
Oral | Symbol A (Atmospheric and Hydrospheric Sciences) | A-CG Complex & General

[A-CG15]Coastal Ecosystems - 2. Coral reefs, seagrass meadows, and mangroves

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Coastal marine ecosystems are complex open system interacting with surrounding watersheds, outer ocean, and the atmosphere. They provide a wealth of various ecosystem services to human life, however, at the same time, are also influenced strongly and often negatively by human activities. This session, together with a companion session dedicated for the water cycle and land-ocean interactions [A-XX##], aims to provide a platform for interdisciplinary discussion covering various aspects of frontiers in coastal ecosystem sciences. This session particularly focuses shallow-water benthic communities such as coral reefs, seagrass meadows, and mangroves. All these communities are characterized by originally high primary production, active material cycling, and biodiversity hot spots. However, increasing human demand for coastal marine resources and industrial development concentrating on coastal regions incur the risk of rapid degradation and diminishment. Comprehensive assessment and monitoring of ecosystem functions and development of effective means for conservation and restoration are urgently needed for such communities. This session is dedicated to organizing and promoting such research and management activities by sharing state-of-the-art science and technology among ecologists, geologists, geochemists, biogeographers, etc. Case and modeling studies concerning the following topics are especially welcome: material cycling and ecosystem functions; climate changes such as global warming, ocean acidification, and sea-level rise; ecosystem services such as carbon sequestration, nutrient regulation, and fisheries production; broad-scale comparison; long-term ecological researches.

4:45 PM - 5:00 PM

[Discussion]Discussion