An overview of the Fisheries Resource Information System and Tools (FiRST): a database management system for storing and analyzing trawl survey and related data

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Demersal trawl surveys have been used for assessments of fisheries potential and monitoring the status of fish stocks in many countries in South and Southeast Asia. This paper presents the development of a database system, the "Fisheries Resource Information System and Tools" (FiRST), from a regional collaborative effort between eight counties and ICLARM - The World Fish Center. The effort has collated trawl survey data of about 21,000 hauls/stations from research trawl survey hauls across the South and Southeast Asian region.

FiRST was designed as data container (to organize, store, retrieve and exchange) for extant trawl surveys. In addition, the database system includes generic socioeconomic data, as well as catch and effort statistics and an analytical routine to approximate biomasses. Analytical modules from other software needed for data analyses have also been made accessible via the database system.

This paper also presents some insights on the utility of retrospective analysis of trawl survey data in establishing resource baselines and to improve understanding on the biology and exploitation status (e.g. biomass declines and species composition changes) of coastal fishery resources. The database system is now an important regional repository of information for sustainable management of coastal fish stocks in developing Asian countries and is envisioned to provide solid foundations for formulation of appropriate fisheries management strategies and action plans at the national and regional level.