

Frontiers report of UNEP, 2022

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In news– The United Nations Environment Programme (UNEP) has released the annual Frontiers report, 2022 recently.

Key highlights of the report-

- Each edition of the Frontiers report introduces selected emerging environmental issues that present distinct challenges and require tailored solutions.
- **Frontiers 2022: Noise, Blazes and Mismatches identified three issues:**
 - **Listening to Cities:** From Noisy Environments to Positive Soundscapes.
 - **Wildfires Under Climate Change:** A Burning Issue.
 - **Phenology:** Climate Change Is Shifting the Rhythm of Nature.
- The report has warned that **wildfires are predicted to worsen in the coming years and decades**, attributed to climate change and human activities.
- There has been a rapid expansion of cities towards forest areas in many regions in recent decades and this wildland-urban interface is the area where wildfire risks are most pronounced.
- Wildfires seldom spread to **humid tropical forests** in the past. But these forests are now **more vulnerable due to deforestation and forest fragmentation**.
- Extreme weather events such as hotter temperatures and more droughts lead to longer fire seasons and increase the likelihood of fire weather conditions.
- As per the report, **Savannah or the mixed woodland-grassland ecosystem accounted for 77 per cent of the**

total 13 million individual fires (lasting for 4-5 days) which occurred globally **between 2003 and 2016**.

- Between 2002 and 2016, an average of about 423 million hectares or 4.23 million square km of the earth's land surface was burnt every year, equivalent to an area around the size of the entire European Union.
- In fact, **67 per cent of the annual global area burned by all types of fires, including wildfires, was on the African continent.**
- It has pointed out that with rising forest fires, the world is very likely to see **more frequent incidences of lightning.**
- **Lightning ignition is the predominant driver of massive wildfires in the boreal forests of North America** and northern Siberia.
- Fire-induced thunderstorms are a new danger posed by rising wildfires.
- In recent decades, such thunderstorms have been reported very frequently in Australia, Europe and North America
- **With the changing climate, the frequency of lightning strikes is projected to increase.**
- **The report also recommended the following to improve monitoring and management of wildfires:**
 - Appreciating and adopting indigenous fire management techniques.
 - Focus on long-range weather forecasting.
 - Focus on remote-sensing capabilities such as satellites, ground-based radar, lightning detection as well as data handling.
- The report has identified wildfires are **one of three most important environmental issues** to have emerged due to climate change.
- The other two are noise pollution and shifts in biological life cycles of plants and animals.

What is Soundscape ?

- The International Organization for Standardization (ISO) defines a soundscape as “[the] acoustic environment as perceived or experienced and/or understood by a person or people, in context”.
- In other words, soundscape encompasses the way people perceive, experience and respond to the full range of sounds in a place at a given time.

What is Phenology?

- It refers to periodic events in biological life cycles.
- Phenology examines the timing of recurring life-cycle stages, driven by environmental forces, and how interacting species respond to changes in timing within an ecosystem.