

UNESCO/IOC Activity: Promoting Ecosystem-based Approaches to Fisheries Conservation in LME's (Global activity)

Component 2.a. Ecosystem modeling training and application for GEF/LMEs, 2004-2007

The project supports capacity building in developing countries and countries with economies in transition through the transfer of advanced methods, practices and tools for ecosystem-based fisheries management. Component 2.a. of the project is designed to strengthen the capacities of the countries participating in the GEF/LME's projects by providing training and building scientific capacity in ecosystem-based fisheries assessment and management. Scientists from developing countries and countries with economies in transition have been trained through workshops conducted with wide representation from GEF/LME projects. The workshops focus on modeling methods that consider the importance of the food-web and the ecosystem's carrying capacity for marine fish stocks. The tool of choice, Ecopath with Ecosim (EwE), is the most-widely used tool for this purpose internationally, and is among other used to provide an assessment of ecosystems' carrying capacities.

The following training courses have been conducted as part of the activity,

- In connection with the 4th World Fisheries Congress a course was held during May 10-14, 2004, in Vancouver, BC, Canada. The course had 31 participants from Argentina, Australia, Brazil, Canada, Chile, Faroe Islands, Indonesia, Italy, Portugal, Spain, Switzerland, UK, and USA. It was linked to the Fisheries Scientists Network established by the American Fisheries Society (see separate report).
- In cooperation with the Baltic Regional Sea Project a course Oct 18-22, Jūrmala, Latvia with 17 participants from Estonia, Latvia, Lithuania, Poland, Sweden, and Denmark. Participants constructed ECOPATH models for Pärnu Bay, Ainaži/Dzeni area, Pape area, and Putsk Bay (BSRP coastal study sites in Estonia, Latvia, Lithuania, Poland), as well as the Curonian Lagoon, Gdansk Bay and the open Baltic Proper. The workshop served to prepare the work of an ICES Productivity Study Group and led to a theme session on 'Impact of External Forcing on Flows in Marine Trophic Networks' at the 2005 ICES Annual Science Meeting in Aberdeen, Scotland. At the theme session 22 oral presentations and 2 posters were presented.
- A third workshop was arranged in cooperation with the Benguela Current LME Program during Dec 5-9, 2005 (with advanced sessions the following week). The workshop had 20 participants from South Africa, Namibia, France, Norway, and New Zealand, and the participants developed preliminary models for areas of interest or improved previously-constructed models
- Finally, a workshop was arranged by the Guinea Current LME Project during April 18-22, 2006. Here, 26 participants representing all 16 countries of the region took part in an introductory training course focused on model construction, utilization and interpretation. As follow-up to the workshop, an advanced training course on using models for fisheries management based on models from the region will be arranged

in 2007, while a book describing the fisheries of the Guinea Current is under preparation.

In addition to these activities a training course for the Southeast Asia region will be conducted in cooperation with the Yellow Sea GEF/LME project in early 2007.

A major part of the project activity is development of ecosystem models for all LMEs of the World as well as an assessment of ecosystem carrying capacity for all LMEs.

The models will be based on information in a variety of global databases, and will include estimates of the fisheries extraction and of potential carrying capacity of all 64 currently-defined Large Marine Ecosystems of the World.