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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 Harinbhanga 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](#)

