Community-based management of small-scale fisheries

Community-based management of small-scale fisheries occurs when local communities collectively take responsibility for marine resource management. This may be community-led or in collaboration with government and non-state actors (e.g. NGOs, scientists) who facilitate management through the provision of technical support and financing. Management decisions support sustainable use of marine resources and may include, for example, gear restrictions and the designation of marine protected areas (temporary and permanent).

Current strategies come under a variety of different names but include:

- *Territorial User Rights for Fisheries (TURFS):* fisher's user rights are strengthened and decision-making devolved to them to encourage sustainable stewardship.
- *Locally Managed Marine Areas (LMMAs):* management measures introduced are context specific, but local control over decision-making is a key characteristic.

Assumptions for resilience: It is assumed that more sustainable behaviour and innovative conservation actions can be encouraged by strengthening fisheries governance through increased local participation in decision-making, clarification of property rights and collaborative management between resource users, government agencies, scientists and other relevant stakeholders.

Ecological impacts

Positive

The link between ecological impacts and community-based management is not always clear as changes in management structure are often accompanied by other management actions (e.g. gear changes). Documented examples have shown that effective community-based management:

- Has positive impacts on biomass and numbers of commercially important species.
- Can result in wider ecosystem benefits.

Negative

No documented evidence was found that community-based management has negative impacts on marine ecosystems.

It has been suggested in the literature that:

- Where fish biomass and numbers have increased, so may illegal fishing behaviours where enforcement is weak.

Implications for ecological resilience

- Community-managed areas may not be as effective for ecosystem recovery as no-take zones, but have higher biomass than non-managed areas.
- The management actions introduced and their level of enforcement will impact the sustainability of fisheries activities and their impacts on the wider marine ecosystem.

Social impacts

Positive

The link between social impacts and community-based management is not always clear as changes in management structure are often accompanied by other management actions (e.g. gear changes).

Documented examples have shown that community-based management can, in some circumstances, lead to:

- Increased fishing yield, household income and well-being.
- Increased participation, inclusion and empowerment of local communities in management decisions.
- Decreased illegal behaviours where enforcement is strong.
- Reduced conflict and increased cooperation between stakeholders.
- Trialling of new methods and alternative livelihoods (e.g. mariculture)
- Quick community response to develop and influence wider co-management.

Negative

It has been suggested that community-based management could:

- Create social inequality by favouring more wealthy resource users.
- Lead to tension within families, households and villages where support for management is not widespread.

Implications for social resilience

- Establishing effective local governance supports local communities to make decisions in the face of change, which is critical for building resilience.
- Encouraging poorer households to engage may have the greatest pay-off in terms of wealth creation and social resilience.
- The presence of motivated, respected and entrepreneurial leaders can support success, but training may be needed to build such skills.

Spatial scale: typically small-scale, but large LMMAs can be effective e.g. Velondriake LMMA in Madagascar which spans nearly 1000km^2.

Temporal scale: impacts can occur in short-term (e.g. within 3 months for octopus fishery), but often take much longer.

Case-study: Locally Managed Marine Areas in Kenya and Tanzania

Collaborative Fisheries Management Areas (CFMAs) or Community Conservation Areas (CCAs) are an emerging approach to fisheries management and marine conservation that are gaining strength in the WIO. The approach takes inspiration from the concept of Locally Managed Marine Areas (LMMAs) that has developed throughout the Pacific and elsewhere. In Kenya CCAs and in Tanzania CFMAs connect a network of villages which co-operate through their Beach Management Units (BMUs). They identify a shared management area, develop and implement a management plan and set of bylaws to improve fisheries sustainability and reef conservation. Management tools can include permanent, temporary or seasonal closures thereby combining spatial management with other fisheries management (see Report Card 8).

Has it been successful? LMMAs are proliferating in the region. There appears to be greater social acceptance of these areas than of government-implemented regulation, even when LMMAs involve closures. Community ownership and control are identified as key to this success. Successful cases include the octopus closures in Zanzibar, which report relatively rapid improvements in stocks allowing communities to view the benefits in the short-term.

Sustainable financing is important for the success of LMMAs. In Kenya and mainland Tanzania BMUs or fisheries association committees are able to collect revenue through fishing and in some places tourism fees collected at landing sites. In Tanzania the District Government provide tender over a landing site to the BMU to facilitate collection of fees.

Finally, the composition of BMU committees and thus of LMMA governance structures was identified as important for success. In Kenya, for example, BMUs can comprise fishermen and women, fish buyers, fish consumers, boat makers, and other fisheries stakeholders.

Challenges: Success is not guaranteed in all locations. In Zanzibar, for example, legislation is currently not detailed enough to adequately support the establishment of co-management, specifically the process of local fisher committee formation and operation as well as the process of by-law formulation and approval. This presents a major challenge for the effectiveness and sustainability of emerging LMMAs. Furthermore the Shehia management body is restricted to ten members, all fishermen, and there are no recommendations on gender representation. Management committees also lack a sustainable source of resources, especially for enforcement.

Future application: projects have been initiated in Zanzibar to revise the legislation to adequately support community-based collaborative fisheries management.

Further reading

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Images courtesy of Mwambao Coastal Community Network.