

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.wfindia.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 be **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/>

