Prelim Bits 30-07-2022 | UPSC Daily Current Affairs

Amendments to EIA

- *The Ministry of Environment, Forests and Climate Change has notified amendment to the Environment Impact Assessment (EIA) Rules.*

New amendments

- Highway projects related to defence and strategic importance in Border States are sensitive in nature and need to be executed on priority basis keeping in view strategic, defence and security considerations.
- In this regard, the Central Government deems it necessary to exempt such projects from the requirement of Environmental Clearance in border areas, subject to specified Standard Operating Procedure along with standard environmental safeguards for such projects for self-compliance by the agency executing such projects.
- The new rules have exempted the following projects from environmental clearance:
    - Highway projects of strategic and defence importance, which are 100 km from the Line of Control.
    - Thermal power plants up to 15 MW based on biomass or non-hazardous municipal solid waste using auxiliary fuel such as coal, lignite or petroleum products up to 15%.
    - Increasing the threshold of ports which exclusively deals in fish handling, and caters to small fishermen. This exemption is provided taking into account livelihood issues of fishermen.
    - Toll plazas that need more width for installation of toll collection booths to cater to a large number of vehicles
    - Expansion activities in existing airports related to terminal building expansion without increase in the airport's existing area, rather than expansion of runways, etc.

Environmental Impact Assessment (EIA)

- UNEP defines Environmental Impact Assessment (EIA) as a tool used to identify the environmental, social and economic impacts of a project prior to decision-making.
- By using EIA both environmental and economic benefits can be achieved, such as reduced cost and time of project implementation and design, avoided treatment/clean-up costs.
- Since India's participation in the United Nations (UN) Conference on Human Environment in Stockholm in 1972, and the Rio Summit 1992, India has significantly strengthened its environmental governance.
- India has also been a party to global climate agreements, like
    - United Nations Framework Convention on Climate Change (UNFCCC)

    - Kyoto Protocol
    - Convention of Biological Diversity (CBD)
- All these agreements stresses on the need for an effective EIA process

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Manas National Park

Manas Tiger Reserve has more tigresses than tigers.

- Annual monitoring results of the Manas National Park - a trans-boundary World Heritage Site was released on International Tiger Day (29th July).
- The Manas Tiger Reserve is contiguous with the 1,000 sq. km Royal Manas National Park in Bhutan.

Key Findings –

- As per the assessment the Tiger reserve has 52 adult tigers along with eight cubs.
- This is an increase of eight adults and four cubs over 2021.
- The gender of 27 tigers could be properly ascertained – eight of them males and 19 females.
- This indicates that the reserve has 2.4 tigresses for every tiger.
- The sex ratio is positively skewed towards females from the ecological point of view.
- For the first time the population estimate of all other major species has been done in a holistic manner.
- The estimate showed that Manas has 3,220 hog deer, 2,613 elephants, 1,656 wild buffaloes, 1,174 gaurs or Indian bison and 804 sambhars.

National Tiger Conservation Authority

- The National Tiger Conservation Authority (NTCA) has been constituted under section 38 L (1) of Wildlife (Protection) Act, 1972.
- The authority consists of
    - Chairperson - Minister of Environment and Forests and Climate Change
    - Vice-Chairperson - Minister of State in the MoEFCC
    - 3 members of Parliament.
    - Secretary, Ministry of Environment and Forests.
- It is entrusted with strengthening tiger conservation measures in the country

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Right to a Clean and Healthy environment

UN declares access to clean, healthy environment as universal human right

- Right to live in a clean and healthy environment was not included in the Universal Declaration of Human Rights, 1948.
- Now, United Nations (UN) in a historic resolution has declared that every person on the planet has the right to live in a clean and healthy environment.
- The declaration has been adopted by over 160 UN member nations, including India.
- This will encourage countries to incorporate the right to a healthy environment in national constitutions and regional treaties.
- However the declaration is not legally binding.
- The resolution will help reduce environmental injustices, close protection gaps and empower people in vulnerable situations, including environmental human rights defenders, children, youth, women and indigenous peoples.
- It also recognises that Climate change and environmental degradation are the most critical threats awaiting humanity in the future.
- Unsustainable management and use of natural resources, the pollution of air, land and water, the unsound management of chemicals and waste, and the resulting loss in biodiversity interfere with the enjoyment of this right.
- This refers to the three main interlinked environmental threats that humanity currently faces: climate change, pollution and biodiversity loss.
- A similar resolution was adopted last year by the Human Rights Council.
- It calls upon States, international organisations, and business enterprises to scale up efforts to ensure a healthy environment for all.

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Gluttonous Cosmic 'Black Widow'

Gluttonous cosmic 'black widow' is heaviest-known neutron star.

- **Neutron star –** A neutron star is the compact collapsed core of a massive star that exploded as a supernova at the end of its life cycle.
- Stars that are about eight or more times the sun's mass transform hydrogen into heavier elements through thermonuclear fusion in their cores.
- When they build up about 1.4 times the mass of our sun in iron, that core collapses into a neutron star having a diameter only about the size of a city, with the rest blown off in the supernova explosion.
- Its matter is so compact that an amount about the size of a sugar cube would outweigh Mount Everest.
- **Black Widow -** Now the Astronomers have observed a most massive neutron star, classified as a "black widow".

- It got particularly hefty by gobbling up most of the mass of a stellar companion trapped in an unhappy cosmic marriage.
- It means its gravitational pull has poached material from its companion star enabling it to grow to a mass at the uppermost limit before it would collapse into a black hole.
- It has a mass 2.35 times greater than that of our sun and is spinning at 707 times per second.
- This is perhaps the maximum possible mass for such objects before they collapse to form a black hole.
- The one discovered now is highly magnetized type of neutron star called a pulsar.
- It unleashes beams of electromagnetic radiation from its poles. As it spins, these beams appear akin to a lighthouse's rotating light.
- The heavier the neutron star, the denser the material in its core.
- The neutron star, resides in our Milky Way galaxy in the direction of the constellation Sextans.
- It is formally named as PSR J0952-0607 and is located roughly 20,000 light years from Earth.

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Karikiyoor Rock Paintings

Researchers have discovered 5000 year old rock paintings at Karikiyoor in Nilgiris.

- The Karikiyoor rock paintings is a series of over 300 images etched on the side of the cliff-face in Kothagiri.
- It is located in the Nilgiris district of Tamil Nadu.
- A variety of subjects are depicted in great detail. It includes
    - communities that lived in the area at that time
    - the wildlife they witnessed and their relationships with them
    - the battles with other communities
- No scientific dating has been done on the site. It is believed to be more than 5,000-years old.
- These images are all drawn using earthen paints.
- The images depict a gradual shift from a hunter-gatherer lifestyle in the initial drawings to a pastoral and, eventually, a settled agrarian lifestyle in the later drawings.
- The shift indicates that the rock art site got added on by different groups at different stages in its history.
- There are other smaller cave painting sites hidden deep inside reserve forests.
- James Wilkinson Breeks, a civil servant has documented 18 distinct rock art sites in his book “An Account of the Primitive Tribes and Monuments of the Nilagiris.”
- Local indigenous communities, especially the Irulas and the Kurumbas, have an attachment to the sites.

- Most of these sites are located near the settlements of these aboriginal groups.
- They believe the sites are the ancestral abodes of their forefathers, and this belief has helped in conserving these sites so far.
- The Kurumbas claim a link to Vellarikombai rock art site while in Karikiyoor and Sigur, the rock art sites are claimed by the Irulas.
- Vandals have defaced some of the rock art, painting political and religious symbols on the images.

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