Press Release

CSIR-NEERI holds a brainstorming workshop on carrying capacity of water resources

CSIR-National Environmental Engineering Research Institute (CSIR-NEERI) organized a 'Brainstorming Workshop on Carrying Capacity of Water Resources' on 21 March 2025 in the NEERI Auditorium. In the inaugural session, Dr. Avinash Dhakne, Member Secretary, Maharashtra Pollution Control Board (MPCB) emphasized the significance of the event and expressed his intention to implement its outcomes to aid in the conservation of water resources in Maharashtra. He highlighted the need to preserve our ecosystem as a crucial aspect of water conservation. He further stated that certain parameters must be considered for sustainable development and looked forward to deriving effective solutions through this session.

Dr. Sukumar Devotta, Former Director, CSIR-NEERI stated that carrying capacity is multidimensional; however, in many cases, specific aspects are emphasized while factors such as biodiversity and socio-economics are often overlooked. He emphasized that historical data plays a crucial role in carrying capacity studies. He explained that the carrying capacity of a small area can be interdependent on multiple parameters. Dr. Devotta cautioned that CO_2 concentration has risen from 380 ppm to 426 ppm. He advocated for carrying capacity studies to assess whether the world can sustain a 2°C temperature rise. He further pointed out that many developing countries, including India, face water scarcity, and emphasized the need to effectively manage water resources. He observed that industrial water consumption accounts for only 10% of total usage, whereas greater focus should be placed on other sectors, particularly agriculture, to enhance water conservation efforts.

Dr. R. N. Singh, Former Director, CSIR-NEERI, highlighted the perspectives of modeling carrying capacity in water resources. He explained how the concept of carrying capacity has evolved from mechanics to ecology. He mentioned that the current focus is on algorithmic models. He emphasized that mathematical thinking is essential for studying carrying capacity. He asserted that translating ideas into mathematical equations is key to effectively studying carrying capacity.

Dr C V Chalapati Rao, Former Chief Scientist, CSIR-NEERI shared his experiences and contributions in carrying capacity studies. Dr. Paras Pujari, Chief Scientist & Incharge, Water Resource provided an overview of the brainstorming session. In his welcome address, Dr. S. Venkata Mohan, Director, CSIR-NEERI, highlighted how CSIR-NEERI has evolved with multidisciplinary expertise and continues to combat emerging environmental issues.

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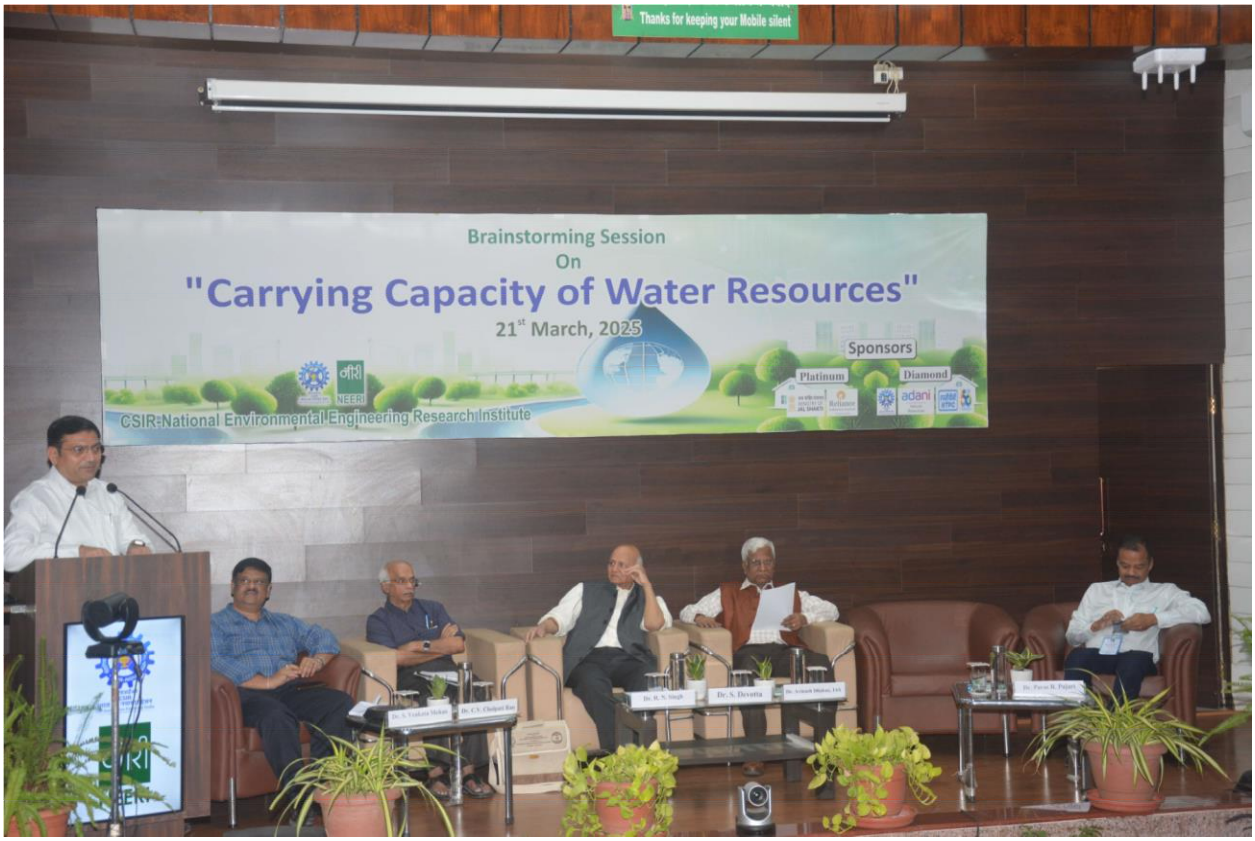
Panel discussions on stakeholders' and experts' perceptions of carrying capacity were held following the inaugural session. This event is expected to play a crucial role in strengthening

