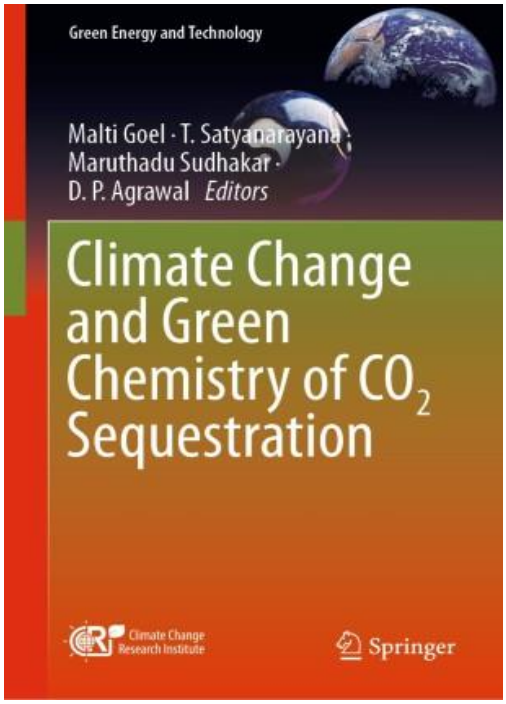

The Climate Change Research Institute presents a book on "Climate Change and Green Chemistry of CO2 Sequestration".

Foreword by Sh. Suresh Prabhu, former Union Minister of Civil Aviation, Railways, Industry and Commerce Government of India

Discusses advances in carbon dioxide capture and green chemistry of conversion in the context of global climate change

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Eds: Malti Goel, T. Satyanarayana, M. Sudhakar, D. P. Agrawal

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Book Climate Change and Green Chemistry of CO_2 Sequestration being released by Shri Suresh Prabhu on 24th June 2021

Chapter 3

An Assessment of CO_2 Reduction Potential from Carbon Sequestration Versus Renewable Energy Targets in India

Malti Goel, Rupali Pal, and Aditya Sharma

Abstract Carbon management from the energy sector is a key challenge before the nations. India as a nation is undergoing rapid economic and social transitions requiring diversified energy resources to meet basic energy needs of the people. India is having a 7% share in the world coal resources, and coal has been the dominant fuel for energy. Several policies that work toward climate change control by reducing or avoiding greenhouse gas emissions, exist. This chapter describes India's energy scene, trends in coal consumption, and India's renewable energy targets. To assess the potential of CO_2 sequestration—carbon capture, utilization, and storage, in mitigating emissions from the Indian industry—CO_2 emission scenarios need to be generated. Using basic assumptions from Coal Vision 2030, the CO_2 emission projections in three scenarios of high coal, business-as-usual, and high renewable energy, without and with CO_2 sequestration are calculated for 2017–2030. The current national and international CO_2 sequestration research is highlighted.

Keywords Carbon management · Energy security · CO_2 reduction · Renewable energy · CO_2 sequestration

Abbreviations

ADB	Asia Development Bank
BAU	Business as Usual
BCS	Best case Scenario

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