Clean AI

Published On: 29-04-2025

Context

• The **International Monetary Fund's report** that pointed to the likelihood of the **economic gains of Artificial Intelligence (AI) applications outweighing the environmental costs of the increased energy demand that AI data centres will require** is reassuring.

• It underscores that this transformational technology is **not fundamentally at odds with the global imperative to pursue sustainable growth strategies** across the board.

• Countries that are better prepared with renewable energy generation are bound to see a lower social and environmental cost to pursuing their AI ambitions.

• India's AI infrastructure — at least the part of it that the government is indirectly funding through the **IndiaAI Mission — does not rise to the level of weighing at a macro level on the nation's energy mix.**

• Still, the need for pursuing renewables specifically for AI is necessary to follow.

• This is already in a sense the government's approach to the issue, outlined at the AI Action Summit in Paris earlier this year.

• While AI is not the sole industry where a push for renewable energy and sustainable practices is important, the sector nevertheless offers itself up for two main reasons.

1. The first is the **sheer volume of electricity that it is set to consume.**

• **AI expansion alone could increase electricity prices by up to 9 percent**, adding to price pressures coming from many other sources.

2. The second is that **data centres lend themselves uniquely to captive renewable infrastructure.**

• Some Indian firms have already made moves to purchase renewable energy, and the hundreds of acres that data centres occupy are ripe for complementing equipment **with solar cells.**

• Nuclear energy may also turn out to be a welcome contribution: **small modular reactors** at emerging data centre clusters, in conjunction with other renewable sources, would avert a sizeable quantity of emissions.

• **Electricity use is not the only** environmental footprint that the AI age will leave behind — the technology requires **large-scale mining of minerals and water use, and produces effluents in the manufacturing of the electronics supply chain.**