**Climate change and intertidal communities: an integrated approach to monitor species responses at the physiological, individual and community level towards a long-term monitoring system at a marine station**

**Date: June 27 -28, 2012**

**Venue: College of Ocean and Earth Sciences, Xiamen University, Xiamen, China**

Climate change is anticipated to have severe and lasting impacts on marine ecosystems, causing species extinctions and large scale range shifts. Coastal communities are very sensitive to climate change and intertidal species are model organisms to study these impacts as they are easy to quantify, widely distributed and are already living close to their physiological limits. Predicting and providing a conservation plan to manage such impacts is however often hampered by a lack if baseline information on the status of natural communities and patterns of change in environmental conditions. Long term *in situ* monitoring of environmental variations, species' physiological responses and resulting community dynamics are, therefore, critical to improve our understanding of how coastal communities may change under climate change scenarios.

Protected areas with easy access, such as provided by coastal areas close to marine stations, can be an important baseline for studies of how intertidal communities change naturally and/or respond to stressors. Such areas are therefore ideal to establish long-term monitoring programmes and have proved vitally important in many areas of the world (e.g., Chile, US and UK). This workshop aims to discuss and devise the most efficient way to establish a long-term meteorological, oceanographic, ecological and physiological monitoring system in marine station. To achieve this, the workshop will be divided into three sessions:

1. Physical environmental observations, including tidal levels, temperature, salinity etc monitoring
2. Physiological studies of species responses to natural and man-induced changes, and
3. Resulting variation in local community structure, ecology and biodiversity

**Language:** English

**Sponsors:**

State Key Lab of Marine Environmental Science, Xiamen University

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