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The Role of Community Forests for Climate Change Adaptation in the Ayeyarwady Delta, Myanmar

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Abstract

Community forests (CF) empower rural people to manage their own resources. In Myanmar's Ayeyarwady Delta, mangrove forests are important for communities' livelihoods. However, population growth, extension of rice production and unclear tenure rights are leading to deforestation and forest degradation. Additionally, in view of climate change, coastal communities are becoming more vulnerable. Experts predict sea level rise, irregular rainfall and more extreme weather events such as cyclone Nargis in 2008. As rice yields are declining, can mangrove restoration coupled with CF be a successful strategy to adapt to a changing climate?

This study aimed to assess communities' vulnerability and the potential of mangrove CF for climate change adaptation in the brackish water zone of Ayeyarwady Delta. Within four villages, 110 household interviews, 20 focus group discussions, key informant interviews and several participative research tools were applied. In addition 20 forest plots were analysed in terms of species composition and biomass density.

Major vulnerability factors are low education, tenure insecurity and depletion of natural resources. It was found that 25 % of total income in the study area is derived from CF products. The most important of those are crabs (80 %), which breed at the roots of mangrove trees. Income also comes from selling timber, fuelwood and *Nypa* palm. Other livelihoods consist of homegardens, small businesses, daily labour, long-term labour, livestock, remittances, fishing and farming, in that order. Apart from income opportunities, CF also provides housing material, fuelwood and a variety of food items. The communities are aware of changes in the climate. They already experience higher temperatures in summer, unpredictable rainfall and increased flooding, leading to salt intrusion on rice fields. During cyclone Nargis, however, community forests and homegardens proved to be more resilient than other land uses.

Summing up, the role of mangrove CF is crucial for livelihoods at present as well as in the future. A healthy forest which is managed sustainably has the potential to continuously provide goods for income generation and home consumption in addition to mitigating losses from extreme weather events. Thus, clear tenure rights and management principles through stakeholder dialogue are a must.

Keywords: Community forests, livelihoods, mangroves, Myanmar

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