

Sidney Holt visit to JRC under the scope of the a4a initiative, Ispra, 25/June/2012

June 27, 2012

1 Introduction

As agreed previously, the a4a initiative is promoting a programme of visiting scientists with the aim of getting external expert cooperation and revision of the initiative's tasks. The visit of Sidney Holt, the co-author, with Ray Beverton, of one of the most important books in Fisheries Science "On the Dynamics of Exploited Fish Populations", was considered of major relevance.

2 Agenda

- Day 01
 - Open seminaire to JRC on the history, concept and implementation of MSY as a management objective
 - Conversation about the a4a initiative
 - Conversation about the revision of CFP

3 Discussion

Discussing with Sidney Holt's the implementation of MSY management objectives was very clear in some subjects worth highliting:

- MSY is a theoretical variable that can not be reliably computed, although one can estimate local values of msy that can be used for management. Sidney argued that such estimate should consider the fleet profit as it main concern, which means it should be achieved at a lower F level than MSY. The distance between the two is dependent on the the level of flateness of the yield curve.
- Most managers seem to consider sustainability means profitability. However, it is possible to achieve sustainable exploitation which is unprofitable if the level of effort required is too costly. In that sense managing fisheries at MSY doesn't neccessarily mean these fisheries will be profitable.
- The usage of biomass dynamic models led to the widespread use of weight indicators for biomass and catches, which ultimately led to the implementation of TAC management systems. However the important and fessible thing to do is to control harvest rates through effort and capacity management.

- It's critical that management agrees on the time frame to achieve objectives and that such time frame considers the life span of the species in order to allow the "maximization" of the objectives along that time frame. It is not possible to have optimal exploitation forever.
- Management procedure development should focus on agreeing on the scientific procedure to compute the management action and not on the result.
- Ecosystem processes are essential but ecosystem management is hard to achieve due to the inherent complexity of the system, the accumulation of noise and uncertainty, and the unavoidable conflict of objectives.
- Recruitment variability is the major problem of fisheries management. It is very difficult to predict as it depends on environmental factors that can not be predicted or even understood. Most of the times SSB is at levels that generate the same recruitment, the flat top of the S/R curves, and it's only affected by SSB levels resulting from high fishing pressure.
- Stock assessment models can be simplified by using ratios between parameters, like $\frac{K}{M}$, that are a lot less variable.
- The a4a initiative will need to build confidence in managers and stakeholders. This confidence can be built by doing "perfect" assessments on 1 or 2 species, or by getting approximate results on all species. In any case it must be build on empirical evidence and not only on assumptions.

4 Cooperation with a4a

Sidney Holt was interested on being updated on developments although a direct involvement is not foreseen.