



CURRENT AFFAIRS



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REPORT ON RENEWABLE ENERGY BY CLIMATE ANALYTICS

THIS ARTICLE COVERS 'DAILY CURRENT AFFAIRS' AND THE TOPIC DETAILS OF "REPORT ON RENEWABLE ENERGY BY CLIMATE ANALYTICS". THIS TOPIC IS RELEVANT IN THE "ENVIRONMENT AND ECOLOGY" SECTION OF THE UPSC CSE EXAM.

WHY IN THE NEWS?

Think-Tank Climate Analytics recently released a report titled "Tripling renewables by 2030: Interpreting the global goal at the regional level," which estimates the necessary investments and describes what a 1.5°C-aligned rollout of renewables would entail locally.

SIGNIFICANT FINDINGS OF THE REPORT

TRIPLING RENEWABLE EFFORTS FOR ACHIEVING THE 1.5°C TARGET:

To meet the 1.5°C goal outlined in the Paris Agreement, the global capacity for renewables must increase to 11.5 TW by 2030, marking a 3.4-fold rise from 2022 levels. This necessitates diverse regions to adapt at varying rates, influenced by the imperative to phase out fossil fuels and anticipated growth in electricity demand.

INVESTMENT REQUIREMENTS:

Meeting the 1.5°C-aligned target demands a USD 12 trillion investment in the power system by 2030, averaging USD 2 trillion annually from 2024 onward. Approximately two-thirds of this investment would be allocated to renewable installations, with the remainder dedicated to grid and storage infrastructure.

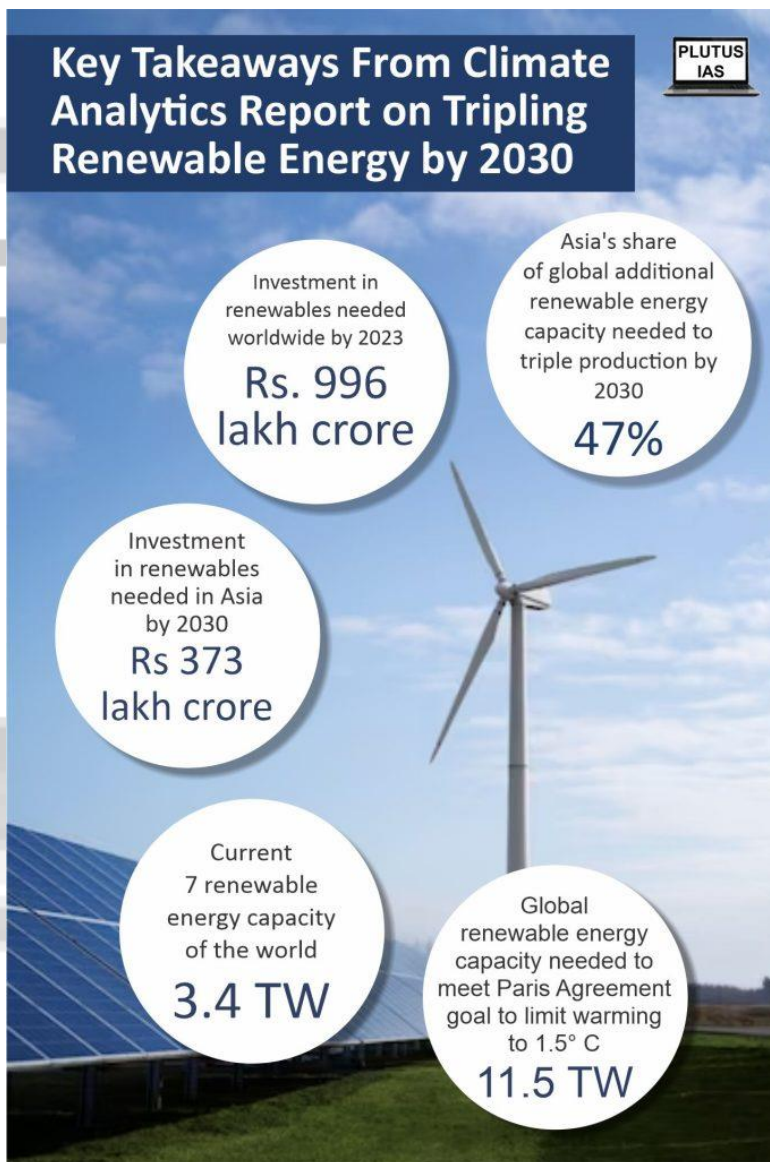
CONTRIBUTIONS FROM DIFFERENT REGIONS:

Asian Region: Asia emerges as the most substantial contributor, accounting for approximately 47% of the required 8.1 TW additions in global renewable capacity by 2030. Asia is notably the region making significant progress in tripling renewables in line with the 1.5°C goal, **driven by notable growth in China and India, compensating for slower advancements in countries like South Korea.**

However, the persistent construction of coal-fired power plants in China and India poses a considerable risk, potentially jeopardising a 1.5°C-aligned transition in the power sector or resulting in substantial stranded assets.