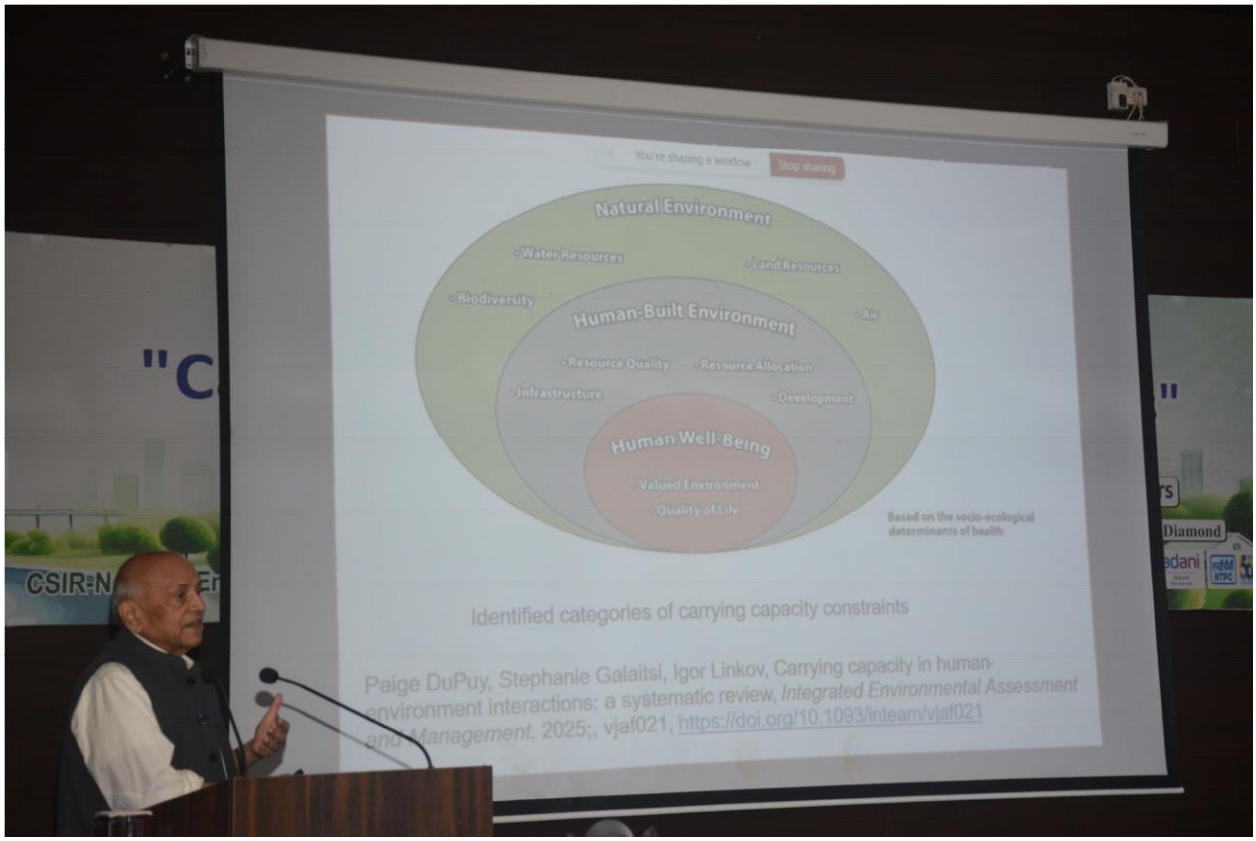
sustainable water resource planning and management by integrating scientific expertise with policy-driven solutions.
Dr. Shalini Dhyani, Principal Scientist, CSIR-NEERI conducted the proceedings.

