

Mangroves/Blue Carbon ecosystems for ecosystem-based disaster risk reduction: Some examples from the field

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Coastal wetlands, including salt marshes, sea grasses and mangroves are often referred to as blue carbon ecosystems (BCEs). These ecosystems not only play an important role in sustaining various services (regulating, provisioning, supporting and cultural) but are also crucial for maintaining structural and functional integrity of the coastal /seascape.

Increasingly, due to global climate change, the severity and frequency of extreme weather events have grown worldwide and the cost of these disasters (in terms of human lives, property damage, etc) is increasing each year. While actions towards mitigating the causes and impacts of climate change are being taken, there is a growing recognition of sustainable, affordable and effective alternatives to reduce the risk and cost of these disasters by employing nature positive approaches. Ecosystem-based disaster risk reduction (Eco-DRR) encompasses sustainable environmental management strategies that aim to leverage regulatory functions of ecosystems to prevent, mitigate, or diminish the impacts of disasters. Mangroves, in particular provide an excellent case example for being such a solution as these are most effective and resilient natural barrier to protect coastal areas against severe cyclones, storm surges, tsunamis, erosion of coastlines, etc.

In this presentation, some examples from India, and other countries will be shared to highlight the positive role of mangrove forests in protecting coastal community and coastal landscape, and how this realization has led to restoration of coastal areas to reduce the risk of disasters in future. Some examples will be included where the recognition of the importance of mangrove forests in the integrity of coastal landscape has resulted in into local regulations and planning policies to impart protection to the mangroves.

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At present, Dr. Bhomia is a scientist at Centre for International Forestry Research (CIFOR) based in Indonesia. He is working as Blue Carbon and Climate Change expert in the Climate Change, Energy and Low Carbon Development group. His work focuses on freshwater peatlands and coastal mangrove ecosystems as potential options for designing nature-based solutions for climate change. During his decade long research career, he has conducted research in both freshwater and marine ecosystems. Notably freshwater wetlands of Florida Everglades and Peruvian Amazonia, and coastal mangroves in India, Honduras, Liberia, Gabon, Ghana, Madagascar, Senegal and Indonesia.