

Coasts and Estuaries- The Future

Eric Wolanski*

College of Science and Engineering, James Cook University, Townsville, Australia

We announce the forthcoming publication of the Elsevier book “Coasts and Estuaries – The Future” edited by Eric Wolanski at James Cook University, Australia, John Day at Louisiana State University, USA, Michael Elliott at the University of Hull, UK, and Ramesh Ramachandran at the National Centre for Sustainable Coastal Management, India.

Coastal ecosystems are at the nexus of the Anthropocene, with enormous environmental issues, and inhabited by nearly half the human population. These coastal systems and the surrounding human societies form coastal social-ecological systems that increasingly face enormous environmental issues from multiple pressures, which threaten their sustainability. The pressures include basically all human activities within the river catchments such as changes to land use and hydrology in the river catchment, and directly on coastal ecosystems from land claim, coastal sand mining, harbour dredging, pollution and eutrophication, overexploitation such as overfishing and extraction of groundwater, gas and petroleum extraction. In addition coastal zones are impacted by climate change – this is not just the ‘usual’ culprits of sea level rise, ocean acidification and increased temperature but also, just as important, changes in the rainfall-runoff of the river catchments, stronger coastal storms and the changes to species distributions, including the influx of invasive species. During the 20th Century, coastal scientists studied the problems and issues arising along the coasts. Now, in the 21st Century, they must focus about how to solve these problems and issues through better management and innovative approaches.

This is the purpose of this new book. The book is centred around the proposed DAPSI(W)R(M) framework. It provide a typology of the human interaction with estuaries and coastal waters worldwide at a large number of study sites as a comprehensive description of what works and what does not work for estuaries and coastal waters worldwide and what remediation measures are possible and likely to succeed within limits.