

Global Change Coastal Zone Management Issues for the Asia-Pacific Region: APN's Responses in Addressing These Issues

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A number of important global change issues have been identified for the Asia-Pacific coastal zone. The most significant of these is the need to adapt to the potential impact of global warming and accelerated sea-level rise. There are both physical and human dimensions to global change and regional/local change which will have impact on coasts in the future. There are three main global change drivers affecting coasts which should be acknowledged in the coastal management. First, there are natural phenomena, such as climate change and variability including global warming and sea-level rise, and major regional influences with global climate change linkages such as ENSO and the Asian Monsoon. Second, there are globally driven socio-economic changes as evidenced by globalization of economic activity and the dominance of international corporations, many of which are more powerful than smaller countries. The effect of global demand and international trade can have an impact on the Asia-Pacific coast, such as mangrove clearance for shrimp farming even though the major driver/demand may be external to the region. Third, there are global influences on management of various natural coastal environments such as world heritage or marine protected areas. There are also local influences, such as the natural dynamic coastal processes, and population pressure on coasts, such as coastal resource use, waste disposal, mining and coastal development and pollution.

Both global and local drivers can be divided into two groups 'dimensions', namely biophysical and human. Most of these will show increases in the future, such as sea-level rise, economic activity and population, which will inevitably result in a declining supply of coastal resources. As a result of these trends, the 'coastal condition' will decline. In order to improve conditions, appropriate adaptations must be put in place, the earlier this is done, the better the outcome. If the adaptation measures are delayed, there will be poorer outcome.



23-27 November • Manila, Philippines

The potential impacts from global change issues are compounded by current issues. Methods for tackling these issues, such as 'integrated coastal management' have few examples of best practice. There is a need to recognize the diversity of coastal management practices in the Asia-Pacific region and to develop appropriate national and local policies. Similarly, there is a need for this to be accompanied by appropriate education putting less reliance on English language-based material and western concepts.

The scope of the Asia-Pacific Network for Global Change Research (APN) coastal zone research is much broader than the APN member countries and can be considered to cover the whole of the Asia-Pacific region, including the East Asian region and small islands states in the central Pacific.