

The Potential of Educational Institutions for Building Resilience in the Coastal Zone :  
**The Relevance of Mangrove Ecosystem Services in Different Settings**  
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**ABSTRACT**

Since 2011, the Lasallian network as part of its environmental advocacy, has devoted 75% of its tree-planting efforts to mangroves. This review was undertaken to explore the potentials of this initiative outside of its formative value, to contribute to the broader ecological goal of building resilience in the coastal zone. Using the framework of mangrove ecosystem services, the context of the Manila Bay River System and the West Philippine Sea were examined as examples of mangroves in deltaic-urban and fringing-rural settings respectively. Sites differed only on the relevance of coastal protection services as this depended on the degree of exposure to storm surge risk. Both food and habitat provisioning; and regulation services of mangroves were valuable across both sites. (1) Coastal protection by mangroves currently suffices only for wave heights of 1m. Further research is needed to integrate mangrove ecosystems within a suite of other solutions that can adequately prepare natural, man-made and human systems for climate change. (2) Food and habitat provisioning services highlight the importance of mangrove-seagrass bed-coral reef connectivity. Research on how the lesser studied seagrasses of the Philippines cope with present and future stressors are needed, among them siltation and pollution from land-based activities in the absence of mangroves. (3) As socio-economic pressures for land conversion of mangroves to other uses exist across all sites, research on the carbon-storage potential of mangrove soils may be an additional venue for assessing trade-offs of mangrove forests against their proposed alternative uses. The work of academicians, researchers and community development advocates in building more resilient communities will be relevant to 15 Mn Filipinos living in low elevation coastal zone and whose lives and livelihood are most at risk to the increased storminess and sea level rise that are consequences of climate change.