

InBox

CARBON CAPTURE AND STORAGE (CCS)

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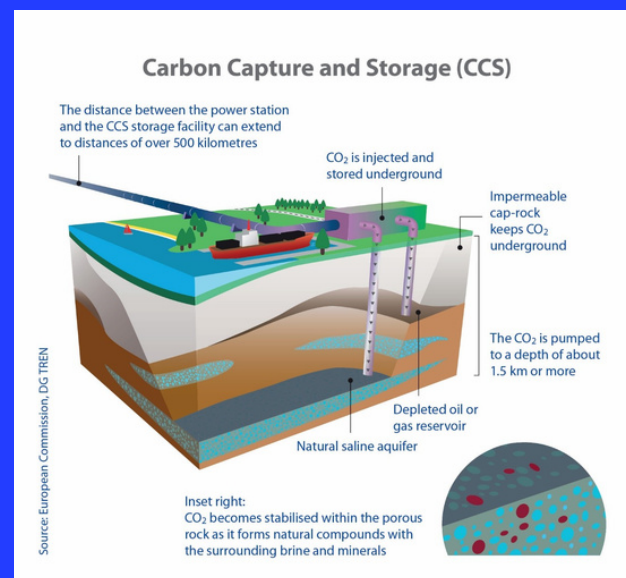
While we cannot stop global warming overnight, or even over the next several decades, we can slow down the rate and limit the amount of warming by reducing human emissions of heat-trapping gases and soot ('black carbon'). There are several technologies that can play a vital role in mitigating climate change viz. solar energy, wind power, nuclear power, hydrogen fuel, batteries operated electric vehicles, carbon capture, and storage, etc. It will be our constant endeavor to bring out the latest technologies in the upcoming series of magazines 'Land Water & People'. In the present issue, we highlight the importance of carbon capture and storage, wherein geoscientists can play a pivotal role.

CARBON CAPTURE AND STORAGE (CCS)

Carbon Capture and Storage (CCS) is the process of capturing CO₂ from industrial activities that would otherwise be released into the atmosphere and injecting that CO₂ into deep geological formations for safe, secure and permanent storage underground. As society works to address climate change and meet society's goal of the Paris Agreement, CCS ability to decarbonize emission-intensive sectors like manufacturing and power generation will be crucial. While renewable energy sources will play an important role in world's energy transition, the CCS remains one of the few proven technologies capable of significantly reducing emission in these hard-to-decarbonize sectors.

The geologic formations suitable for CO₂ capture and sequestration include depleted oil and gas fields, deep coal seams, and saline formations. The deep saline formations contain most of the global geologic storage capacity for CO₂, they are likely to become the most widely used type of geologic storage site in the long-term.

It is visualised that there is significant CO₂ potential in the saline water-bearing rocks in the oil and gas bearing sedimentary basins around the margins of the Indian peninsula, especially in the offshore basins, but also onshore in the states of Gujarat and Rajasthan.



Source : European Commission, DG TREN