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Zombie Fires

- Zombie Fire is a fire from a previous growing season that can smoulder under the ground which is made up of carbon-rich peat.
- When the weather warms, the fire can reignite, these are also known as holdover fires.
- According to a new study, the fire regimes in the Arctic are changing rapidly, with 'zombie fires' becoming more frequent in addition to fires occurring in the once-frozen tundra.
- The fires in the Arctic spreading to areas which were formerly fire-resistant is a more worrying feature.
- The tundra is drying up and vegetation there like moss, grass, dwarf shrubs, etc. are starting to catch fire.
- In 2019 and 2020, burning occurred well above the Arctic Circle, a region not normally known to support large wildfires.
- Wildfires on permafrost in Siberia south of the Arctic are not uncommon.
- The reason for this anomaly is that temperatures in winter and spring were warmer than usual during 2019-20.
- Temperature in Siberia in 2020 had gone through the roof, with the region recording a severe heatwave.
- Nearly all of this year's fires inside the Arctic Circle occurred on continuous permafrost, with over half of these burning on ancient carbon-rich peat soils.

Arctic Fires

- The Arctic region has a cold body of water and permafrost, it naturally acts as a carbon sink.
- On average it absorbs 58 megatons of CO_2 a year in its cold water.
- Soils in areas of permafrost contain twice as much carbon as there is currently in the atmosphere.
- As the climate and permafrost soils have warmed, microbes have started to break down this organic carbon, which has been frozen and fixed in the permafrost.
- That has led to a rise in land emissions of CO_2 and methane.

- Also there will be less absorption of carbon by water with rising temperature.
- It will be a feedback loop, as peatlands release more carbon, global warming increases, which thaws more peat and causes more wildfires.
- Arctic fires will affect the global climate over the long term depending on what they burnt.
- That's because peatlands, unlike boreal forest, do not regrow quickly after a fire, so the carbon released is permanently lost to the atmosphere.

EX-Bongosagar

- Exercise Bongosagar is a bilateral naval exercise between India and Bangladesh, the first edition of the exercise was held in 2019.
- It aims to develop interoperability and joint operational skills through the conduct of a wide spectrum of maritime exercises and operations.
- It will be followed by the 3rd edition of India-Bangladesh Coordinated Patrol (IN-BN CORPAT), wherein both countries will undertake joint patrolling along the International Maritime Boundary Line (IMBL).
- The second edition of the exercise has held recently in Northern Bay of Bengal.
- This year's edition assumes greater significance since it is being conducted during Mujib Barsho, the 100th birth anniversary of Bangabandhu Sheikh Mujibur Rahman.

Maritime Boundary

- A maritime boundary is a conceptual division of the Earth's water surface areas using physiographic or geopolitical criteria.
- As such, it usually bounds areas of exclusive national rights over mineral and biological resources, encompassing maritime features, limits and zones.
- Generally, a maritime boundary is delineated at a particular distance from a jurisdiction's coastline.
- Although in some countries the term maritime boundary represents borders of a maritime nation that are recognized by the United Nations Convention on the Law of the Sea, maritime borders usually serve to identify the edge of international waters.
- Maritime boundaries exist in the context of territorial waters, contiguous zones, and exclusive economic zones.
- However, the terminology does not encompass lake or river boundaries, which are considered within the context of land boundaries.

- Some maritime boundaries have remained indeterminate despite efforts to clarify them.
- The delineation of maritime boundaries has strategic, economic and environmental implications.

Data Governance Quality Index (DGQI)

- Data Governance Quality Index (DGQI) survey was conducted by Development Monitoring and Evaluation Office (DMEO), Niti Aayog.
- It aims to assess different Ministries/Departments' performance on the implementation of Central Sector Schemes (CS) and Centrally Sponsored Schemes (CSS).
- It also drives healthy competition among them and promote cooperative peer learning from best practices.
- Six major themes of DGQI are as follows

1. Data Generation.
2. Data Quality.
3. Use of Technology.
4. Data Analysis, Use and Dissemination.
5. Data Security.
6. HR Capacity and Case Studies.

- Ministries/Departments were classified in six categories:

1. Administrative,
2. Strategic,
3. Infrastructure,
4. Social,
5. Economic,
6. Scientific.

- Recently Department of Fertilizers (Ministry of Chemicals and Fertilizers) has been ranked 3rd out of the 65 Ministries/Departments with a score 4.11 on a scale of 5 on Data Governance Quality Index (DGQI).
- It has been ranked 2nd amongst the 16 Economic Ministries/Departments.

Confronting Carbon Inequality

- Confronting Carbon Inequality is a report released by Oxfam International and the Stockholm Environmental Institute (SEI).
- It highlights that a rich person contributes more to the climate crisis than a poor person.

- According to the report an Indian emitted only 1.97 tonnes of CO_2 (tCO_2) annually, while Americans and Canadians both emitted well over 16 tCO_2.
- The per capita CO_2 emissions of the richest 10% of Indians were about 4.4 tons in 2018, in comparison to the per capita emissions of the richest 10% Americans were 52.4 tons, almost 12 times that of the richest Indians.
- Highlights of the report are as follows

1. **Cumulative Emissions -** The richest 1% of humanity accounted for 15% of cumulative emissions, while the poorest 50% accounted for only 7%.
2. **Depletion of Global Carbon Budget -** The richest 10% depleted the global carbon budget by 31% and the poorest 50% used only 4% of the carbon budget.

   A carbon budget is a cumulative amount of carbon dioxide (CO_2) emissions permitted over a period of time to keep within a certain temperature threshold.

3. **Emissions Growth -** While the richest 10% accounted for 46% of emissions growth, the poorest 50% accounted for only 6%.

   About half of the emissions of the richest 10% are associated with North America and the European Union (EU).

Source: PIB, the Hindu

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