised wetlands, Kazhuveli is also a wetland of ***international significance and a potential Ramsar site.***

Sparking Disability Inclusive Rural Transformation (SPARK) Project

• **Aim -** To help people with disabilities, especially women and youth with disabilities, become active participants.
• **Implemented by -** The ILO and the International Fund for Agricultural Development (IFAD), in collaboration with the Women's Development Corporation in Maharashtra.
• Through this project, persons with disabilities were trained as Disability Inclusion Facilitators (DIFs).
• **International Fund for Agricultural Development (IFAD)** is a United Nations agency that works to eradicate poverty and hunger in developing countries.

Cyclone Jasper

• Jasper is a ***Tropical Cyclone*** that formed in the north coast of Queensland in ***Australia***.