

Prelim Bits 24-06-2019

Record-Breaking Heat Waves

- Scott Power of the Australian Bureau of Meteorology conducted a study.
- It stated that by 2100, 'Record-Breaking Heat' will Be a New Normal for Every Year,
- The study investigated record-setting heat under two possible future scenarios:
 - i. one with very high greenhouse gas emissions ("RCP8.5")* and
 - ii. one where global warming is limited to below 2C ("RCP2.6")*.
- Under the high-emissions scenario,
 - 1. Tropical regions are likely to see the most record-setting heat.
 - 2. 58% of the world could see a new temperature record set.
 - 3. New heat records could be set every year in two-thirds of the world's least developed countries.

• If the temperature rise is limited to 2°C,

- only 14% of the world would see new record temperatures &
- 2. only 3% of the world's area will see such record-smashing.
- The past four years have been the warmest on record with 2016 being the hottest year ever recorded.
- The study projected this record-setting trend i.e trend of temperatures exceeding the historical average for first time, will continue for at least the next 20 years and for longer.
- The world also saw its highest ever "minimum" temperature.
- During last summer's northern-hemisphere heatwave, temperature records were broken in cities across the world,
- Among the hottest on record globally 53.9°C in Mitribah, Kuwait (2016) and 53.7°C in Turbat, Pakistan (2017).
- Pace of change- The more extreme these events are, the greater the potential to push ecosystems beyond their ability to cope.
- The findings reinforce the urgent need to reduce greenhouse gas emissions,
- The poorest countries are projected to witness the highest pace at which records are set.

- Approximately 68% of years of 21st century will see records set in the world's Least Developed Countries.
- Whereas this figure is only 54% in wealthier nations.
- Projections for India- In the high-emissions scenario, the likelihood of at least one high monthly record in any given year varies regionally from 60% to 70% (global average 58%)
 - 1. In the low-emissions scenario, it drops to approximately 15% over the whole country.
 - 2. The frequency will increase if greenhouse gas emissions continue to rise.
 - 3. The frequency will fall if large and sustained cuts are made to global greenhouse gas emissions.
- This month, Delhi reported its highest ever temperature of 48°C
- Churu in Rajasthan crossed 50°C.

U.S. Pentagon emits more greenhouse gases

- A finding showed that if the The U.S. Department of Defense (Pentagon)
 was listed as a country, its emissions would make it the world's 55th
 largest contributor of greenhouse gases..
- Pentagon is the largest institutional consumer of fossil fuels in the world.
- It emits more greenhouse gases than Portugal or Sweden.
- It released about 59 million metric tons of carbon dioxide and other greenhouse gases in 2017.
- It consumed between 77% and 80% of all federal government energy consumption since 2001.
- Military weapons and equipment use so much fuel that that is gallons per mile.
- China is the world's largest emitter of carbon dioxide, , followed by the United States.
- Global temperatures are on course for a 3C to 5C rise this century.
- Overshooting a global target of limiting the increase to 2C or less.
- 4C of warming would increase more than five times the influence of climate on conflict.
- Failing to reduce greenhouse gas emissions will make the nightmare scenarios, perhaps even "climate wars" more likely.
- A case for decarbonizing the military Over the past decade the Defense Department has reduced its fossil fuel consumption through actions that include using renewable energy.
- Cutting Pentagon greenhouse gas emissions will help save lives in the United

States and could diminish the risk of climate conflict.

Dalbergia sissoo (Indian rosewood/shisham tree)

- Shisham trees are found dying by experts are baffled.
- It is a **decidious tree** that is economically important for its value in forestry, agroforestry, and horticulture.
- It provides timber, fuelwood, fodder, has medicinal value, used extensively as an ornamental tree as well as for shading, erosion control, and soil fertility.
- Native to the Indian sub-continent and it has been introduced in various countries throughout the world.
- It survives in areas with a mean annual rainfall of 500-4500mm
- Its extensive root system makes it ideally suited for stabilizing and controlling erosion.
- The wood of Indian rosewood is highly durable with excellent finishing colour and smoothness.
- Scientists at the Forest Research Institute (FRI) identified a "fungus" could be the problem behind the dying of the tree.
- Conservation Status: Not Threatened
- Recently India has proposed to remove rosewood (Dalbergia sissoo) from Appendix II (Not threatened) of CITES
- Appendix II of CITES states that trade must be controlled to avoid utilisation incompatible with their survival.
- According to the India's proposal, Listing of Dalbergia genus may create unnecessary complications in the trade.
- Export market of rosewood handicraft, a thriving sector has nearly crashed since an international agreement came into effect in 2017, regulating the trade in all the 250 rosewood species (under Dalbergia genus).
- So India has proposed to remove rosewood (Dalbergia sissoo) from Appendix II of CITES.

Continental axis hypothesis

- It states that regions of the earth spread across,
 - a. Latitudinal area (east-west) more likely to witness greater development
 - b. Longitudinal area (North-South) comparatively lower development.
- This is because temparatures are largely similar across latitudes, which helps technology and ideas to spread among larger population.
- It also results in more cultural homogeneity.
- It is also known as "Continental orientation hypothesis."

Source: The Indian Express, Live Science, The Hindu

