Syllabus subtopic: Conservation, environmental pollution and degradation, environmental impact assessment

News: Greenhouse gases in the atmosphere hit a new record in 2018, exceeding the average yearly increase of the last decade and reinforcing increasingly damaging weather patterns, the World Meteorological Organization (WMO) said on Monday.

Prelims and Mains focus: About WMO, greenhouse gases and their impact on the environment, ways to tackle their harmful effects

Key highlights of the report:

- The concentration of carbon dioxide surged from 405.5ppm in 2017 to 407.8ppm in 2018, exceeding the average annual increase of 2.06ppm in 2005-2015. The annual increase in methane was the highest since 1998.

- The UN agency's Greenhouse GasBulletin is one of a series of studies to be published ahead of a UN climate change summit being held in Madrid next week, and is expected to guide discussions there. It measures the atmospheric concentration of the gases responsible for global warming, rather than emissions.

- Irrespective of future policy, carbon dioxide stays in the atmosphere for centuries, locking in warming trends.

About WMO:

- The World Meteorological Organization (WMO) is a specialized agency of the United Nations dedicated to meteorology (weather), climatology (climate), operational hydrology (water) and other related geophysical sciences such as oceanography and atmospheric chemistry.

- Predecessor organization — International Meteorological Organization (IMO) — founded in 1873.

Reports published by WMO:

2. Status of the World Climate.
Functions:

1. WMO coordinates the activities of National Meteorological and Hydrological Services in 191 States and Territories so that basic weather, climate and water services are made available to anyone who needs them, when they need them.
2. WMO guarantees the publication of observations and statistics and furthers the application of meteorology and hydrology (including the monitoring and predictions of climate change and ozone) to all aspects of human activities such as aviation, shipping, water management and agriculture.
3. WMO also encourages research and training in meteorology and hydrology and their related applications and contributes towards reducing the impact of weather- and climate-related hazards. This is accomplished through regular, reliable forecasts and early warnings on flooding, drought, tropical cyclones, tornadoes and other extreme events.
4. Predictions concerning locust swarms and the transport of pollutants (nuclear and toxic substances, volcanic ash) are also provided by WMO Members.