



Session 7 -Other Fisheries:

What can one learn from a small southern cousin

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Understanding the history of the science, and the assessment/management process is also important for understanding the history of fishery and interpretation of data and information

- History of the fishery
- History of the science
- History of the process

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History of the fishery/stock – lessons learned:

- In the absence of meaningful verification and compliance systems, under-reporting and IUU catches can be expected – particularly in quota managed fishery. The problem is not limited to RFMO non-members and flag of convenient vessels;
- Rebuilding trajectories for a depleted stock are likely to be different from those predicted based on estimates of the dynamics of the decline
- Simple assumptions (parsimony) in the absence of data are likely to be wrong
- Biological processes are unlikely to be stationary (e.g. growth, movement rates);
- Importance of the spatial dimension
- Importance of indicators and cross checking for consistency

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History of the science – Lessons learned:

- reliable and verified catch, effort and size data essential for stock assessments - implies need for observers or possibly VMS with video monitoring
- Obtaining reliable abundance indices (required for assessments) is problematic only from fishery data even if data is reliable - fisheries independent methods of monitoring fish populations should be sought.
- Need to balance effort devoted to modelling & assessments with data collection and biological research
- Conventional tagging experiments can provide meaningful estimates of F & M but must be well designed, implemented and ability to estimate reporting rates – most viable alternative to CPUE;
- Value of electronic tagging for hypothesis generation but limited value for parameter estimation;
- Importance but difficulty of quantification of uncertainty;
- Importance of being open/developing new methods.

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History of the process – lessons learned:

- Integrated, statistical catch at age approaches provide a more scientific rigorous assessment method which allows for incorporation of a wider range and expanded time series of historical data and improved characterization of uncertainty than VPA
- Management procedures provide a substantially improved approach for providing scientific management advice but are not a “silver bullet”
- Modelling input data scenarios is a poor substitute for acquiring reliable, high quality data in the first place - such a modelling approach entails a large element of subjectivity and is likely to result in a serious misrepresentation of the real uncertainty.
- Research undertaken to reduce uncertainty is likely to result in a perception of expanding uncertainty because actual uncertainty has been understated;
- Political interference in the scientific assessment/advice process is not uncommon but is rarely discussed/documentated

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History of the process – lessons learned (continued):

- Role of science in the management process needs to be better clarified/understood (e.g. science can advise on the consequence of alternative actions; recommendations on management actions can only be meaningfully provided in the context of well articulated management objectives);
- Managers need to understand and become realistic about the actual level of risk associated with their decisions and that they are willing to accept;
- Importance of real dialog between scientists, managers and stakeholders
- Acceptance of the need for and the actual development and implementation of independent ways to monitor and verify catches and fishing effort for scientific purposes is likely to be slow and difficult;
- The scientific process and the science/management interface are important to discuss and document