Majid Bakhtiyari

PhD Candidate

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Summary

Mangroves are known to provide important nursery, breeding and foraging grounds, and structural habitat for shelter from predators for mollusc, prawn, crab and fish species important to commercial, recreational and indigenous fisheries. Mangroves also have a role in improving water quality by removing nutrients from storm water and controlling erosion from flooding and storm surge (Clarke and Johns, 2002). There has been much recent effort to restore and rehabilitate mangroves to ameliorate significant continual habitat loss. Whether being impacted or restored, cost-effective and reliable methods are required to assess the habitats' capacity for functions and services. Most current assessment methods focus on forest structure and mostly consider mangroves as terrestrial forests. Structural conditions reflect long-term influences of impacts; this approach also ignores the effect of short-term drivers as well as being too insensitive as early warning indicators. There are potential biotic indicators, ranging from community structure to physiological and biochemical variables that could react to anthropogenic impacts quickly and thus, higher sensitivity to stress conditions. In this project, I tend to evaluate how the ecosystem attributes may be regulated by the prevalence of human activities and then to develop a conceptual and quantitative model representing mangrove function/service.

Research Expertise

- Ecosystem rehabilitation and management
- Biostatistics
- Lan use survey and GIS
- Fish anatomy and fish biology
- Biological and chemical water purification / waste and water management
- Aquaculture recirculating systems
- I am interested in developing natural friendly projects that also support the growing industrial and social demands