

## Future Scenarios in the Coastal Zone in Asia

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Unique challenges face the coastal zone in Asia due to the great length of coastline in many countries of the region, especially Indonesia, Philippines, Vietnam, India and Thailand. In the coastal zone there is a concentration of human population, but also great treats from natural disasters e.g. typhoons and floods, increasingly made worst by destructive human activities e.g. cutting of mangrove forests. The coastal zone is also a focal points for economic development in many countries, based on logging, fisheries and aquaculture, shipping and trade, and tourism to name a few examples.

In terms of the future treats to the coastal zone in Asia, the following are some key issues:

- Population pressure
- Destruction of natural habitats and resources
- Coastal zone reclamation
- Massive sedimentation from uncontrolled upland development
- Sea level rise

Regarding the probable future strategies and solutions to create sustainable socio-economic conditions in the coastal zone, which are also sensitive to environmental limitation, the following can be suggested:

- Stronger and more implementable legal framework
- More adoption of zoning to reduce conflicts between coastal resources users
- More compliance-based management e.g. codes of conduct/best management practices (e.g. for coastal shrimp farming)
- Mangrove and other marine products to carry 'ecolabels' e.g. charcoal, shrimp, to demonstrate non destructive production methods.
- Future technology to restore mangroves, coral reefs (seeding of young corals, culture of many coral species (e.g. aquarium fish and molluscs) including seagrass beds.
- Less dependence on coastal natural resources directly (e.g. less cutting of mangroves, and destruction of coral reefs). More indirect uses and values recognised e.g. aquaculture and tourism to increase.
- More appreciation of conservation values (recreation, education, fisheries habitat support, storm and flood protection).
- Establishment of National Plan of CZM from top-down but also bottom-up via coastal communities.
- Closed International Cooperation on CZM among Asian countries