Asian-Pacific in the spotlight: climate change, coasts and people.

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Ecosystems like coral reefs provide immeasurable value to tropical coastal societies and people. They are also enormous storehouses of biological diversity and hence are important in terms of global genetic heritage. Despite their importance, however, coral reefs are under threat from local and global stresses factors which is placing the future of many coastal societies and people into jeopardy. To natural scientists, the problems and solutions appear deceptively simple: if we know that an ecosystem such as coral reef is valuable, and we know that it is threatened, then surely all we need to do is identify the threats and eliminate them? Unfortunately, the world is never this simple, and the problems that face like coral reefs are inherently tangled by nature, involving the entangling of short and long-term imperatives, and issues as broadly connected as human health, urban development, public attitudes, fisheries, food security, coastal zone management, and long-term environmental sustainability. And to add to this, the value of natural ecosystems like coral reefs may not be immediately obvious and hence the motivation to protect them is missing. One approach to this problem is to place an economic value on ecological services that reefs provide, thereby letting market forces ensure that valuable ecosystems are preserved in perpetuity. This approach appeals to be economically minded, and for some ecosystem services can result in a straightforward calculation of economic value (e.g. fisheries, tourist value). In other cases, however, it is difficult or impossible to estimate a direct dollar value on the services provided by coral reefs. For example, estimating the value of coral reefs in the production of beach sand or the preservation of water quality is probably impossible. And how does one calculate the cultural value that coral reefs have for many societies throughout the world? Clearly these ecosystem services are valuable and hence we need to break move beyond the current perception that not being able to value something means it has no value. This paper will explore these questions in the context of one of the most complex settings for coral reefs, the Coral Triangle, where coral reefs, large numbers of people, local stressors and climate change come together.