

Socioeconomic assessment of the impact of coral rehabilitation in Wasini, Kwale County, Kenya

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Abstract

Coral reefs are highly diverse and productive ecosystems that serve many functions to coastal communities around the globe. In Wasini Island, situated in Shimoni, (located in Kenya's South Coast County of Kwale) where this study was conducted, the corals are not only important as a source of livelihood, but also contribute in various ways to oceanic production: tourism, recreation, coastal protection. In addition corals act as indicators of climate change. The subsistence and commercial use of coral reef resources in Kenya has persisted for centuries, thus increasing pressures from anthropogenic stress. These pressures include: destructive fishing methods, coral mining, coastal development, pollution, and tourist activity. Rehabilitation of corals in the Wasini Island was undertaken by Kenya Marine and Fisheries Research Institute under the Kenya Coastal Development Project in 2011. After successfully implementing the coral reef rehabilitation, it became necessary to assess its socioeconomic impacts on the local community. Data was collected in Wasini Island and Kijiweni village using purposive sampling, conducted through participatory approaches, namely: Direct observation, Semi-structured questionnaires and Focus Group discussions. The data was cleaned and analyzed using Excel and the Statistical Package for Social Sciences where descriptive analysis for the two study sites were generated. Results indicated that in both villages the community-based coral rehabilitation efforts had generated substantial positive impacts to both the local residents and the environment at large. Among the 42 respondents, 30% indicated that the rehabilitated coral initiative had increased the availability of fish, 18% stated that the initiative had increased incomes, while 17%, noted increased tourist attraction. Fourteen percent (14%) indicated improved community welfare, 5% reported improved marine environment, 3%, indicated the initiative had created a better habitat for fish, while 13% felt that there were no benefits received from the program. Impacts of coral rehabilitation on the local culture ~~was~~ were also reported; these included the promotion of a culture of preservation and not destruction of nature, increased community cohesion, increased inclusion of women and livelihood diversity. Others felt that the culture had been impacted the community negatively by promoting undesirable interactions of men and women which is a taboo - given that men and women are not supposed to work together. In regards to the environment, the impacts of coral rehabilitation to the communities included: the majority (78% of the respondents) reported that coral rehabilitation initiative had resulted in ~~to~~ the creation of a beautiful and clean coral zone, 9% mentioned the provision of habitat for fish, and similarly 9% stated the fostering marine stewardship. Two percent of the respondents (fisherman) claimed to have been denied their rights to access fishing grounds in the rehabilitated area, while 2% of the respondents were not aware of any negative impacts. The study's findings have shown that the coral restoration efforts on the Wasini Island's generated significant benefits to the local residents, including diversification of livelihoods, improved fisheries, enhanced incomes and changed societal attitudes that promote conservation and management of the marine resources. In addition, the initiative has promoted social integration

among local residents. In a noticeable departure from past practices, where gender roles were clearly defined and strictly adhered to, the coral rehabilitation project has led to increased community cohesion as both men and women, young and old, are fully and equally incorporated into rehabilitation activities. This change has seen womenfolk actively participate in construction of the BMU offices, as well as in coral planting and conservation activities in Wasini.

Key words: Socioeconomic impacts, Coral rehabilitation, communities, community cohesion, diversification of livelihoods