13 April 2024
National and International News

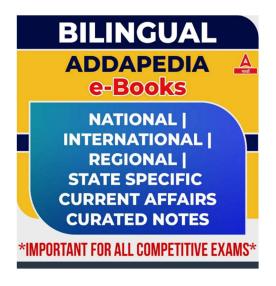| World's largest Renewable Energy Park	Context:
	Adani Green Energy Limited is developing a **30 GW** renewable energy plant in **Khavda, Kutch, Gujarat,** on barren land covering **538 sq km, making it the world's largest power plant regardless of the energy source.** **Key points:** - The Khavda project is a **hybrid renewable energy cluster** that generates solar energy during the morning and wind energy during the evening. - It currently has an operational capacity of **2,000 MW of solar energy.** - The project area is **five times the size of Paris and almost as large as Mumbai.** Started in December 2022, the project achieved its first production on December 31, 2023. - The company has completed **2 GW of power production at the Khavda project site** and aims to produce an **additional 4 GW in the ongoing financial year 2024-25, reaching a total of 6 GW by March 2025.** **The company aims to install 7 cr 50 lakh solar panels till 2029 and aims to produce 45,000 MW by 2030.** - This project is expected to help India avoid about **58 million tonnes of CO2 emissions annually.** - The renewable energy project is spread across 12 states, **with major production in Rajasthan and Gujarat.**

Evolution and Essentials of India's Climate Policy	**Context:** ● India's approach to climate policy is **deeply rooted in its commitment to inclusive growth, poverty eradication, and adherence to UNFCCC principles.** ● The evolution of this policy traces back to significant global events like the **Rio Summit of 1992,** which catalyzed the formation of international frameworks for addressing climate change and biodiversity. **Global Context and Over-exploitation:** ● Climate change, now a **global crisis, stems from unsustainable practices** predominantly driven by developed nations. ● Studies indicate that the **US and Europe,** along with other wealthy nations, have significantly exceeded their fair share of resource consumption, exacerbating ecological damage. **India's Position and Climate Policy Determinants:** ● India, despite **being home to a substantial population, has managed to stay within its sustainability limits.** ● Its climate policy is **shaped by five key factors: geography, population dynamics, environmental impacts, worldview, and strategic actions.** **Geographical Significance:** ● The Indian landmass has an area of **3.28 million sq km**, accounting for **2.4%** of the world's geographical land surface area and **4%** of the world's freshwater resources. ● India is the **seventh largest country in the world**. ● It is one of the **17** mega-biodiverse countries, having four biodiversity hotspots, **10** bio-geographic zones, and **22** agro-biodiversity hotspots. ● India's vast landmass and abundant freshwater resources position it **uniquely on the global stage.** ● With its **rich biodiversity and unique seasonal cycles,** India faces challenges in maintaining ecological harmony amid climate change-induced disruptions. **Population Dynamics:** ● With nearly **one-sixth of the world's population**, India holds a diverse array of species. ● The human to land ratio is very low in India at **0.0021 sq km.** ● However, its population density and land scarcity **necessitate careful land and water management strategies for sustainable survival.** **Conclusion:**

- India's climate policy is a **multifaceted response to the complex challenges posed by climate change.**
- By understanding its unique geopolitical position, demographic dynamics, and environmental imperatives, India seeks to navigate towards a sustainable future while upholding principles of equity and collective responsibility.

Volcanic vortex rings

Context:
- Mount Etna, **Europe's largest volcano, has been generating unique smoke rings known as volcanic vortex rings,** which are rare phenomena similar to smoke rings blown by some cigarette smokers.
- These rings have attracted attention due to their unusual occurrence.

