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Title:
An electronic monitoring system for assessing Indonesia’s snapper-grouper fisheries

Short Title - Under 30 characters:
Monitoring Indonesia's fisheries

Abstract:

Deep demersal fisheries in Indonesia yields close to 100,000 metric tons of snapper and grouper, which is landed by a fleet of approximately 10,000 fishing boats. Data on these multi-species, dispersed, small- to medium-scale fisheries, however, is scarce and tough to collect because logbooks have been shown to be highly inaccurate. This data-deficiency made stock assessments and design of harvest control rules impossible. We developed an electronic data collection method that was new for Indonesia, the Crew Operated Data Recording System (CODRS), to collect verifiable species- and length-composition data from catches across all segments of the fleet. CODRS engaged crews of 579 fishing vessels to take pictures of each fish in their catch, in combination with the deployment of a location tracking device on their boats. Using more than 2 million CODRS images, we successfully built a database that includes updated life-history parameters for the top 50 species in the fishery based on the maximum observed length-frequency distribution of the catch (i.e., asymptotic length, size at maturity, optimum fishing length, total mortality, and spawning potential ratio). We then applied a portfolio of length-based stock assessments and show high risks of overfishing for most of the major target species, especially for snapper species with large maximum sizes. The electronic monitoring method we have established could be scaled to other fisheries that lack data to complete stock assessments.

Abstracts: Open or Invited:
Yes

Meeting Theme:
Sustainable fisheries and aquaculture

Presentation Type and Format:
Oral

Primary Session Choice:
Leveraging fishery-dependent data in stock assessments and fisheries management: working at the

interface of observer and electronic monitoring data (Flex format)

Are you a student?:
No

Will you be traveling to the United States from a country that requires you obtain an entry visa?:
No