



Tropentag, September 18-21, 2016, Vienna, Austria

“Solidarity in a competing world —
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Economic Implication of Bycatch Reduction as a Food Security Measure in Nigeria

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Abstract

Aquaculture is very important to rural communities by playing a key role in food security. This is not only for subsistence and small scale fishers who rely on fishery for food, income generation and services but also for consumers who regard it as a source of affordable high quality animal protein. Certainly for many poor households engaged in full-time, seasonal or occasional small-scale fishing activities, such contributions are crucial to individual/household food security. The study is assessing the economic implication of a bycatch reduction as a food security measure in Nigeria. This is achieved by examining the effect of bycatch reduction devices in the equilibrium population of the bycatch species at every level of effort directed at the target species of fish; on cost per unit effort; food security status of fishing households and constraints faced by fishing households. Snowballing was used to select one hundred and eighty (180) artisanal fish farmers across three riverine areas of Lagos, Ondo and Kogi States. Data collected were analysed using descriptive statistics, United States Household Food Security Survey Module (USHFSSM) and Static Fishery Economic Model (SFEM). The study revealed that introduction of a bycatch reduction device raises the unit cost of effort and this cost increase induces a reduction in the profit maximising level of effort and also reduces profit. With food security status of fishing household above average, the constraints faced in bycatch include poor access to information, inadequate capital, poor fishing gears, poor storage facilities and poor value addition. Government should formulate and implement proper policies that would eliminate these constraints by giving attention to the technical, social and regulatory approaches of bycatch; embrace effective bycatch reduction devices at minimum cost and employ well trained extension agents to educate these farmers on importance of bycatch reduction. It is also recommended that small scale fishing credit policy be put in place to help the households; this can be made on the percentage of total agricultural loans to be given to the fishery sub-section.

Keywords: Bycatch, fishing household, food Security, Nigeria, SFEM, USHFSSM