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Dr. Hossain to Present a Seminar in Singapore

Abstract

There are numerous large cities located within close proximity and downstream to a large dam. Such large cities are often "Dam-reliant" due to their existential need for a steady supply of water, flood control, power and food generation that are sustained mostly with the upstream dam's water. Overall, dams are responsible for supplying water for 40% of world's irrigation, 20% of global food production and 10% of power generation, all of which play a key role in maintaining the integrity and functional resilience of the nearby cities. Thus a fundamentally novel concept for the infrastructure community - called "Dam-reliant Large City Infrastructure" - needs to be recognized for improving future resilience of city infrastructure in connection to changing patterns of extreme meteorological events. From an existential standpoint, dams and nearby cities need to be studied together because future patterns of extremes in weather are expected to be significantly different from the past records that were used for design/operation of dams and for consequential flood risk assessment of downstream infrastructure.

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