Economic impact of North Kenya Bank Fisheries on Kenya’s fishing communities under climate change and its consequences for its Blue Economy strategy

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Abstract

The Blue Economy is one of Kenya’s strategies to support increased socio-economic development and aid resilience to climate change. By harnessing the productive capacity of its waters, the marine environment provides the ability for resource diversification in Kenya helping to provide sustainable employment and livelihoods in coastal communities. Kenya’s fisheries sector accounts for approximately 0.5% of national GDP with variation in the species caught in inshore and offshore waters, sales prices, and fishers’ wages. While estimation of these direct economic benefits are fundamental to understanding and managing Kenya’s fisheries resources and sector, there are wider economy impacts that are also worth considering especially if these sectors are to grow and move towards sustainable development goals. Recent research undertaken in the UK has shown that the indirect economic value associated with the fishing sector can magnify a change in revenue by 250% and employment by 50%. It is unclear what this percentage is in Kenya. This study aim is to estimate the direct and indirect economic impact on the local economies from changes in fisheries due to climate change and, to estimate the multiplier effect as the state of the marine environment is also beginning to change due to a variety of pressures including over exploitation and climate change.

The study sites include Ngomeni, Amu, Shela, Kiwayuu and Kizingitini where both quantitative and qualitative research methods used in this study included household surveys, focus group discussions and interviews with key stakeholders and informants to understand the perceptions of the fisher communities on fish catch trends, climatical changes, livelihood options and the adoptive capacity. Further a regionalised input-output (RIO) table was produced for Lamu County in the Northern Bank area of Kenya. This was developed using earlier productions of the table at a national level and scaled down by regional data that was available through statistical records and collected by local partners.

Preliminary results indicate that the value of Kenya’s fisheries that was recently reported highlighted the differences in direct economic benefits of offshore and inshore fisheries' and ranges in incomes of ringnet fishers, foot fishers, hand liners and boat owners. These economic assessments provide essential information for fisheries management measures, however they do not include indirect impacts.

So far, the RIO tables have been used to estimate the direct and indirect economic impact on the local economies from changes in fisheries due to climate change. The direct and indirect impacts provide insight into the wider economic impact of the reliance on natural resources and is proving useful for structural regional development that aims to ensure resilience and adaptive capacity. The indirect impacts associated with fisheries within the case
study area are significant in the region’s economy. Additionally, estimates of revenue and employment (or a more suitable index such as sustainable livelihoods) will be undertaken to provide a useful and common metric that can be used to measure economic growth and progress towards the sustainable development goals. Analysis will also be carried out under different climate change scenarios to highlight how the research results of indirect impacts can prove insightful in informing the type of adaptive and mitigation strategies to be used in developing a resilient and sustainable Blue Economy for Kenya.

Given the preliminary results generated so far, this study advocates for additional insights of the fisheries sector by taking an economy-wide perspective where the indirect values are also considered. Indirect values includes the benefits enjoyed by the fisheries’ ancillary sectors such as suppliers (e.g. boat maintenance) and third party sectors (such as other food retailers) which do well economically if the fishing sector is thriving. The outputs of the research will contribute to blue growth discussions and highlight the need to include climate change impacts to better manage adaptation strategies from a whole-economy perspective into the future.

**Keywords:** economic assessments, adaptation strategies, multiplier effect, indirect impacts, blue growth discussions