



ICES Training programme

The International Council for the Exploration of the Sea (ICES) offers courses led by high-profile scientists and instructors. Visit the Training web page: www.ices.dk/iceswork/training/training.asp

Stock assessment (Advanced)

Context and level

This is an advanced course in fisheries stock assessment modelling where we build on the introductory assessment course. Various methods used to generate stock abundance and mortality rate estimates are shown in hands-on exercises. By building stock assessments in modern statistical software tools, we can explore a variety of models and assumptions, and fit those models to data. Importantly, the course includes uncertainty estimation of relevant parameters. The course is aimed at scientists who have some foundation in the fundamentals of stock assessments, preferably those who have done the introductory course.

We will do as much as possible by using hands-on examples. In those examples, we examine the various assumptions as well as strength and weaknesses of different methods. The course will take you through the different steps that are part of any stock assessment. First: exploratory data analysis and the potential information content in the available data; Second: we discuss setting up structured population dynamic models. Here, we take into account the possibilities to reduce the



number of model parameters. As a third step, we link these population dynamics models to existing data by calculating model predictions for catch, survey, and other relevant types of data. Finally, we use several powerful tools to fit the models to data, such as different optimizing/sampling methods. These tools allow us to fit complicated models to noisy data. Also, and importantly, we estimate and present uncertainties in the stock assessment models, so that these can be made explicit in the management advice.

Besides the building of assessment models and estimating uncertainty using various tools we also show how fish stock dynamics can be modelled under different assumptions as a short introduction to the evaluation of harvest control rules.

Objective

The general objective of the course is to advance the training of stock-assessment scientists and advisors in population dynamics and stock assessment. The estimation of uncertainty is a key feature of the course. Theory is put into practice as much as possible by working on examples from different angles.

Course dates

30 May–3 June 2011

Venue

International Council for the Exploration of the Sea
H. C. Andersens Boulevard 44-46
DK-1553 Copenhagen V
Denmark

Tel: +45 3338 6700

Fax: +45 3393 4215

info@ices.dk

You can find more information about:

ICES HQ [here](#)

Hotels close to ICES [here](#)

The hostel next to ICES [here](#)

Fee

The fee for the course is €500. This covers only tuition fee.

Organization

The course is organized by the ICES Secretariat as part of the ICES Training programme.

The course and course materials are provided by Jan Jaap Poos, Wageningen IMARES and Richard Hillary, CSIRO Centre for Marine Research.

The course includes background information, applied examples, and hand-on exercises.

Participants are required to **bring their own laptops** (preferably with MS windows or a GNU/Linux distribution) to connect to ICES network.

Admission and registration

The course is designed for a maximum of 25 participants. The working language is English.

Please use the on-line registration. You will receive a message acknowledging receipt of your application within one week.

The deadline for the submission of applications is 8 April 2011.



Programme

The five-day course is organized as a series of morning sessions that focus on theoretical concepts and afternoon work sessions. These work sessions will be completed in different software environments such as R and AD model builder (see flr-project.org and admb-project.org).

Instructors

Jan Jaap Poos,
Wageningen IMARES
PO Box 68
1970 AB Ijmuiden
Netherlands
janjaap.poos@wur.nl

Richard Hillary,
CSIRO Centre for Marine Research
Castray Esplanade
Hobart 7001,
Australia
Rich.Hillary@csiro.au

Contact ICES Secretariat for more information

Søren Anker Pedersen,
Coordinator for Training
Tel: (45) 33 38 67 52
Email: mailto:training@ices.dk