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Asteroids Approaching Earth

- National Aeronautics and Space Administration (NASA) has cautioned about six asteroids that will zoom past Earth.
- The six asteroids are 2021 AC, 2016 CO247, 2021 AJ (smallest of the six asteroids), 2018 KP1, 2021 AU and 2008 AF4 (largest of the six).
- As per NASA, none of the asteroids going past the Earth poses a threat.
- Only Near-Earth Objects (NEOs) pose a threat to Earth and that also depends on the size as the celestial objects burn upon entering the atmosphere.
- Most of them are blow to small pieces before hitting the ground.

Emissions from Grasslands

- A new study shows that emissions of methane (CH_4) and nitrous oxide (N_2O) from grasslands increased by a factor of 2.5 since 1750 mainly due to increased emissions from livestock.
- This has more than compensated for reduced emissions from the shrinking number of wild grazers.
- Net carbon sink effect of grasslands was estimated to have intensified over the last century but mainly in sparsely-grazed, natural grasslands.
- [Carbon Sink Effect is the ability of grasslands to absorb carbon and pack it in the soil.]
- Conversely, over the last decade, grasslands intensively managed by humans have become a net source of greenhouse gas emissions.
- It has greenhouse gas emission levels similar to those of global croplands, which represent a large source of greenhouse gases.

Longitudinal Ageing Study of India

- Health Minister released India report on Longitudinal Ageing Study of India (LASI) Wave-1 on the virtual platform.
- LASI is a full-scale national survey of scientific investigation of the **health, economic, and social** determinants and consequences of population ageing in India.
- This report will provide a base for national and state level programmes and policies for elderly population.

- The LASI has been undertaken by the National Programme for Health Care of Elderly, Ministry of Health and Family Welfare.
- Wave - 1 covered a baseline sample of over 72,000 individuals aged 45 and above and their spouses.
- This sample includes elderly persons aged 60 and above and oldest-old persons aged 75 and above from all States and Union Territories of the country excluding Sikkim.

Antarctic Ozone Hole

- One of the deepest, largest gap in the ozone layer - Antarctic ozone hole - has closed, according to World Meteorological Organization (WMO).
- The annually occurring ozone hole over the Antarctic had rapidly grown from mid-August and peaked in early October 2020.
- The expansion of the hole was driven by a strong, stable and cold polar vortex and very cold temperatures in the stratosphere.
- The same meteorological factors also contributed to the record 2020 Arctic ozone hole, which has also closed.
- [A polar vortex is a wide expanse of swirling cold air, a low pressure area, in Polar Regions.
- During winters, the polar vortex at the North Pole expands, sending cold air southward.
- An ozone hole is the thinning of the ozone layer boosted in size by colder temperatures.]
- As the temperatures high up in the stratosphere starts to rise, ozone depletion slows, the polar vortex weakens and breaks down.
- By the end of December 2020, ozone levels return to normal. This time around, however, the process took longer.
- Human-made chemicals migrate into the stratosphere and accumulate inside the polar vortex.
- It begins to shrink in size as warmer temperatures dominate.
- The 2020 Antarctic hole was unprecedented as the polar vortex kept the temperature of the ozone layer cold, preventing the mixing of ozone depleted air above Antarctica with ozone rich air from higher latitudes.

Ammoniacal Nitrogen in Yamuna

- Ammoniacal nitrogen (NH_3-N) is a measure for the amount of ammonia, a toxic pollutant found in landfill leachate and in waste products, such as sewage, liquid manure and other liquid organic waste products.
- It can be used as a measure of the health of water in natural bodies such as rivers or lakes, or in man-made water reservoirs.
- A study group has been constituted to discuss the issue of increase in

Ammonical Nitrogen in River Yamuna, and short and long term remedial actions required.

- It comprises of Delhi Jal Board, Haryana State Pollution Control Board, Delhi Pollution Control Committee, Irrigation and Water Resources Department, Haryana, Irrigation and Flood Control Department, Delhi.
- It will review uniform monitoring protocol and requirement of strengthening monitoring mechanism, analyse past data and carry out field survey to identify critical hotspots and period of high anomia levels.
- It was agreed to constitute a Joint Surveillance Squad.

Toycathon 2021

- It is a hackathon jointly launched by the Ministry for Women & Child Development and Textiles and Ministry of Education.
- It is aimed to conceptualize innovative toys based on the Indian value system which will inculcate the positive behaviour and good value among the children.
- This is the first time when school children will innovate, design and conceptualize toys also for specially abled 'divyang children'.
- To create awareness about safe toys which are not harmful chemically, Ministry of Education and Ministry of WCD will adopt special measures.
- School and college students and teachers, toy experts and startups will get together to crowd source ideas for developing toys and games that are based on Indian culture and ethos, etc.

Source: AIR, PIB, The Indian Express, Down To Earth

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