Regional Fisheries Livelihoods Programme for South and Southeast Asia (RFLP)

Briefing Note

Can coastal communities turn mangroves to money (without chopping them down)?

Introduction

The Regional Fisheries Livelihoods Programme for South and Southeast Asia (RFLP) is a Spanish-funded initiative implemented by the UN Food and Agriculture Organization (FAO). RFLP sets out to reduce vulnerability amongst coastal fishing communities in areas of Cambodia, Indonesia, Philippines, Sri Lanka, Timor Leste and Viet Nam. One of the RFLP's key objectives is to seek alternative livelihood options for fishers and their families.

Mangroves play a well documented environmental role that includes providing protection from coastal hazards and maintaining coastal fisheries resources. In addition, mangrove ecosystems commonly contain much larger amounts of carbon than most terrestrial forests and also have higher rates of primary productivity than many other tropical forests types.

In view of this, RFLP commissioned a consultant from the FAO's Regional Office for Asia and the Pacific to investigate the possibility of generating income from mangroves through carbon credit sales and payments for environmental services as an alternative livelihood option for fishers and their families. The full report will be available at www.rflp.org shortly.

Key findings

The lack of well fitting methodologies and the need to provide communities with income within a short time frame (~3 years) suggests that the sale of carbon credits is not a practical course for RFLP to follow in providing alternative means of livelihood support to fisher communities.

A more realistic alternative may be to develop an alternative lower cost accreditation framework that does not yield carbon credits, but provides a socially and environmentally sound 'sustainable development product' focussing on payments for mangrove protection and aimed at corporate buyers.

Key issues

Markets still in early stage of development

Rising concern over climate change has seen the establishment of markets both through voluntary and internationally agreed measures. However issues associated with monitoring and quantifying carbon flows with precision have meant that costs of including forestry activities in markets have exceeded associated benefits. Meanwhile, markets for environmental services have yet to develop to any great extent.

Methodology wanted

The inclusion of soil carbon, in addition to carbon in biomass, is particularly important in the case of mangroves as soil carbon stocks may account for well over half of the total carbon present in the ecosystem. However,

rates of soil carbon collection as a result of root turnover and litter fall are not well known and may be highly variable. Time-consuming methodological work is likely to be necessary before rates of accretion/conservation of soil carbon can be quantified, validated and credited.

Changing architecture

In addition to the technical issues, investment in mangrove related carbon emissions reduction suffers risks associated with transitions in the global climate change architecture. A post-2012 replacement for the Kyoto Protocol has yet to be agreed while voluntary markets for forestry related carbon sales will end once national level reduced emissions from deforestation and degradation (REDD) mechanisms are established.

Institutional and administrative issues

Institutional and administrative issues must also be taken into account in assessing the feasibility of setting up carbon sales. For example, costs will be associated with distributing and monitoring benefits to local communities in relation to mangrove activities. Ownership of mangrove areas (i.e. who should benefit) is also often not clear.

Economies of scale

Even with carbon emissions reductions of 34 tonnes per year (the upper level recorded by existing forestry initiatives) any project would likely have to cover over 1,000 ha to break even within 5 years given a sale price of $5 per carbon credit.

Most profitable possibilities

Given the nature of mangrove ecosystems and potential for sequestering carbon/reducing emissions, the most profitable sites are likely to be reduced emissions from deforestation and degradation (REDD) activities in threatened degraded mangrove areas with peat soils; and afforestation and reforestation (A/R) activities in abandoned fish ponds.

Possible next steps

Despite the above, under current conditions it is still possible for communities to benefit from mangrove related activities. The following steps could be considered:

- Identify potential mangrove areas and consult with stakeholders to determine interest;
- Provide livelihoods support through traditional mangrove related activities and alternative means (e.g. disaster risk reduction) in association with national NGO and/or local government;
- Facilitate agreement over mangrove restoration/conservation between authorities and local community;
- Identify possible corporate entity to provide sponsorship and facilitate agreement with local community and authorities over payment for mangrove conservation;
- Identify inter-governmental or civil society institutions to provide local technical support and act as intermediary;
- Work towards:
    a. Carbon accreditation including addressing methodological issues, and accreditation with social and environmental standards; **or**
    b. Develop an alternative lower cost accreditation framework that does not yield carbon credits, but provides a socially and environmentally sound 'sustainable development product' focussing on payments for mangrove protection and aimed at corporate buyers.