SEMINAIRE AMURE

Mardi 10 mai 2011

14h30 > 17h00

IUEM – Technopôle IUEM

Pogramme

14h30-15h20
"Collaborative research opportunities and linkages between Australia and France in marine science"
Stewart Frusher, Université de Tasmanie, Hobart, Australia

15h20-16h10
"What can a Bayesian approach tell us about Tropical rock lobster management and Torres Strait islander fishing opportunities? "
Ingrid Van Putten, CSIRO, Hobart, Australia

16h10-17h00
"Integrated assessment approaches for coastal and marine resources management"
Olivier Thébaud, CSIRO, Brisbane, Australia

ABSTRACTS

< What can a Bayesian approach tell us about Tropical rock lobster management and Torres Strait islander fishing opportunities? >

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Abstract

The Tropical Rock Lobster fishery in the Torres Strait, based on the ornate rock lobster *Panulirus ornatus,* is currently managed by input controls. This fishery is complex in terms of its multiple jurisdictions and indigenous and non-indigenous sectors. This fishery characterised by a complex human dimension is now moving to a quota managed system. While going to output control to ensure the resource of this fishery is protected, other important objectives for the fishery, such as ensuring the traditional way of life and livelihood of Torres Strait islanders is protected, also have to be met. A key objective of managers of the lobster fishery, which is the subject of this study, is to promote indigenous fisher participation.

A Bayesian Network analysis is applied to the indigenous component of this fishery incorporating the key drivers of fishing effort and heterogeneity of the indigenous lobster fishers, to describe in a probabilistic way, full time and part fishing indigenous fisher participation. The effect of changes in key drivers, such as the availability a government employment program, lobster prices, social capital, and infrastructure availability, on indigenous fisher participation, is investigated.
Our model clearly shows that there are three distinct types of indigenous lobster fishers and that their participation is driven by distinctly different factors. Full time indigenous fishers are very similar to non-indigenous commercial fishers with respect to economic factors. Yet they are different in that the presence of community role models and community business knowledge is an important driver for full time indigenous fisher participation.
Scenario analysis suggests a dramatic change in the probability of lower part time indigenous fisher and higher full time fisher participation can be expected as a result of reduced availability of the government employment program. However, the impact of the provision of logistics, infrastructure, and nurturing social capital is expected to have an equally significant impact on full time indigenous fisher participation. If management authorities are tasked with protecting the traditional way of life as well as enhancing employment opportunities for Traditional Inhabitants, it is important they consider both the effect of management changes for the fishery as a whole as well as for each fisher types independently.

< INTEGRATED ASSESSMENT APPROACHES FOR COASTAL AND MARINE RESOURCES MANAGEMENT >

Olivier Thébaud
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ABSTRACT
One of the big challenges for contemporary societies is the management of competing human uses of, and impacts on, marine ecosystems. In meeting this challenge, there has been an increasingly prominent role for science in providing information and analytical methods for supporting policy and management decisions. This has led to a need for scientists to communicate with an ever increasing range of stakeholders. This in turn has induced a search for decision support frameworks allowing active participation of stakeholders (including management agencies) and facilitating the generation of ideas, identification of problems and approaches for solving them, as well as anticipation of real-world impacts. Such frameworks necessarily span diverse fields ranging from biophysical, social and economic sciences, to jurisdictional, political, institutional and managerial processes. Integrated management strategy evaluation (MSE) frameworks have been developed with such a purpose. While they have been largely applied to commercial fisheries, MSE approaches have only rarely been applied to the explicit assessment of coastal zone management issues.
The presentation will provide a brief introduction to the way in which MSE approaches have been developed by CSIRO as a basis for the integrated assessment of coastal zone management problems. Two examples will be used as illustrations. The first is the development of a simulation modelling approach to examine the effect of management options on the recreationally important tourist destination of Ningaloo Reef in Western Australia where a recreational fishery targets Spangled Emperor (*Lethrinus nebulosus*).
The second is the development of a catchment to coast decision support tool for the exploration of alternative water quality management strategies in South-East Queensland. Emphasis in the presentation will be placed on the human dimensions which needed to be captured by these two projects, to adequately represent the management issues under consideration.

The presentation will draw on the following publications:

Little R., Thébaud O., Fulton B., 2010. Evaluation of management strategies in Ningaloo Marine Park, Western Australia. In Proceedings of the conference of the International Institute for Fisheries Economics and Trade, Montpellier, July 2010.

Dutra, L.X.C. et al., 2010. Healthy Waterways Management Strategy Evaluation: Scoping Study for the Development of a 'catchment-to-coast' MSE in SE Queensland - Phase 2 – Final Report, CSIRO Marine and Atmospheric Research, Cleveland.