Dr. S. Venkata Mohan, Director, CSIR-NEERI delivering the welcome address

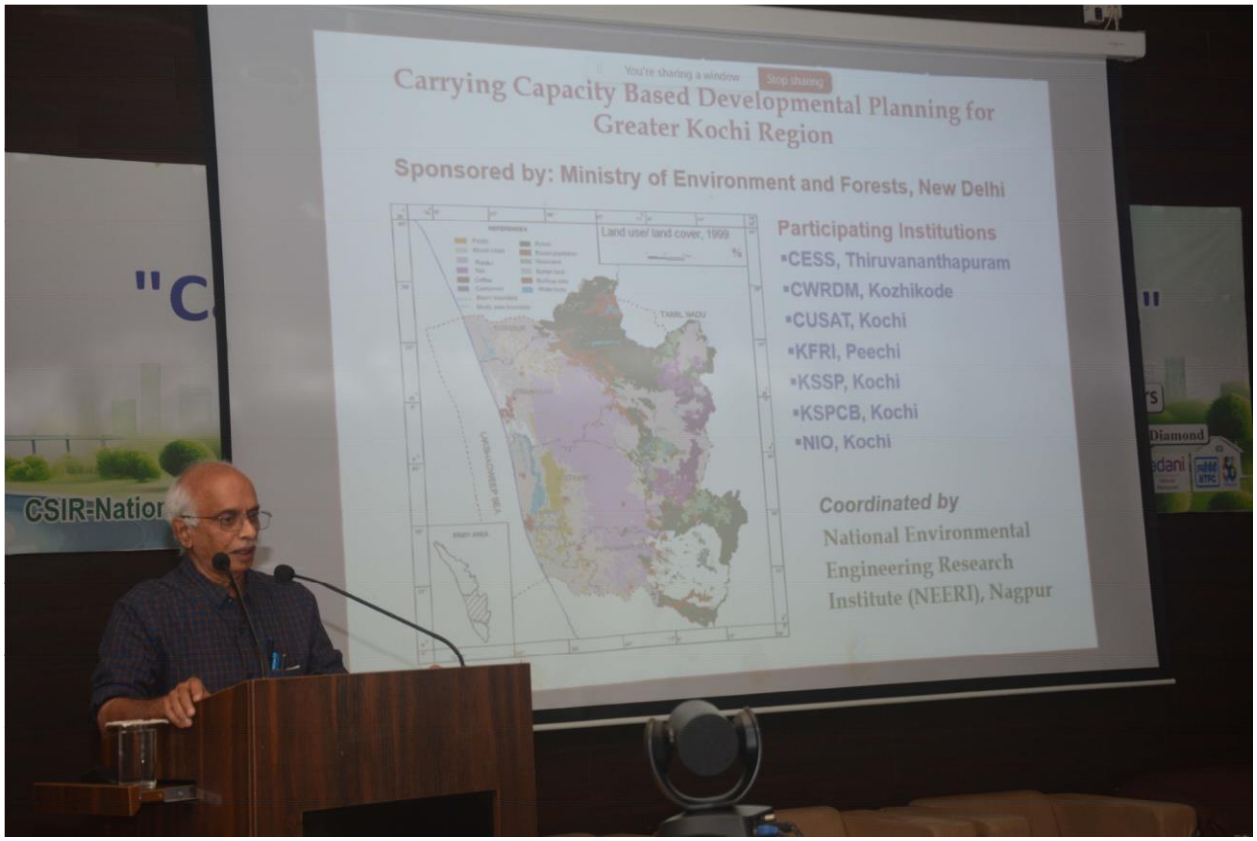


Dr. Avinash Dhakne, Member Secretary, Maharashtra Pollution Control Board (MPCB) addressing the participants

