Prelim Bits 01-12-2021 | UPSC Daily Current Affairs

Fishing Cat

The Children for Fishing Cat project of Andhra Pradesh recruits children as ambassadors for conservation to save the predator and its home.

> The Children for Fishing Cat project is part of the Godavari Fishing Cat Project, which focuses on community-based conservation of this in the coastal habitats of the region.

- Fishing cat is a wild cat species that is bigger than a domestic cat.
- They are nocturnal. They can easily wade through water and survive in wet landscapes.
- As they have webbing between their toes that helps to catch fish efficiently, their diet is dominated by fish.
- **Habitat** - They abound in estuarine floodplains, tidal mangrove forests and also inland freshwater habitats.
- They are scattered along the Eastern Ghats. They are also found in the foothills of the Himalayas along the Ganga and Brahmaputra river valleys and in the Western Ghats.
- They inhabit the Sundarbans (West Bengal), Chilika lagoon and the surrounding wetlands (Odisha), Coringa and Krishna mangroves (AP).
- **Threats** - Loss of its preferred wetland habitats; Depletion of its main prey-fish due to unsustainable fishing practices; Occasional poaching for its skin; shrimp farming; trapping, snaring and poisoning.

Protection Status	
IUCN Red List	Endangered
CITES	Appendix II
Wildlife (Protection) Act, 1972	Schedule I

Reference

1. https://www.thehindu.com/sci-tech/energy-and-environment/this-library-in-andhra-pradesh-can-save-the-elusive-fishing-cat/article37702200.ece
2. https://www.wwfindia.org/about_wwf/priority_species/lesser_known_species/fishing_cat/
3. https://www.downtoearth.org.in/news/wildlife-biodiversity/world-wildlife-day-first-ever-survey-on-fishing-cats-of-the-chilika-starts-75747

Study on Flash Droughts

A recent study has identified India among the global flash drought hotspots from 1980-2015.

- About 10-15% areas under cultivation of rice and maize were affected by flash droughts during the monsoon seasons in India from 1951-2018.
- It predicted that by the end of the 21st century, the frequency of concurrent hot and dry

extremes in India will rise by about five-fold.
- This can cause approximately a seven-fold increase in flash droughts.
- India could experience more flash droughts during the monsoon season than the non-monsoon season.
- The study has also identified the flash drought hotspots,
    1. Corn belt across the mid-western United States,
    2. Barley production in the Iberian Peninsula,
    3. Wheat belt in western Russia,
    4. Wheat production in Asia Minor,
    5. Rice-producing regions in India and the Indochina Peninsula,
    6. Maize production in north-eastern China and
    7. Sorghum production across the Sahel.

Flash drought

- Flash drought is the **rapid onset or intensification of drought** and is set in motion by lower-than-normal rates of precipitation, accompanied by abnormally high temperatures, winds, and radiation.
- Together, these changes in weather can rapidly alter the local climate.
- Flash droughts can either by **short-lived** yet severe event where soil moisture completely depletes or a **multi-week** period of rapid intensification toward drought.
- Unlike conventional drought, which can happen anywhere and at any time, flash drought typically occurs during **warm seasons**.
- **Causes** - Rapid drought intensification occurs due to two key drivers:
    1. A critical lack of precipitation accompanied by abnormally high temperatures, high winds, and/or changes in radiation and
    2. Increased evaporative demand, which is a measure of the extent to which the environment 'tries' to evaporate water.
- [This is unlike common drought that is caused only by decline in precipitation.]
- Geographic differences and climate patterns also impact the development of flash drought.
- In contrast with conventional drought - that occurs throughout the year at any location - flash drought typically occurs during warm seasons.
- **Impacts** - As flash droughts can develop in only a few weeks, they create impacts on agriculture that are difficult to prepare for and mitigate.
- Higher temperature increases evapo-transpiration and further lowers soil moisture, which decreases rapidly as drought conditions continue.
- [Evapo-transpiration is the process by which water is transferred from the land to the atmosphere by evaporation from the soil and by transpiration from plants.]

Reference

1. https://www.downtoearth.org.in/news/climate-change/study-identifies-india-among-global-flash-drought-hotspots-from-1980-2015-80131
2. https://www.drought.gov/what-is-drought/flash-drought
3. https://indianexpress.com/article/technology/science/flash-droughts-affect-india-7639227/

Rift Valley Lakes

A report has found that the water levels of lakes in Kenya's Great Rift Valley increased significantly, due to climate change, human activities and an active tectonic belt.

- Rift Valley Lakes are a series of lakes in the East African Rift valley that runs through eastern

Africa from Ethiopia in the north to Malawi in the south.

- These include the African Great Lakes (Victoria, Tanganyika and Malawi) as well as Turkana, Albert, Edward, Kivu and other lakes.
    - Lake Victoria is the second largest freshwater lake in the world after Lake Superior in the US.
    - Lake Taganayika is the longest lake in the world.
- Rift Valley lakes are well known for the evolution of at least 800 **cichlid fish species** that live in their waters.
- **Threats** - Deforestation, pollution from agricultural and industrial activities, run-off from urban areas and overfishing threaten the health of many of the lakes and their water basins.

Rift Valley

- A rift valley is a lowland region that forms where Earth's tectonic plates move apart, or rift.
- Rift valleys are found both on land and at the bottom of the ocean, where they are created by the process of seafloor spreading.
- Rift valleys differ from river valleys and glacial valleys in that they are created by tectonic activity and not the process of erosion.

Reference

1. https://www.downtoearth.org.in/news/africa/rising-water-levels-in-kenya-s-rift-valley-lakes-379-935-people-require-urgent-humanitarian-assistance-80128
2. https://wwf.panda.org/discover/knowledge_hub/where_we_work/africa_rift_lakes/
3. https://www.nationalgeographic.org/encyclopedia/rift-valley/

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