Mount Etna:
- Situated on the **east coast of Sicily,** Mount Etna is the **highest point in Italy south of the Alps** and one of the most active volcanoes in Europe.
- It has **five craters at its summit,** responsible for most eruptions, along with over 300 vents contributing to **"flank" eruptions.**
- Since **1600,** Mount Etna has experienced **at least 60 flank eruptions and numerous summit eruptions**, with notable ones in 2006, 2007-08, 2012, 2018, and 2021 for the summit, and in 2001, 2002-03, 2004-05, and 2008-09 for the flanks.
- **Designated a UNESCO World Heritage Site since 2013, Mount Etna has a documented eruptive history dating back 500,000 years.**

Vortex rings:
- **Volcanic vortex rings are formed when gas**, primarily **water vapor,** is rapidly released through a vent in a **volcano's crater, resulting in circular rings.**
- First documented at M**ount Etna and Vesuvius** in Italy in 1724, these rings have been observed at various volcanoes worldwide in modern times.
- Etna is well-known for regularly producing volcanic vortex rings, with observations of **"dozens of gas rings every day"**
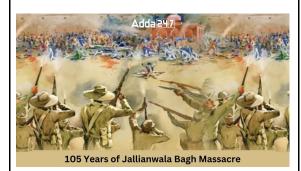
above the volcano in July 2023.
- According to volcanologist Boris Behncke, **"no volcano on Earth produces as many vapor rings as Etna."**
- Recently, a new vent opened on the **northeastern edge of the Southeast Crater,** leading to the production of numerous steam rings, though this does not necessarily indicate an imminent eruption, as experts suggest changes in the conduit's properties could alter the ability to form these rings.

World Cybercrime Index	Context:

World Cybercrime Index

CYBERCRIME INDEX
Ranking countries by cybercrime threat level

Ranking	Country	WCI score	Ranking	Country	WCI score
1	Russia	58.39	11	Iran	4.78
2	Ukraine	36.44	12	Belarus	3.87
3	China	27.86	13	Ghana	3.58
4	United States	25.01	14	South Africa	2.58
5	Nigeria	21.28	15	Moldova	2.57
6	Romania	14.83	16	Israel	2.51
7	North Korea	10.61	17	Poland	2.22
8	United Kingdom	9.01	18	Germany	2.17
9	Brazil	8.93	19	Netherlands	1.92
10	India	6.13	20	Latvia	1.68

Context:
- The **World Cybercrime Index (WCI) aims to pinpoint major cybercrime hotspots worldwide and rank significant sources of cybercrime at a national level.**
- The index is a **collaborative effort between the University of Oxford and UNSW Canberra.**
- The index ranks around **100 countries,** identifying key hotspots based on categories such as ransomware, credit card theft, and scams.

Key points:
- Cybercriminal threats primarily originate from a select few countries, with **Russia and Ukraine topping the list.**
- The **top 10 countries in various categories include China, Russia, Ukraine, United States, Romania, and Nigeria.**
- 97 countries are identified as hubs for cybercrime by at least one expert.
- Rankings: **India is ranked 10th overall in the index,** scoring well in impact, professionalism, and technical skills.
- The United States is often linked with **data and identity theft, while China is associated with technical products or services.**
- The estimated cost of cybercrime is projected to be **$9.22 trillion in 2024,** and it is expected to rise to **$13.82 trillion by 2028.**

105 years of Jalliwala Bagh Massacre

105 Years of Jallianwala Bagh Massacre

- **April 13, 1919**, marked a dark chapter in B**ritish colonial history as Brigadier General Reginald Dyer** ordered troops to open fire on a peaceful gathering in **Jallianwala Bagh, Punjab**.
- The indiscriminate shooting resulted in the deaths of hundreds, if not thousands, of men, women, and children, leaving a scar on the nation's conscience.
- **In 2024, India observes 105th anniversary** of the Jallianwala Bagh Massacre which serves as a poignant reminder of the **sacrifices made in the pursuit of freedom.**
- The repercussions of this atrocity continue to reverberate **through history, influencing political discourse and public memory.**

Legacy of Jallianwala Bagh Massacre
- The Jallianwala Bagh site, now a **national monument,** serves as a poignant reminder of the sacrifices made in the struggle for Indian independence.
- The massacre left a permanent scar on **Indo-British relations** and **galvanized the Indian nationalist movement**, paving the way for future resistance against colonial rule.