

Mangroves key to saving lives

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The replanting of mangroves on the coasts of the Philippines could help save many of the lives lost in the 20-30 typhoons that hit the islands annually. This is one of the numerous reasons for the 'urgent need for immediate and massive mangrove replanting' that J.H. Primavera from the Southeast Asian Fisheries Development Center and J.M.A. Esteban from De La Salle University, both in the Philippines, cite in a paper published online in the Springer journal *Wetlands Ecology and Management*. The study presents an analysis on a range of programs demonstrating that low-cost locally led projects have a much higher rate of success than high-cost government-led projects.

The mangrove forests along the Philippines' 36,300 km of coastline play an important role in fisheries, forestry and wildlife as well as providing protection from typhoons and storm surges, erosion and floods. In the last century, they have declined from 450,000 ha to 120,000 ha, mostly due to their development into culture ponds. This has led to many replanting initiatives ranging from small community projects to large scale international development assistance programs. During this time planting costs have escalated from \$100/ha to >\$500/ha, mainly due to the overhead costs of large-scale projects. Unfortunately, despite heavy funding, the majority of these replanting schemes have been unsuccessful with only 10-20 percent of the mangroves replanted surviving.

In a comparison of a number of replanting initiatives, the authors found that the most successful projects had been low budget and locally led. One World Bank-sponsored project costing \$38 million for coastal and

nearshore fisheries (in addition to agriculture, forestry, livelihood and infrastructure subprojects) reported only a 35 percent survival rate for the mangroves planted. Conversely, a small £23,100 project implemented by a local government unit in co-operation with a people's organization had a mangrove survival rate of 97 percent. Primavera and Esteban point out that the community involved had a shared interest in the survival of the mangroves and lived next to the plantation site therefore making maintenance easy.

They also noted a distinct lack of ecological knowledge as the wrong species of mangrove is consistently being planted in inappropriate sites. The sheltered areas which have been largely converted to fishponds were historically home to the mangrove forests. These ponds are theoretically covered by legal title if privately owned. This has led to the most popular species of mangrove, *Rhizophora*, being planted on exposed coastlines, where there are no ownership issues, despite its inability to withstand wave action.

The authors point out that many of these government-leased ponds have no legal basis and many are underutilized or have been abandoned. They challenge the Philippine government to 'muster enough political will to make abandoned, undeveloped and otherwise illegal culture ponds available for mangrove rehabilitation'. Planting in these more appropriate sites, together with the use of hardier species such as *S. alba* and *A. marina* in more exposed areas, would have a significant effect on survival rates.

Primavera and Esteban conclude that the ecological benefits of mangrove rehabilitation involve planting the correct species on suitable sites, the involvement and commitment of the community and grant of tenure. Funding appears to be of secondary importance.

Source: Springer

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