Sub-Saharan Africa: Scaling rapidly at 6.6 times, Sub-Saharan Africa benefits from low existing renewable capacity and high energy access needs. The forecasted 66% per capita growth in electricity demand from 2020 to 2030 in the region contributes to a renewables scale-up rate double the global average. However, achieving this accelerated rollout requires a significant increase in international climate finance.

OECD Region: The OECD (Organisation for Economic Co-operation and Development) contributes the second-largest share of global capacity additions, **accounting for approximately 36%**. Renewable scaling in this region occurs at a slower pace of 3.1 times due to modest electricity demand growth and a higher existing renewable capacity in 2022.



INVESTMENT GAP AND POSSIBLE SOLUTIONS:

A substantial investment gap exists, with the world projected to fall short by USD 5 trillion between 2024 and 2030. Bridging this gap could be achieved entirely by redirecting investments from fossil fuels to renewables and grids, aligning the power sector with the 1.5°C target.

POLICY GUIDELINES:

Alongside escalating renewable efforts, governments must terminate public support and subsidies for fossil fuels to effectively reduce emissions. To steer endeavours towards this goal, governments require a transparent roadmap and information on investment and climate finance needs. Civil society needs benchmarks to hold governments accountable for their commitments.

CHALLENGES AND URGENCY:

Sub-Saharan Africa confronts significant challenges, including insufficient investment and international support, potentially denying millions the advantages of renewable energy. Urgent action is imperative to secure financing and support renewable deployment in less affluent regions, ensuring the fulfilment of the COP28 pledge.

INDIAN INITIATIVES TOWARD CLEAN ENERGY

India has been at the forefront of adopting and promoting initiatives aimed at transitioning towards cleaner and more sustainable energy sources. These efforts align with the global push to combat climate change and enhance environmental sustainability. Several key initiatives exemplify India's commitment to clean energy:

NATIONAL SOLAR MISSION (NSM):

Launched in 2010, NSM sets an ambitious target of deploying 100 GW of solar power capacity by 2022. This mission focuses on increasing the share of solar energy in the country's energy mix, promoting solar technology adoption, and fostering research and development in the solar sector.

PRADHAN MANTRI UJJWALA YOJANA (PMUY):

While not exclusively an energy initiative, PMUY, launched in 2016, aims to provide clean cooking fuel to households below the poverty line. By distributing LPG connections, the program reduces reliance on traditional biomass for cooking, contributing to a cleaner environment.

NATIONAL WIND-SOLAR HYBRID POLICY:

Introduced in 2018, this policy encourages the development of hybrid projects that combine both wind and solar energy generation. By leveraging the complementary nature of wind and solar resources, India seeks to enhance overall renewable energy capacity and grid stability.

FAME INDIA SCHEME:

The Faster Adoption and Manufacturing of Hybrid and Electric Vehicles (FAME) India Scheme, initiated in 2015, aims to accelerate the adoption of electric vehicles (EVs) and their manufacturing. By incentivising EV adoption, the scheme contributes to reducing vehicular emissions and promoting a cleaner transportation system.

PRELIMS PRACTICE QUESTIONS

Q1. Consider the following statements:

1. The Kyoto Protocol aims to protect the ozone layer
2. The main objective of the Global Environment Facility (GEF) is conservation of Biodiversity
3. GEF acts as the financial mechanism for the Montreal Protocol
4. Basel Convention is associated with addressing the transboundary movement of hazardous waste

How many of the statements above is/are correct?

- A. Only one
- B. Only two
- C. Only three
- D. All four

ANSWER: C

MAINS PRACTICE QUESTIONS

Q1. Discuss the economic challenges associated with establishing clean energy infrastructure nationally. How can countries overcome financial barriers to invest in renewable technologies and transition away from traditional energy sources?

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