Dr. S. Devotta, Former Director, CSIR-NEERI speaking on the occasion

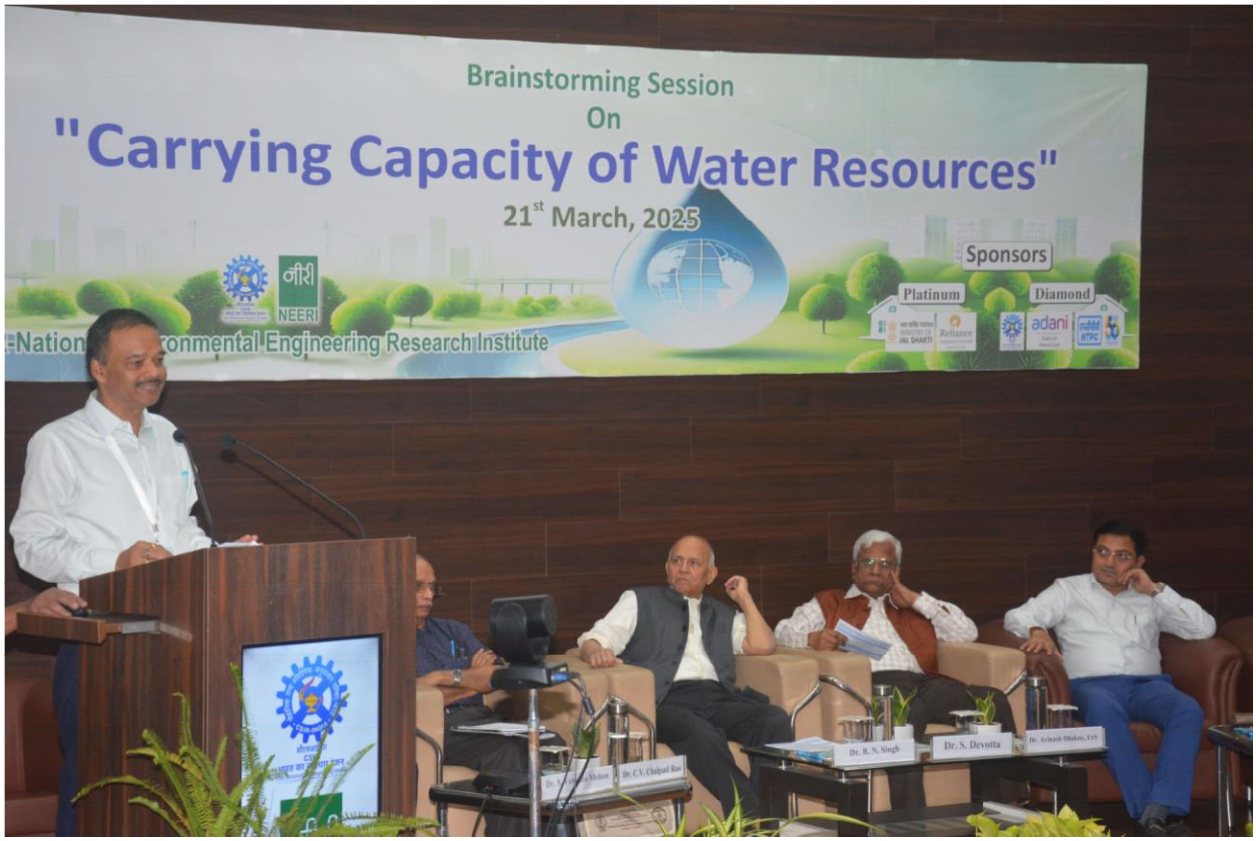


Dr. R. N. Singh, Former Director, CSIR-NEERI, highlighted the perspectives of modeling carrying capacity in water resources



Dr C V Chalapati Rao, Former Chief Scientist, CSIR-NEERI shared his experiences and contributions in carrying capacity studies

A view of the panel discussion



Dr. Paras Pujari provided an overview of the event