

Session K Habitat Science to Support Stock Assessment

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The role of pelagic and benthic marine habitats for the sustainability of fisheries has received considerable theoretical attention over the last decade. It is now accepted by most marine habitat and fisheries scientists that habitat plays a critical role in the life history of all fish species. For example, there is little doubt that “natural mortality”, M , will in many instances be modified by changing habitat condition as well as by life history stage. Despite this acknowledgement, the stock assessment process typically does not consider habitat condition in its calculations. Further the interaction of the distribution of fish stocks and rapid changes (e.g. hydrographic) in habitat condition is not typically considered in the design of stock assessment surveys.

One reason for this apparent inability to include habitat condition when assessing the status of fish stocks, is the fact that most stock assessment experts are taxed to the limit and cannot begin to explore new challenges associated with habitat condition. The other key reason is that the habitat scientists have not often delivered the data sets, which can easily be incorporated into current stock assessment modelling approaches. Therefore, it is imperative that the experts in these fields of expertise begin discussions to identify the science which is needed to improve stock assessments.

This theme session aims to highlight real and theoretical examples of habitat-science activities, which are or could be used to improve stock assessment. Contributors are encouraged to present data, theories, methodologies and ideas, which will help to generate products which can be utilized in the current stock assessment process. Considered will be papers which:

- improve the accuracy of currently used stock assessment models;
- improve stock assessment through development of new models and
- improve the design of data collection surveys.

The papers from this session should be of great interest to fisheries and habitat scientists as well as marine resource managers. The findings should promote (1) improved stock assessments that quantify habitat effects on fish yield; (2) ecosystem models that incorporate linkages between habitats, harvested fish stocks; and (3) comprehensive and defensible advice on habitat value in support of marine spatial management.

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