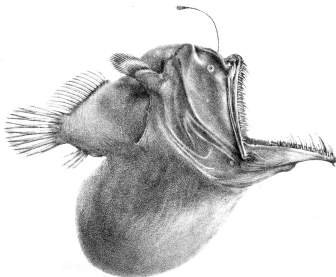# a4a MSE elements and classes

Course on Management Strategies Evaluation with FLR and a4a
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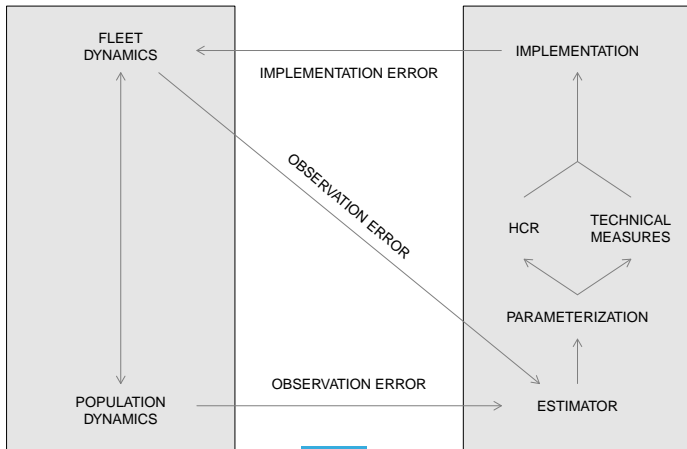
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Joint Research Centre
European Commission

The a4a MSE elements

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R S4 classes

➔ One may think of R classes as excel templates.

➔ There's a set of tables that define the data structure, it may have plots which are drawn when the user populates the data tables, it may have macros to perform some actions or functions to do specific computations.

➔ Classes do the same, define the data structure (like sheets) and methods (like macros and functions).

R S4 classes (cont')

➜ When a template is populated with data it becames a specific file which is used for a particular instance, like managing one's house budget, or building a plot for a report or the report itself.

➜ In R when a class is populated with information it's said to be 'instantiated' and the specific 'file' is called an 'object' which is available in one's R workspace, like a file in the hard disk.

a4a MSE classes

mseCtrl : control object for mse elements

FLom : the operating model

FLoem : observation error model

FLiem : implementation error model

FLmse : mse results

mpCtrl : control object for mp run

How does it work

1. create FLom, FLoem, FLiem, mpCtrl (mp method input)
2. run mp method
3. mp generates FLmse (mp method output)

The mseCtrl class is used as a building block of the classes above. The same way FLQuant is used as a building block of many FLR classes, e.g. FLStock.

Hands-on !

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