Risk of Moving from Fossils to Clean Energy

Prelims: Clean Energy, Green Transition, Net zero, Fossil Fuels.

Mains: Challenges of Moving from Fossils to Clean Energy.

Why in News?

Recently, a study published in the Global Environmental Change journal, which states that India's financial sector is **highly exposed to the risks of the economy transitioning from being largely dependent on fossil fuel to clean energy.**

What are the Findings?

- **Transition can Negatively Impact:**
  - India's financial sector is **highly exposed to the activities related to fossil fuels** and any transition from fossil fuel to clean energy will have a negative impact on this sector.
    - 60% of lending to the mining sector is for oil and gas extraction.
    - 20% of **manufacturing sector** debt **is for petroleum refining and related industries.**
    - Electricity production is the largest source of carbon emissions, accounting for **5.2% of outstanding credit.**
- **Shortage of Experts:**
  - There is a shortage of **experts in India's** financial institutions **who have the expertise to appropriately advise the institutions** on transition from fossil fuel to clean energy.
  - Only four of the ten major financial institutions surveyed collect information on **environmental, social and governance (ESG) risks** and these firms do not systematically incorporate that data into financial planning.
- **Less Capacity to respond to Shocks and Stresses:**
  - High-carbon industries - power generation, chemicals, iron and steel, and aviation-**account for 10% of outstanding debt to Indian financial institutions.**
  - However, these industries are also heavily indebted, and therefore have less financial capacity to respond to shocks and stresses.
  - This will further expose **India's financial sector to the risk associated with the transition.**
- **More Polluting and More Expensive Energy Supply:**
  - The financial decisions of **Indian banks and institutional investors are locking the country into a more polluting,** more expensive energy supply.
  - For example, only 17.5% of bank lending to the power sector has been to pure-play renewables.
  - Consequently, **India has much higher electricity from carbon-sources than the world average.**
    - Coal currently accounts for 44% of India's primary energy sources and 70% of its power(electricity).
    - The country's coal-fired power plants have an average age of 13 years and India

has 91,000 MW of new proposed coal capacity in the works, second only to China.
- According to the **Draft National Electricity Plan 2022, coal's share in the electricity generation mix will decrease to 50% by 2030.**

- **Potential:**
  - The current lending and investment patterns reveal that **India's financial sector is heavily exposed to potential transition risks.**
  - However, the other side of risks is the tremendous opportunity to move finance towards sustainable assets and activities.
    - In 2021, India committed to reach net-zero emissions **by 2070.**
    - India has also announced plans to source **half of its electricity needs (50%) from non-fossil fuel sources by 2030.**
    - This will require financing to the order of at least **a trillion dollars to meet these commitments.**

UPSC Civil Services Examination, Previous Year Questions (PYQs)

Q. Give an account of the current status and the targets to be achieved pertaining to renewable energy sources in the country. Discuss in brief the importance of National Programme on Light Emitting Diodes (LEDs). **(2016)**

Q. Should the pursuit of carbon credits and clean development mechanisms set up under UNFCCC be maintained even though there has been a massive slide in the value of a carbon credit? Discuss with respect to India's energy needs for economic growth. **(2014)**

Source: TH