

Co-benefits of protecting mangrove for biodiversity conservation and multiple ecosystem services and functions

Date	29 April (Fri.)
Time	16:00 (UTC+8)
Venue	Zoom only



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The conservation of ecosystems and their biodiversity has numerous co-benefits, both for local societies and for humankind worldwide. Accurate monitoring and understanding of biodiversity and multifunctionality of mangrove and human dominated ecosystems as well as their interactions with current and changing environments is an essential first step for nature-based solutions to sustain global mangroves but remains challenging. To address this challenge, I use a multidisciplinary approach that integrates in-situ and remote sensing data and sophisticated modelling with hypothesis testing. In this seminar talk, I will discuss three topics: (1) the ability of ecosystem carbon storage in Sundarbans (the world's largest mangrove forest) and global mangrove; (2) how fusion of multisource satellite image properties improves mapping of essential biodiversity variables (species richness, plant traits, and ecosystem carbon storage) using machine learning modeling; and (3) the underlying mechanism of biodiversity, the environment, and multiple ecosystem services (functions).



Mizan Rahman is a Forest ecologist with 10+ years' experience in mangrove ecology, field ecology, ecological modeling and remote sensing. He has rich experience in working with many reputed institutes worldwide, including NASA Goddard Space Flight Center, USA. His research is motivated by understanding the patterns and drivers of spatiotemporal variations in forest diversity and ecosystem functioning, as well as assessing the climate change impacts on these ecological processes, with ultimate goals to offer necessary tools and sciences through a multi-disciplinary approach to aid nature-based solutions for sustaining our natural ecosystems in the context of global climate change.