**Syllabus subtopic:** Conservation, Environmental Pollution and Degradation, Environmental Impact Assessment.

**Prelims and Mains focus:** about the impact of Australian bushfires on global temperature

**Context:** Australia’s bushfires are contributing to one of the biggest annual increases in the concentration of carbon dioxide in the Earth’s atmosphere since record-keeping began more than 60 years ago, according to a forecast published by Britain’s Met Office on Friday.

**Observations made by the Britain’s Met Office**

- A forecast of the atmospheric concentration of carbon-dioxide shows that 2020 will witness one of the largest annual rises in concentration since measurements began at Mauna Loa, in Hawaii, 1958.

- It said the atmospheric concentration of CO2 is expected to peak above 417 parts per million in May, with the average for the year forecast to be 414.2 ± 0.6ppm. This annual average represents a 2.74 ± 0.57 ppm rise on the 2019 average.

- While human-caused greenhouse gas emissions are responsible for the bulk of the increase in CO2 levels, Australia’s bushfires have made the problem measurably worse, underscoring the impact of the catastrophe on the global climate system.

- Although the data series started in 1958 has always shown CO2 concentrations increasing year-on-year, driven by fossil fuel burning and deforestation, the rate of rise has not been perfectly even.

- Fluctuations in the amount of CO2 absorbed by tropical forests and other natural carbon sinks can affect overall levels of the gas in the atmosphere.
This year, the Met forecasts that the impact of weather patterns on global ecosystems will increase the annual human-caused rise in CO2 concentration by 10%, with emissions from the Australian fires accounting for one-fifth of that increase.

Alarming levels of CO2 concentration

- Concentrations of CO2 in the Earth’s atmosphere have already far surpassed what scientists consider to be safe limits.

- At a climate summit in Madrid in December, U.N. Secretary-General Antonio Guterres warned that 400 ppm had once been considered “an unthinkable tipping point.”

- The last time there was a comparable concentration of CO2 in the atmosphere was between 3 and 5 million years ago, when the temperature was between 2 and 3 degrees Celsius warmer and sea levels were 10 to 20 meters higher than today, scientists say.

- Australia’s fires are themselves a foretaste of the kind of catastrophes that are liable to become normal as the planet warms, with prolonged drought and low humidity making arid landscapes more vulnerable to huge blazes, scientists say.

Conclusion

- The CO2 forecast underscored the urgency of the task facing negotiators trying to persuade big countries to cut emissions under the 2015 Paris Agreement to combat climate change, which is still nowhere near on track to spare the world from devastating temperature increases.

- The accord enters a crucial implementation phase this year, with governments due to submit more ambitious plans for climate action ahead of a summit in Glasgow in November. Australia’s government is regarded as among the main laggards.
The 2020 Climate Change Performance Index rated Australia as one of the worst performers among 57 high-emitters, awarding it 0 out of 100 possible points for its policies.