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Human Emissions of Nitrous Oxide

- According to recent findings Human emissions of nitrous oxide (N2O) increased by 30 per cent between 1980 and 2016.
- Its global concentration levels increased from 270 parts per billion (ppb) in 1750 to 331 ppb in 2018, a jump of 20 per cent.
- The growth has been the quickest in the past five decades because of human emissions.
- It has also found that a major proportion of the N2O emissions in the last four decades came from the agricultural sector, mainly because of the use nitrogen-based fertilisers.
- Most N2O emissions have come from emerging countries like India, China and Brazil.
- The increase in its emissions means that the climatic burden on the atmosphere is increasing from non-carbon sources as well, while the major focus of global climate change negotiations is currently centred on carbon its emissions and mitigation.

Nitrous Oxide (N2O)

- Nitrous oxide is a dangerous gas for the sustainable existence of humans on Earth.
- It has the third-highest concentration (Co2 and Methane are other two gases) in our atmosphere among greenhouse gases responsible for global warming.
- N2O can live in the atmosphere for up to 125 years.
- N2O is also the only remaining threat to the ozone layer, for it accumulates in the atmosphere over a long period of time, just like CO2.

Nagorno-Karabakh Region

- Recently Armenia and Azerbaijan held their first high-level talks after nearly two weeks of fierce clashes over the disputed Nagorno-Karabakh region.
- Armenia and Azerbaijan are part of Transcaucasia or South Caucasia.
- Caucasia is a geographical region in the vicinity of the southern Caucasus

Mountains on the border of Eastern Europe and Western Asia consisting of Georgia, Armenia, and Azerbaijan.

- Nagorno-Karabakh region has 95% of the population as ethnically Armenian and is controlled by them but it is internationally recognised as part of Azerbaijan.
- Armenia is Christian majority, while Azerbaijan is Muslim majority country.

Blue flag beaches

- The Blue Flag Programme for beaches and marinas is run by the international, non-governmental, non-profit organisation FEE (the Foundation for Environmental Education).
- FEE (the Foundation for Environmental Education) was established in France in 1985.
- Blue Flag beaches are considered the cleanest beaches of the world.
- In order to qualify for the Blue Flag, a series of stringent environmental, educational, safety, and accessibility criteria must be met and maintained.
- Union environment minister announced 8 beaches of India have been awarded the “BLUE FLAG”.
- The eight beaches are:

1. Shivrajpur in Gujarat,
2. Ghoghla in Daman & Diu,
3. Kasarkod and Padubidri beach in Karnataka,
4. Kappad in Kerala,
5. Rushikonda in Andhra Pradesh,
6. Golden beach of Odisha and
7. Radhanagar beach in Andaman and Nicobar.

- India is also the first country in “Asia-Pacific” region which has achieved this feat in just about 2 years’ time.
- Japan, South Korea and UAE are the only other Asian nations who have been conferred with a couple of Blue Flag beaches, however, in a time frame of about 5 to 6 years.
- India is now in the league of 50 "BLUE FLAG” countries.

BEAMS

- On the lines of Blue Flag certification, Recently India has also launched its own eco-label BEAMS.
- BEAMS (Beach Environment & Aesthetics Management Services) is

launched under ICZM (Integrated Coastal Zone Management) project.
- This is launched by the Society of Integrated Coastal Management (SICOM) and the Union Ministry of Environment, Forest and Climate Change (MoEFCC).
- The objectives of BEAMS program are as follows:

1. Abate pollution in coastal waters,
2. Promote sustainable development of beach facilities,
3. Protect & conserve coastal ecosystems & natural resources,
4. Strive and maintain high standards of cleanliness,
5. Hygiene & safety for beachgoers in accordance with coastal environment & regulations.

