

Distinguished Lecture on
Environmental Management and Decarbonization Strategies in Coal Industry

(21st August, 2026)

Lecture Report

The Sustainability Integration in University Activities (SIUA) and the Department of Environmental Science and Engineering, Delhi Technological University, organized a distinguished lecture on “**Environmental Management and Decarbonization Strategies in Coal Industry**” on 21st August, 2026 at Vigyan Hall, Administrative Block, DTU. The lecture was delivered by Mr. Abhisht Raj, Deputy Manager, Central Mine Planning & Design Institute Limited (CMPDI). His lecture focused on Environmental Management and Decarbonization Strategies in the Coal Industry, providing participants with practical and professional knowledge about the environmental challenges associated with coal-mining activities and the approaches adopted to address them. The lecture began sharing his professional experience in the coal industry. He explained his experience of the last 12 years in the coal sector and discussed his involvement in environmental management. He is an alumnus of Delhi College of Engineering, batch 2007–2011, in Environmental Engineering, and has been working with Coal India Limited since 2014. He has been associated with the Asia-Gevra open-cast mines, Kusmunda open-cast coal mine, and the carrying-capacity study of the Moher sub-basin of the Singrauli coal fields. His professional work includes environmental management and environmental clearance related to major coal mining projects. The presentation was broadly discussed in three parts. In Part I, the speaker introduced the context of environmental management and climate-related concerns in the coal industry. He discussed the internal climate change policy and highlighted the importance of understanding the historical development of environmental management, legal frameworks, Acts, governance. The discussion connected environmental management in the coal sector with the evolution of regulatory and institutional approaches to environmental protection. The lecture also provided practical knowledge about air-quality assessment and modelling, including the application and comparison of models such as AERMOD and CALPUFF. The speaker discussed how meteorological conditions, emission sources, source locations, road-related sources, and other environmental parameters are considered in air-quality

modelling. The modelling workflow demonstrated how environmental data can be organized, analysed, mapped, and summarized to support environmental decision-making and regulatory assessment. An important component of the lecture was the integration of Sustainable Development Goals (SDGs) with activities in the coal industry. The speaker explained how different environmental and industrial activities can be mapped with relevant SDGs, demonstrating the relationship between environmental management and broader sustainable development objectives. The discussion helped participants understand how practices such as pollution control, climate action, resource management, and responsible industrial development contribute to achieving sustainability targets. This provided a broader perspective on how the coal sector can work towards sustainable development while addressing its environmental impacts. Throughout the workshop, participants engaged in interactive discussions, sharing their insights.

Through examples from his professional experience in the coal industry, the speaker demonstrated how environmental management, SDG integration, climate-change policies, air-quality assessment, legal compliance, biodiversity conservation, and decarbonization strategies can be brought together in the planning and management of coal-mining activities. Overall, the lecture provided participants with a comprehensive understanding of the connection between coal mining, environmental protection, climate action, SDGs, and sustainable development, while highlighting the importance of adopting practical and scientifically informed approaches for achieving more sustainable practices in the coal industry.

Glimpse of the Event


