Quantitative Fisheries Science using FLR and a4a
25-29 AUGUST 2014 @JRC, Italy

OBJECTIVES

- Introduce the tools available in FLR for Quantitative Fisheries Science
- Present the a4a stock assessment model
- Explore computational issues and possibilities in fisheries management advice
- Discover Management Strategy Evaluation through FLR

REQUIREMENTS

- Good working knowledge of the R language
    - Running an R session
    - Using classes and objects in R
    - Using and analyzing R functions
    - Debuging and understanding R code
- Basic statistics
    - Descriptive statistics
    - Modelling and optimization
- Basic knowledge of fisheries science
    - Essential ideas of population biology
    - Familiarity with stock assessment

ORGANIZATION

Dates
- Starting at 14.00 on Monday 25 August 2014.
- Finishing at 12.30 on Friday 29 August 2014.

Location
- EC JRC, Ispra, Italy.

Registration

- The deadline for registration is 11th July 2014
- Each participant must register in https://jrc-meeting-registration.jrc.ec.europa.eu/Home/tabid/36/Default.aspx . The registration can be incomplete regarding accomodation and travel details and updated later.
- The JRC will issue an official invitation letter.

Getting there
- Nearest airports are Milano Malpensa (MXP) and Milano Linate (LIN).
- Transport between airport and Ispra will be organized and provided free of charge by JRC.

Accommodation

- There's a block reservation in Hotel Europa.
- The participants that want to stay in Hotel Europa should mark it on the registration.
- JRC will book the rooms but the participants will have to pay, ~65 euros per night.

Costs

No fee required. Each participant will have to fund their own expenses.

AGENDA

Daily timetable
- AM: 09.00 - 12.30, TUE-FRI
- PM: 14.00 - 17.30, MON-THU

Day 1

SESSION 1: Introduction to FLR
- Welcome, setting up R & FLR
- Introduction to FLR: classes and methods
- Loading and manipulating data
- Documentation, manuals and help

Day 2

SESSION 2: EDA, plotting and modelling
- Plotting and EDA facilities in FLR
- Stock-recruitment relationships and non-linear modelling
- Simple stock assessment using biodyn

SESSION 3: Introduction to a4a
- The a4a initiative
- a4a growth methods
- Converting length to ages
- a4a M methods

Day 3

SESSION 4: Stock assessment using a4a
- Stock assessment with a4a
- A quick and dirty stock assessment
- Data structures

SESSION 5: Statistical catch-at-age prediction and simulation
- The sca method: statistical catch-at-age
- Advanced features of a4aSCA
- Predict and simulate
- More models for fishing mortality

Day 4

SESSION 6: Short and medium term forecasting for advice
- Short and medium term forecasting in fisheries management
- Forecasting with FLash

SESSION 7: Reference points and simulation
- Simulation tools in FLR
- Biological and economic reference points with FLBRP
- Management advice: combining Flash and FLBRP

Day 5

SESSION 8: Management Strategy Evaluation
- Building Operating Models with a4a
- Evaluating Management Procedures
- Final wrap up