

COASTAL FISHERIES MANAGEMENT SECTION

Community-based ecosystem approach to fisheries management: Guidelines for Pacific Island countries

Implementing the ecosystem approach to fisheries (EAF) management in Pacific Island countries is becoming important for managing the region's coastal fisheries. This has been reflected in the recommendations of the sub-regional joint Food and Agriculture Organization of the United Nations (FAO)/SPC EAF workshops held in Nadi, Fiji (November 2008), and in Guam (March/April 2009). The two respective workshops requested the formulation of a manual and guidelines to integrate EAF components into existing coastal resources management programmes, which are in most countries implemented by communities with national agencies or non-governmental organisations (NGOs) playing a supportive role.

Managing a resource or fish stock in isolation from its ecosystem ignores the fact that the very ecosystem that the resource or fish species depends on is being affected by fishing activities and other human activities. Fishing can affect an ecosystem by 1) catching unwanted species, 2) causing physical damage to habitats, 3) disrupting food chains, and 4) causing changes in biodiversity. Other human activities unrelated to fishing — such as agriculture, forestry and development — can also affect marine ecosystems, including the species that are part of them. The effects of climate change also often exacerbate human impacts on an ecosystem.

It is pointless to address the problem of depleted fish stocks merely by placing controls on fishing activities if the key threats to their recovery are related to other human activities and natural factors that cause ecosystem

degradation. For these reasons, fisheries authorities are replacing narrow, target species-based fisheries management strategies with a broader approach that attempts to manage fish stocks as components of marine ecosystems. Under an EAF, the usual concern of fisheries managers (i.e. the sustainability of target species) is extended to address the sustainability of an ecosystem on which a fishery depends, which includes people and fish stocks. EAF addresses both human and ecological well-being and merges two paradigms: that of protecting and conserving ecosystem structure and functioning, and that of fisheries management, which focuses on providing food, income and livelihoods for humans.

Because the objective of EAF is the sustainable use of entire ecosystems as well as target species, non-fisheries activities that impact marine ecosystems must also be managed, even though these activities may be outside the responsibility of fisheries authorities. In addition to fishing, target stocks are affected by non-fishing factors, including climate change, coastal development, pollution, and the loss of critical habitats by reclamation. Because of the broad issues involved, fully implementing an EAF requires collaboration and cooperation between communities and a range of government agencies responsible for managing activities that impact on marine ecosystems.

In instances where communities are involved in managing fisheries, actions are already being taken to protect key ecosystems such as coral reefs and mangroves. In other words, addressing human impacts on ecosystems is not a

new concept within community-based fisheries management.

A community-based ecosystem approach to fisheries management (CEAFM) represents a combination of three different perspectives: fisheries management, ecosystem management and community-based management. An appropriate definition of CEAFM is the management of fisheries — within an ecosystem context — by local communities working with government and other partners. The close involvement of communities accentuates the fact that humans are an integral part of ecosystems and their needs must be addressed.

In an effort to assist countries with implementing their CEAFM programmes, SPC and FAO in partnership with The Nature Conservancy developed guidelines for implementing national CEAFM programmes. The guidelines are intended to help communities, government agencies and NGOs in Pacific Island countries to work together to develop and implement community-owned fisheries management plans for a designated area. Although the guidelines are particularly designed to enable a government fisheries agency to work with communities to manage coastal areas, they may be used by any group, including community leaders, an environmental agency, or an NGO, for the same purpose.

The guidelines that have been drafted give some background, including a summary of key issues with regard to coastal ecosystems in Pacific Island countries, and present step-by-step guidelines and simple tools to assist communities and their

partners in creating and implementing community plans that reduce human impacts on eco-

systems and ensure that catches of seafood species are sustainable. The guidelines also provide

some basic requirements for implementing a CEA FM.

Developing a national coastal management framework for Vanuatu

The Vanuatu Fisheries Department requested assistance from SPC's Coastal Fisheries Management Section in developing a framework for implementing its integrated coastal management project. The project, "Enhancing coastal and marine ecosystems resilience to climate change through coastal governance and conservation measures", was established by the Pacific Regional Environment Programme's Coastal Zone Management Programme, and was spearheaded by the National Fisheries Authority. The project envisages developing a coastal fisheries management plan for selected communities and assisting those communities in developing actions not only to manage coastal fisheries, but also to build resilience toward the impacts of non-fisheries activities and climate change.

Kalo Pakoa, Project Coordinator, stated:

"One of the main objectives of the project is to develop a framework policy to bind all our effort towards our adaptation in the long term. The issue of climate change is so broad involving many sectors whose responsibilities are guided by different legislations, priorities and overlapping responsibilities. Working together can be very difficult and complicated; we therefore need a framework policy based on our local situation to guide us forward. With global phenomenon at the rise in terms of climate change

and sea level rise, we in Vanuatu can contribute immensely to strategic actions only in a coordinated manner."

In response to Vanuatu's request, SPC's Coastal Fisheries Management Section conducted a national consultation workshop and funded two officers from Vanuatu to undertake a two-week attachment at SPC's headquarters in Noumea.

The aim of the workshop was to initiate the process for developing a national framework for an integrated management approach to coastal ecosystem and fisheries. The workshop considered fisheries and non-fisheries impacts on the marine environment and the effects of climate change on fisheries resources. The process provides guidelines on implementing strategic actions to improve the natural resilience of marine ecosystems and livelihoods of local communities who are dependent on marine resources.

In opening the workshop, the Director General of Vanuatu's Ministry of Agriculture, Quarantine, Forest and Fisheries, Jeffery Wilfred, stressed that the impacts of climate change are no longer a future threat:

"Right now, changes in weather patterns brought about by changing climatic conditions are affecting the very basics of our lives, increased rainfall, floods and erosion and increasing frequency and intensity of tropical cyclones. Rising sea surface temperature has already

caused mass loss of our corals to bleaching and crown of thorns outbreak which threatens fisheries and marine based economies and livelihoods. Climate change is affecting the resources and the ecosystems upon which we rely on for our food security needs, water supplies, agriculture landscape and the productivity of our reefs and oceans."

Fisheries are a "down stream sector", which depend very much on the quality of coastal ecosystems. Waste derived from land-based sources ends up in the sea and when the marine ecosystem is damaged, fisheries and marine biodiversity are the first to be affected.

The purpose of the attachment of Kalo Pakoa (Project Coordinator) and Touasi Kalsaria-Tiwok of the Department of Environment was to develop a draft national framework based on recommendations from the national workshop. The Coastal Management Framework is a policy document intended to inform and guide the Department of Fisheries as the lead agency on coastal environmental matters and other line agencies, whose activities are linked to the coast, to improve strategic decision-making in order to address the impact of climate change. It is also developed to promote and ensure compliance of existing measures to achieve sustainability through promotion of sound practices by line government agencies and communities.