Climate Change and What We Can Do to Improve the Current Situation

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Abstract

Climate change is indisputably one of the most controversial subjects today. Paleo-climatology information reveals that the global climate followed a cyclical pattern and there is mounting evidence that climate change has been occurring rapidly in the last century. Extreme weather occurrences and sea water level rise are among the major consequences that will significantly impact our lives and the well-being of our society, leading to a series of water resources, ecology, food supply, and public health issues. The scientific communities are largely convinced that anthropogenic greenhouse gas (GHG) emissions have been exacerbating the rate of climate change today. As a result, organizations are adopting adaptation measures and are taking mitigation actions. Today's society is moving towards low-carbon living and sustainable development to reduce vulnerability to climate change. Various carbon capture and storage technologies are being developed. A major contributor of GHG emissions, the construction industry plays an important role in improving the current situation. As an introduction to the theme of this symposium, this presentation will discuss the climate change phenomenon, its impacts, mitigation options, and adaptation measures.

Speaker

Dr. Chin Man 'Bill' Mok received his BSc(Eng) from HKU with first class honors in 1985. After working for Maunsell Consultants for over a year, he was awarded the S.L. Pao Education Scholarship and Hui Yin Hing Fellowship to pursue graduate studies at UC Berkeley where he obtained his MS and PhD. He joined Geomatrix Consultants in 1987 and is currently a principal engineer and hydrogeologist. In addition, Dr. Mok is an adjunct professor at the University of Waterloo, focusing on climate change and water resources issues, and a part-time associate professor at HKU.

Dr. Mok's 25 years of consulting practice spans across multiple disciplines. He has directed numerous projects involving water resources amenities, environmental control and remediation systems, nuclear facilities, locks and dams, bridges, underground structures, buildings, and land development. Dr. Mok also participates actively in research. He has been the principal investigator of many research projects funded by US federal agencies, such as the Department of Energy, Federal Highway Administration, Federal Emergency Management Agency, and the US Geologic Survey. His current research interests include climate change, integrated atmospheric-hydrologic system, carbon dioxide geologic sequestration, nanotechnology, high-resolution site characterization, and decision support system. He is currently the chair of an ASCE task committee on environmental sensing and cyber-infrastructure as well as the secretary of ASCE's groundwater management committee.