

Assessment of Community Perceptions of Mangrove Ecosystem Services and Their Link to SDGs in Vanga, Kenya

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Abstract : Mangroves play a vital role in the achievement of multiple goals of global sustainable development (SDG's), particularly SDG SDG 14 (life under water). Their management, however, is faced with several shortcomings arising from inadequate knowledge on the perceptions of their ecosystem services, hence a need to map mangrove goods and services within SDGs while interrogating the disaggregated perceptions. This study therefore aimed at exploring the parities and disparities in attitudes and perceptions of mangrove ecosystem services among community members of Vanga and the link of the ecosystem services (ESs) to specific SDG targets. The study was based at the Kenya-Tanzania transboundary area in Vanga; where a carbon-offset project on mangroves is being up scaled. Mixed methods approach employing surveys, focus group discussions (FGDs) and reviews of secondary data were used in the study. A two stage cluster samplings was used to select the study population and the sample size. FGDs were conducted purposively selecting active participants in mangrove related activities with distinct socio-demographic characteristics. Sampled respondents comprised of males and females of different occupations and age groups. Secondary data review was used to select specific SDG targets against which mangrove ecosystem services identified through a value chain analysis were mapped. In Vanga, 20 ecosystem services were identified and categorized under supporting, cultural and aesthetic, provisioning and regulating services. According to the findings of this study, 63.9% (95% ci 56.6-69.3) perceived of the ESs as very important for economic development, 10.3% (95% ci 0-21.3) viewed them as important for environmental and ecological development while 25.8% (95% ci 2.2-32.8) were not sure of any role they play in development. In the social-economic disaggregation, ecosystem service values were found to vary with the level of interaction with the ecosystem which depended on gender and other social-economic classes within the study area. The youths, low income earners, women and those with low education levels were also identified as the primary beneficiaries of mangrove ecosystem services. The study also found that of the 17 SDGs, mangroves have a potential of influencing the achievement 12, including, SDGs 1, 2, 3, 4, 6, 8 10, 12, 13, 14, 15 and 17 either directly or indirectly. Generally therefore, the local community is aware of the critical importance mangroves for enhanced livelihood and ecological services but challenges in sustainability still occur as a result the diverse values and of the services and the contradicting interests of the different actors around the ecosystem. It is therefore important to consider parities in values and perception to avoid a 'tragedy of the commons' while striving to enhance sustainability of the Mangrove ecosystem.

Keywords : sustainable development, community values, socio-demographics, Vanga, mangrove ecosystem services

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