

Niti Aayog report on Carbon capture & storage

November 30, 2022

In news— NITI Aayog has recently released a study report on 'Carbon Capture, Utilisation, and Storage (CCUS) Policy Framework and its Deployment Mechanism in India'.

Key highlights of the report-

- **The report explores the importance of Carbon Capture, Utilisation, and Storage as an emission reduction strategy to achieve deep decarbonization** from the hard-to-abate sectors.
- The report outlines broad level policy interventions needed across various sectors for its application.
- As, India has updated its NDC targets for achieving 50% of its total installed capacity from non-fossil-based energy sources, 45% reduction in emission intensity by 2030 and taking steps towards achieving Net Zero by 2070, the role of CCUS becomes important as reduction strategy to achieve decarbonization from the hard-to-abate sectors.
- It estimates that about 750 mtpa of carbon capture by 2050 can create employment opportunities of about 8-10 million on full time equivalent (FTE) basis in a phased manner.
- **The report indicates that CCUS can provide a wide variety of opportunities to convert the captured CO₂ to different value-added products like green urea, food and beverage** form application, building materials (concrete and aggregates), chemicals (methanol and ethanol), polymers (including bio-plastics) and enhanced oil recovery (EOR) with wide market opportunities in India, thus contributing substantially to a circular economy.

What is Carbon Capture & Storage?

- It is a **way of reducing carbon emissions**, which could be key to helping to tackle global warming.
- It's a **three-step process, involving**: capturing the carbon dioxide produced by power generation or industrial activity, such as steel or cement making; transporting it; and then storing it deep underground.
- It involves the capture of carbon dioxide (CO₂) emissions from industrial processes, such as steel and cement production, or from the burning of fossil fuels in power generation.
- This carbon is then transported from where it was produced, via ship or in a pipeline, and stored deep underground in geological formations.
- The Intergovernmental Panel on Climate Change (IPCC) highlighted that, if we are to achieve the ambitions of the Paris Agreement and limit future temperature increases to 1.5°C (2.7°F), we must do more than just increasing efforts to reduce emissions – we also need to deploy technologies to remove carbon from the atmosphere.
- Carbon Capture & Storage is one of these technologies and can therefore play an important role in tackling global warming.

