

“Assessment method for not-so-data-poor stocks” Fishreg brainstorm

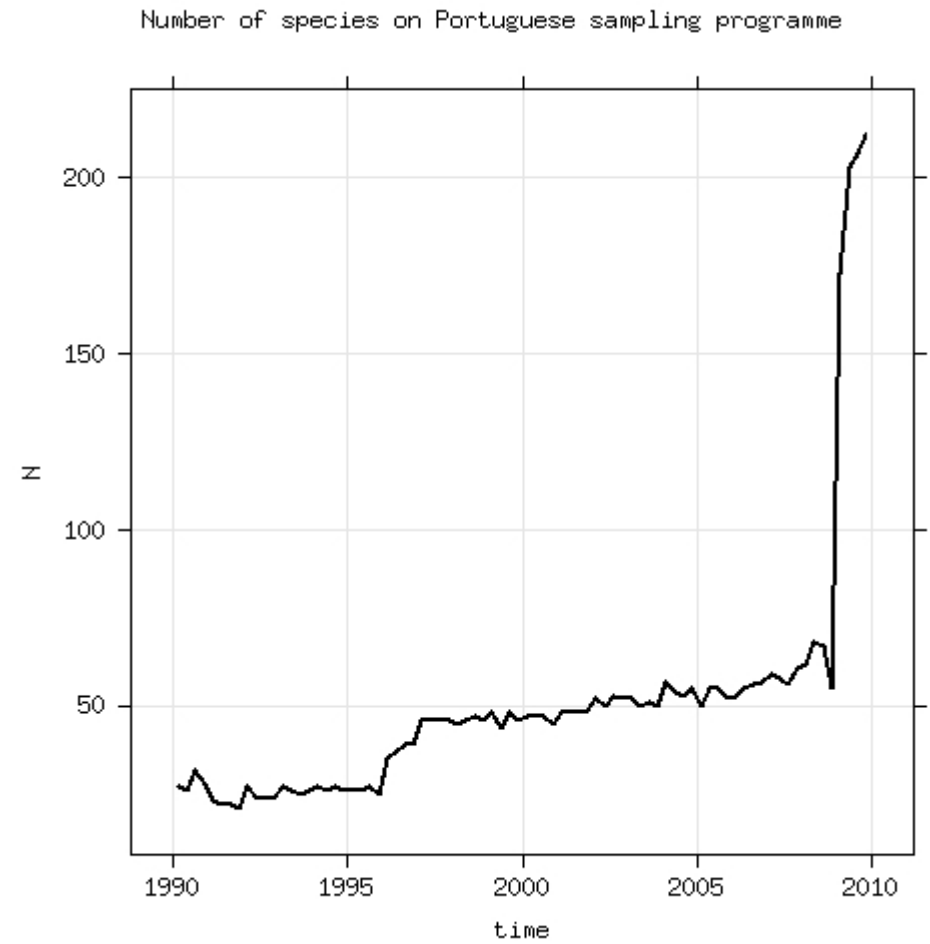
Ernesto Jardim
(14/09/2011)

Setting the scene

- DCF 2009 introduced the concept of “concurrent sampling” for metier related variables: sampling all or a predefined assemblage of species, simultaneously in a vessel's catches or landings (2008/949/EC, Annex, Chapter I, 1.b)
- Sampling must be performed in order to evaluate the quarterly length distribution of species in the catches, and the quarterly volume of discards (B1.1.1).

Setting the scene in numbers

- In 2010 DCF costs **57m €**
- Biological parameters (growth & reproduction) are being collected for **>250** stocks in waters where European fleets operate.
- Taking PT as example, the number of species sampled on the auction market for length distributions of the landings raised from ~60 to **>200** in 2009.



So what ? (Miles *dixit*)

- In 2020 fisheries scientists will face the challenge of assessing >250 stocks, caught by several fleets in European EEZ, for each there are information broken by time and space on:

Source	Time	Space	Volume (L,D,C)	+Length	Effort	Index	+Length
On-auction	:-)	:-	:-)	:-	:-)	:-	:-)
On-board	:-	:-	:-)	:-	:-	:-)	:-
Surveys	:-	:-		:-		:-	:-
log-books	:-)	:-	:-		:-)	:-	
VMS	:-)	:-			:-	:-)	

- Biology will be a problem
- Not sure about socio-economic information

Problem

These are not
data-poor stocks !!

