Call for Papers 22nd Pacific Science Congress, Kuala Lumpur, Malaysia 14-18 June, 2011

Subtheme: Oceans (Coral Reefs, Ocean Acidification, Fisheries)

Type of session: Symposium

Title: "The Future of Coral Reefs: Climate Change, Acidification, Over-fishing and other Stresses"

Conveners: Dr. Terry J. Donaldson and the Pacific Science Association Coral Reef Working Group

Description: This symposium will present recent research that attempts to integrate the effects of ocean warming, ocean acidification, over-fishing, and other stressors such as habitat destruction, pollution, and species invasions upon physical and biological processes in coral reef systems. Of particular importance is the combination of ocean warming and ocean acidification that is rapidly emerging as a real signal pointing towards potentially enormous impacts upon coral reef and oceanic systems. For example, warming depletes oceanic oxygen levels both by the lower solubility and by accelerating microbial respiration rates. Thus, aerobic marine animals will experience the double threat of rising CO₂ and declining O₂ levels, and this will impact very large areas of the Indo-Pacific region. The linkages between ocean warming and ocean acidification are not yet well linked, nor are they well-linked to other stressors that, when acting in concert, pose serious cumulative threats. This symposium seeks to provide stronger understanding of the real linkages between them.

Papers will also address predictive models of extinction susceptibilities and risks under these threats, the loss of biodiversity on coral reefs, and the corresponding loss of natural resources to stakeholders within the Pacific region. Papers describing innovative management policies and actions that can address or mitigate these impacts will also be encouraged. Presenters are expected to prepare manuscripts for publication in a peer-reviewed journal or book.

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