

Abstract ID – 1511

Theme 2: Adaptation/mitigation to change in coastal systems

Invited speaker

The 2nd International Symposium on  
**Integrated Coastal Zone Management**  
Arendal, Norway  
3 – 7 July 2011

### **Enhancing the Ability of Coastal Regions to Respond to Climate Change**

Tim Smith

University of the Sunshine Coast  
Maroochydore DC Qld 4558  
Australia

[TSmith5@usc.edu.au](mailto:TSmith5@usc.edu.au)

#### **Abstract**

Coastal communities face a range of human-induced coastal pressures from pollution to resource conflicts that create enduring challenges for integrated coastal zone management. Climate change has emerged as a new issue for ICZM that exacerbates many traditional challenges. If we have not been able to adequately deal with persistent ICZM challenges, what basis is there for thinking that our traditional management approaches will be effective against climate change? Similar to other complex and uncertain sustainability challenges, effective adaptation (and mitigation) to climate change requires new approaches to knowledge production, civic engagement, and decision-making, particularly in the face of high decision stakes. While reductionist science has enabled detailed understanding of specific phenomena at defined scales, holistic solutions to ICZM problems require a systems perspective that comprehensively addresses the interrelationships between system drivers (the things that affect change), relays (the things that magnify or dampen the drivers), the impacts, and various possible management interventions. Furthermore, the institutions that facilitate ICZM need to adapt to changing contexts and challenges through an ongoing process of social learning - so that ICZM can be process enabled (dynamic to changing socio-ecological contexts and goal focused) rather than process constrained (restricted by outdated institutional structures). Current ICZM challenges are mounting and the way coastal communities and decision makers tackle these challenges will be paramount to achieving sustainability and improved quality of life.