

Drivers of socio-ecological adaptive capacity in coastal communities across Madagascar

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Around Madagascar, 87% of coral reefs are threatened by local human activities and fishery resources have decreased dramatically in recent years. Evidence of recent declines of fishery resources, especially species of high value, such as shrimp, sharks, and sea cucumbers, has been documented, and most of the small-scale coastal fisheries in Madagascar are considered unsustainable, largely due to overharvesting and destructive fishing practices. We looked at drivers of adaptive capacity and resilience of communities across a gradient of dependence on fisheries resources in three seascapes in Madagascar, in the southwest, northwest and northeast in 26 villages. Households socio-economic surveys as well as ecological and catch surveys were performed in all areas. Preliminary results demonstrated significant differences in the level of dependence on coastal and marine resources across seascape in Madagascar, the southwest seascape presenting higher dependence and potential vulnerability while the northeast presenting the lowest vulnerability due to other sources of resources. We also observed significant differences among seascape that could be explained by coping strategy by certain household to increase adaptive capacity in a particular seascape. Counter intuitively, despite the significant differences between seascape, the proportion of fish catch sold was constant across all seascape (about 80%), which might be explained by external factors such as the influence of a market as a key driver of adaptive capacity.