Session 04

Bioeconomics of small pelagic fishery, an introduction

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Abstract

A bioeconomic model of small coastal pelagic fishes in Senegal is in development. This model is produced to analyze the responses of the fishery *i.e*. mainly small scale units but other fishing units types mays be include if necessary, to economic (price, costs), biologic (growth, mortality, recruitment) and management (taxes/subsidies, licenses, spatial regulation) parameters. It focuses on the main small pelagic species caught in Senegal (S. aurita, *Sardinella maderensis* and *Ethmalosa fimbritata*). The model is based on 1) an analytical spatial population dynamics model, 2) a spatial fleet dynamics model. Main model's outputs are catch, revenue, private profit and economic rent, and also the spatial distribution of fishing units of the small scale fihseries.

A first version of the model will be presented. To go further, the model has now to be calibrated with updated economic and biological data. These data needs and also the consequences for new data collection will be discussed.

Keyword: bioeconomic model, price, costs, growth, mortality, recruitment, management.

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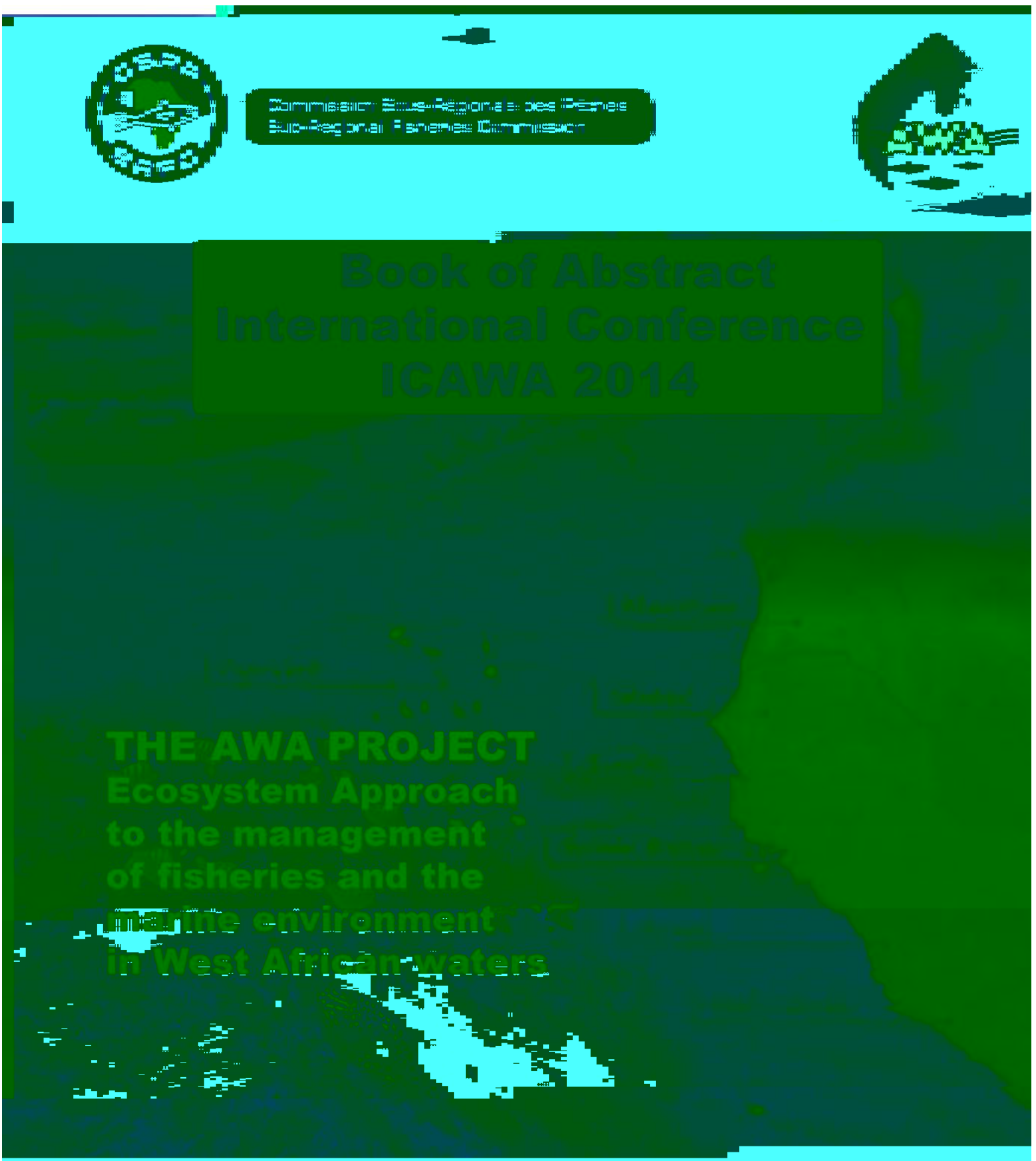

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