

Improving Artisanal Fishery Data Collection and Reporting in Kenya: Experiences and Lessons from Pilot electronic Data Collection

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Presentation: **Oral**

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Good quality data, and timely analysis and interpretation is key to an effective fisheries resource management. In 2013-2016, the State Department for Fisheries Aquaculture and the Blue Economy (SDF&BE) piloted Catch Assessment Survey (CAS) to help design sampling approaches for fish catches, fishing effort, and socio-economic data. The CAS results estimated annual fish production of 20,000 -24,000 tons compared to 8000 -9000 tons reported from routine data collection. The pilot was not without challenges, especially the loss of data and the delayed submission of data records, entry and submission. A mobile data collection application was developed and the aggregate hosted at the fisheries data and information management system (FDIMS). A one-year electronic data collection using a mobile application was piloted at eleven (11) sites termed as the primary sampling unit (PSU) and vessel gear combination as secondary sampling unit (SSU). Total landings at the PSU level, was estimated by stratifying data by landing site, month, craft type (aggregate groups) and gear type (aggregate groups) and raising factor applied at each of the four steps. A total of 5,242 boats were sampled in the period of June 2018 to January 2019 and fish weighing 157 mt recorded from different boat-gear combinations. Preliminary length based spawning potential ratio (LBSPR) analysis indicate that current fishing pressure is targeting immature fish resulting to a SPR value of 20% and below, which is way below 40% (Optimum level). The preliminary results from the implementation of electronic data collection and recommendations for upscaling are based on lessons learnt. These lessons build on the CAS methodology for estimation of the marine fishery total production in Kenya.

Keys words: Catch assessment survey, mobile application, data collection, total catch etc