Prelim Bits 21-02-2023 | UPSC Daily Current Affairs

Climate Feedback Loop

A recent report has warned that the Earth's climate may be on the edge of permanent change due to 'dangerous' feedback loops.

- **Climate change Feedback Loop** - They are the climate's equivalent of a vicious cycle.
- It refers to a change in one metric which accelerates or decelerates the warming trend of the planet.
- **Example** - Melting of ice caps, wildfires, thawing etc.
- **Melting of ice caps** - As the world gets hotter, ice melts, exposing the darker-coloured land or water underneath.
- The dark surface absorbs more light, which in turn contributes to warming and the ice melts at a much more rapid pace.
- **Wildfires** - The burning of dry vegetation introduces poisonous gases such as CO2 which accelerates the greenhouse effect and will result in another wildfire event.

- **Combined Feedback Loops** - The report also warned about the interaction of various feedback loops.
- It may result in a sequence of catastrophic climate tipping points which will be self-sustaining.
- **Dampening Feedback loops** - It refers to the loops which absorb planet-heating carbon emissions.
- The scientists also came out with 7 dampening feedback loops.

References

1. WIONEWS | Feedback loops can impact climate
2. The Hindu | Feedback loops worsening climate crisis

Asian Rhino Range Countries Meeting

The 3rd Asian Rhino Range Countries Meeting was held recently in Chitwan National Park, Nepal.

> *Chitwan Declaration for Asian Rhino Conservation, 2023 was adopted during the meeting.*

- The meeting was attended by delegates from Rhino range countries as well as rhino

experts, including the International Rhino Foundation (IRF).
- Rhino Range Countries are India, Bhutan, Indonesia, Malaysia and Nepal.
- The participating countries exchanged experiences to conserve rhino population.
- The 1st meeting held in Indonesia and 2nd held in India.
- **Target** - The participants agreed to achieve *at least a 3% annual growth rate* of Greater One-Horned, Javan and Sumatran Rhinos.

Conservation in India

- In line with the Chitwan Declaration, Bihar government has recently decided to increase its rhino population by 3% annually.
- It also decided to increase rhino-bearing areas in Valmiki Tiger Reserve (VTR) by 5% in the next 2 years.

Valmiki Tiger Reserve

- It occupies a core area of 909.86 sq km of the Valmiki Sanctuary located in the West Champaran district of Bihar.
- It was established as the 18th Tiger reserve in 1990 and ranked 4th in the density of the tiger population.
- The Rivers Gandak and Masan flow through this area.
- VTR has also been selected as one of the potential sites under the National Rhino Conservation Strategy.

References

1. International Rhino Foundation | 3rd Asian Rhino Meeting
2. The Hindu | Bihar to increase rhino population

Gross Domestic Climate Risk Report

9 out of 50 regions in the world facing high climate risk to a fragile physical infrastructure, fall in India.

- The report was released by the *Cross Dependency Initiative (XDI)*.
- XDI is a global organisation specialising in climate risk analysis for regions, banks and companies.
- The index calculated the *physical climate risk* to built environments such as buildings and properties.
- Physical risk refers to vulnerability from 8 climate change events like heat waves, coastal flooding, extreme wind, etc.
- **ADR** - The index also assigned an Aggregated Damage Ratio (ADR) to each region.
- ADR signifies the total amount of damage a region's-built environment would sustain in 2050 and a high ADR signifies more peril.
- Assam, Bihar and Tamil Nadu had the highest ADR among Indian States.
- Assam, in particular, would witness the maximum increase of climate risk, rising up to 330% by 2050 as compared to 1990.

References

The Hindu | Gross Domestic Climate Risk Report

APJ Abdul Kalam Satellite Launch Vehicle Mission, 2023

India's first hybrid sounding rocket by private players was recently launched from Pattipulam village, Tamil Nadu.

- It was launched by the Martin Foundation in association with Dr APJ Abdul Kalam International Foundation and Space Zone India.
- A total of 150 satellites made by school students from different states were launched under the APJ Abdul Kalam Satellite Launch Vehicle Mission 2023.
- Dr APJ Abdul Kalam International Foundation was established by the Family of Dr. Kalam in 2015 to fulfill his dreams for transforming India.

References

1. The Hindu | India's first hybrid rocket launched
2. Hindustan Times | Satellite Launch Vehicle Mission-2023

Sundarbans

The National Green Tribunal has recently ordered to demolish buildings in Sundarbans in violation of environmental norms.

- Sundarbans was a *Critically Vulnerable Coastal Area (CVCA)* under the coastal regulation zone notifications.
- No construction was permissible in a CVCA.
- Sundarbans, the world's largest delta, spans 10,200 square kilometres of Mangrove Forest in India and Bangladesh.
- Sundarbans National Park, located in the southern part of West Bengal, is a part of the forest within Indian Territory.
- Sundari trees can be found in abundance throughout the forest.
- The Royal Bengal tigers are well-known in Sundarbans.
- The Sundarbans is the world's largest delta and mangrove forest.
- The Sunderban Tiger Reserve, is a world heritage site and a Ramsar Site.
- The Muriganga River runs through the Indian Sundarbans on the west, and the Harinbhahga and Raimangal Rivers run through it on the east.
- Saptamukhi, Thakuran, Matla, and Goasaba are some of the other major rivers that flow through this eco-system.

References

1. The Hindu | NGT directs demolition in Sundarbans
2. Hindustan Times | NGT orders demolish of hotels

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