

Title: **An integrated assessment of the ecological and economical status of fisheries - application to the French fisheries in the Bay of Biscay**

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Abstract: While indicators and assessment frameworks are being developed for ecosystems, and tools for determining the economic status of a fishery are readily available, integrated assessment tools are still mostly lacking. However, the development of an ecosystem approach to fisheries management requires the monitoring and assessment of exploited ecosystems in all their dimensions, including ecological, economical and social components. This presentation will bring together indicators of both ecological status, like abundance and average size of target and non-target stocks, or of the fish community, with economic indicators, like fish prices, fishermen wages and profitability. The interaction between the two components is quantified by the matrices of contributions (the share of each fleet in the production of each stock) and dependencies (the share of each stock in the production of each fleet). The analysis will focus on two questions: i) What is the influence of stocks and community status on the performance and dynamics of fleets, as compared to other factors (fish prices, costs including fuel)? ii) What is the influence of fleet status on the dynamics of fish stocks and of the fish community, as compared to other factors (recruitment, environment)? The Bay of Biscay provides an appropriate case-study with a diversity of stocks and fleets to be assessed and managed together. The approach is applied to the French fleets for which detailed economic data are available.