Problem

No age data will be available
but **lots of information** on
exploitation and abundance
will exist !!

Problem

It will be impossible to keep the present procedures, which require highly trained analysts working for 2 or 3 month per year, to give advice on exploitation/conservation of 1 species ...

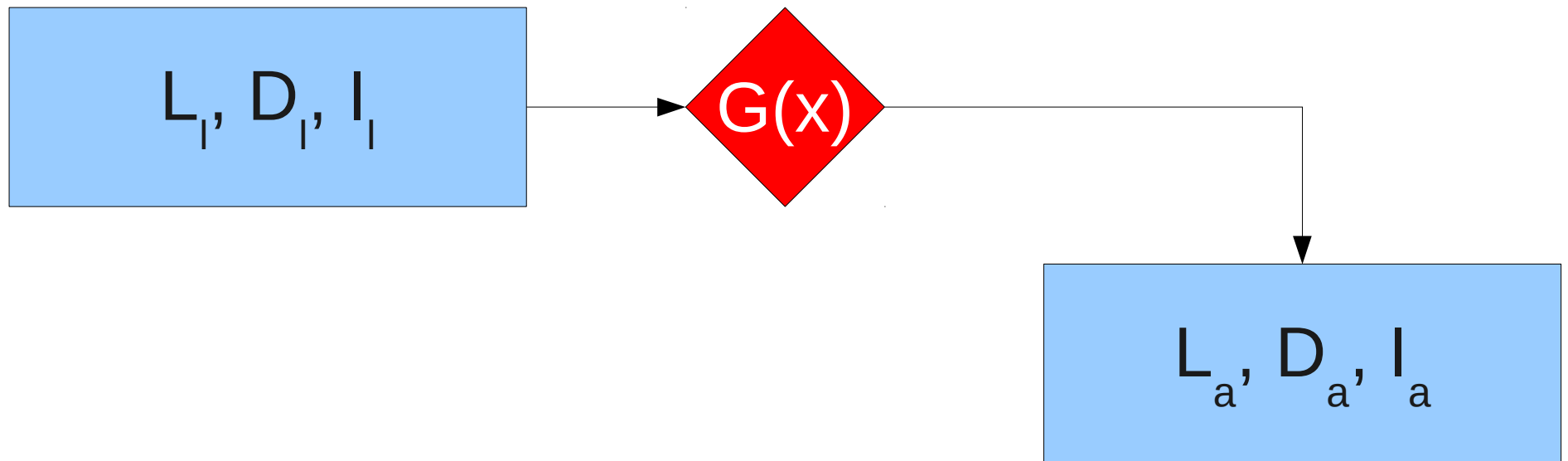
Problem

Dealing with the assessment
of these stocks will require a
change in mindset !!

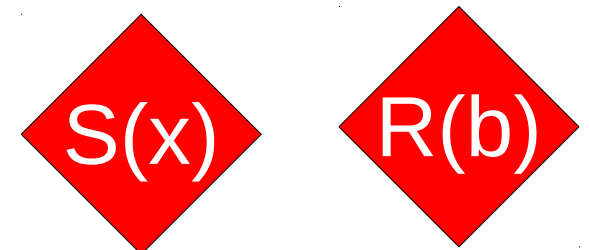
Solution !?

Estimate what you know,
MSE what you don't,
and keep it simple !!

Solution !?



SCAA { +



Solution !?

SCAA

Diagnostics

L_i, D_i, I_i, V_i

Sensitivity analysis
with MSE

(what's the impact on
advice ?)

$G(x)$

$S(x)$

$R(b)$

Open issues

- Multifleet
- Sexual dimorphism
- Space/time scale
- Weighting of likelihood components
- How to deal with maturity ? External parameter or integrated in the assessment method ?
- ...

Assessment for all initiative (a4a)

- Vision: Assess all stocks exploited on the European EEZ
- Objective: Develop a method to assess stocks that have a reduced knowledge base on biology and moderate time series on exploitation and abundance.
- Tools: SCAA model embedded on MSE implemented in R/FLR