

**SPRFMO 3<sup>rd</sup> Workshop**  
**Deep Water Working Group**  
Hobart, Australia, 23-25 May 2017

**SCW3 – Doc03**

**Draft stock assessment framework**

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**OBJECTIVES**

1. Develop a shared understanding of the application of different stock assessment methods for use in a future SPRFMO bottom fishing harvest strategy, using orange roughy stock assessments as examples.
2. Explore and document mechanisms by which methodological uncertainties can be made explicit to the Scientific Committee and how this relates to provision of scientific advice by the SC to the Commission.
3. Consolidate the above and discuss how these components might form part of a broader SPRFMO bottom fishing harvest strategy.

**RATIONALE**

Development of a shared understanding of the application of different stock assessment methods for use in SPRFMO bottom fisheries is an important precursor to the development of a SPRFMO bottom fishing harvest strategy. Importantly, this approach will need to explicitly identify methodological and statistical uncertainties with stock assessment methods and associated results. The fisheries data available for the assessment of demersal species in SPRFMO varies by quantity, quality and diversity for each stock. This variation extends along the spectrum from data rich to data poor. Regardless the SPRFMO Scientific Committee is expected to provide scientific advice to the SPRFMO Commission on stock status. The outcomes of the discussion at this workshop will provide a transparent framework by which stakeholders can approach the interrogation of the various assumptions and limitations typical of all stock assessments. If members share this understanding and have an agreed approach to resolving (or at least exploring) uncertainty, it will be possible to more easily apply a broader harvest strategy that includes reference points and harvest control rules to an accepted stock assessment.

In addition to the above the workshop will aim to prioritise SPRFMO demersal stocks for assessment, identify plausible assessment levels and the assessment frequency for each stock. Assessment levels to discuss could include: (1) Full Benchmark Assessments that are able to utilise catch data from fishery monitoring in combination with stock abundance from independent surveys, catch rates and biological data with the purpose of estimating depletion levels and fishing mortality rates; (2) Data Limited that may utilise catch only or simple indicators to track stock status (e.g. CPUE, size composition); (3) Research Assessments where new methods or data types are applied which may require substantive review of the methods; and (4) Update Assessments where previous assessments are updated with new data. To assist this process the presentation will provide a summary of the available data for the SPRFMO demersal stocks.

**RELATED PAPERS**

SCW3-Doc04 Common reference points using orange roughy as the example.