RBI Monetary Policy 2020

- The Monetary Policy Report is published by the Monetary Policy Committee (MPC) of RBI.
- The MPC is a statutory and institutionalized framework under the RBI Act, 1934, for maintaining price stability, while keeping in mind the objective of growth.
- The MPC determines the policy interest rate (repo rate) required to achieve the inflation target (4%).
- The Governor of RBI is ex-officio Chairman of the MPC.
- Recently Monetary Policy Committee (MPC) of RBI kept the repo rate unchanged at four per cent.
- It decided to maintain its accommodative monetary policy stance to support growth amid the pandemic.
- Reasons quoted by RBI are as follows:

1. India’s GDP would contract by 9.5 per cent in the current fiscal due to the disruptions caused by the coronavirus pandemic.
2. On inflation, the RBI expects a steady decline.
3. CPI inflation is projected at 6.8 per cent for Q2:2020-21, at 5.4-4.5 per cent for H2:2020-21 and 4.3 per cent for Q1:2021-22.

Repo Rate

- It is the rate at which the central bank of a country (Reserve Bank of India in case of India) lends money to commercial banks in the event of any shortfall of funds.
- It is used by monetary authorities to control inflation.
- In the event of inflation, central banks increase repo rate as this acts as a

disincentive for banks to borrow from the central bank.

- This ultimately reduces the money supply in the economy and thus helps in arresting inflation.
- The central bank takes the contrary position in the event of a fall in inflationary pressures.
- Ideally, a low repo rate should translate into low-cost loans for the general masses.
- When the RBI slashes its repo rate, it expects the banks to lower their interest rates charged on loans.

Graded Response Action Plan (GRAP)

- Graded Response Action Plan (GRAP), is an emergency plan to combat air pollution.
- Approved by the Supreme Court in 2016, GRAP was notified in 2017 by the Centre and draws its authority from this notification.
- The action plan has been in effect for three years in Delhi and NCR.
- As such, the plan does not include action by various state governments to be taken throughout the year to tackle industrial, vehicular and combustion emissions.
- The plan is incremental in nature therefore, when the air quality moves from 'Poor' to 'Very Poor', the measures listed under both sections have to be followed.
- If air quality reaches the 'Severe+' stage, the response under GRAP includes extreme measures such as shutting down schools and implementing the odd-even road-space rationing scheme.
- Recently Environment Pollution (Prevention and Control) Authority (EPCA) directed a slew of measures under GRAP to governments in Delhi, Haryana, Rajasthan and Uttar Pradesh.
- This decision comes after air quality in the national capital remained 'poor' for the second day October 8, 2020.

EPCA

- EPCA, a Supreme Court-mandated body, has also asked large construction projects, including highways and the Delhi Metro to provide an undertaking to the state pollution control boards / committees.
- The undertaking will state that these project operators will assure adherence to prescribed norms / guidelines for dust management

FELUDA Covid-19 test

- FELUDA, an acronym for the FNCAS9 Editor-Limited Uniform Detection Assay.
- Feluda paper strip test for SRS-CoV-2 diagnosis has been developed by CSIR-IGIB.
- It has been approved by the Drug Controller General of India for a commercial launch.
- Similar to a pregnancy strip test, Feluda changes colour if the virus is detected and doesn't need expensive machines for detection.
- Feluda test is priced at ₹500 and can deliver a result in 45 minutes.
- It is able to differentiate SARS-CoV-2 from other coronaviruses even if genetic variations between them are minute.
- The trials of this test at the Institute of Genomics and Integrative Biology (IGIB) showed 96% sensitivity and 98% specificity.
- Sensitivity is defined as the ability of a test to correctly identify individuals with the disease, while specificity is the ability of the assay to accurately identify those without the disease.
- According to CSIR, the test matches accuracy levels of RT-PCR tests, considered the gold standard in the diagnosis of Covid-19, has a quicker turnaround time and requires less expensive equipment.
- Recently Union Health Ministry announced the roll out of the Feluda Covid-19 will happen in near future.

CRISPR

- CRISPR is a gene editing technology and is used in correcting genetic defects and treating and preventing the spread of diseases.
- The technology can detect specific sequences of DNA within a gene, and uses an enzyme functioning as molecular scissors to snip it.

Source: The Hindu, Indian Express, Live Mint