



Assessment for All (a4a)

(13/03/2012, JRC, Italy)

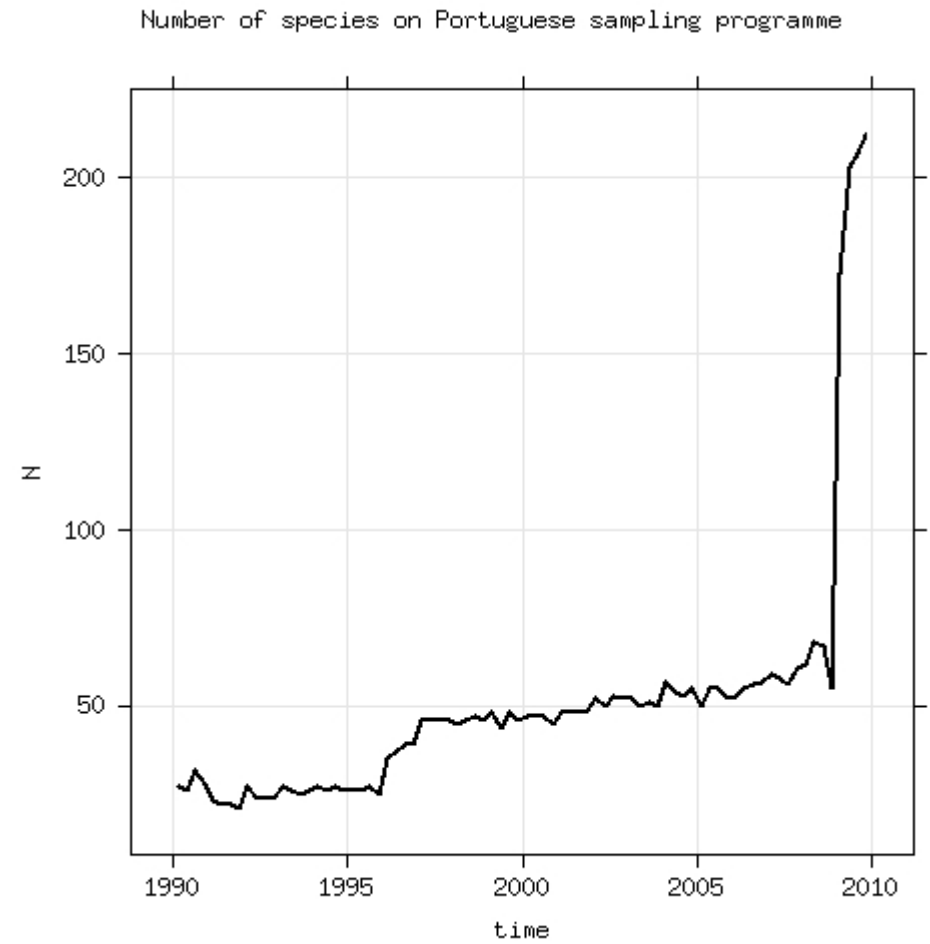
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Setting the scene

- DCF 2009 introduced the concept of “concurrent sampling” for meter 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*)

- European fisheries scientists will face the challenge of assessing 250+ stocks for which:

Table 1 – Quality *ad hoc* description of information provided in each variable by source
(1=fair, 2=good, 3=excellent).

Source	Time	Space	Volume (L,D,C)		Effort	Index of abundance		Biology	
			weight	length		weight	length	growth	reproduction
On-auction	W	ICES	3	3	2	1	2	1	1
On-board	Q	latlon	3	3	3	2	1	2	2
Surveys	Y	latlon		3		3	3	3	3
log-books	D	Rect	1		2	1			
VMS	D	latlon			3	2			

Setting the scene worldwide

- US law requires **all federal fisheries** to come up with approaches for calculating **annual catch limits**, including appropriate **buffers** to account for scientific and management **uncertainties** (Sampson, pers.comm.).
- Beddington et.al (2007) show that these intermediate data stocks that are not being scientifically assessed make up for **30%** of stocks in the USA, **78%** in New Zealand, **48%** in Australia, **61%** in the North-East Atlantic.
- Roa (pers.comm.) states in Chile **65%** of stocks are not assessed.

Problem

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

Opportunities

- Stock assessment as a **data generating** engine
- **Massive data** analysis
- **Multi*** analysis
- Advise for more species
- **Common** stock assessment methodology
- **Comparative advise** analysis
- Direct input to policies like MSFD, MSP, IMP, CFP, etc
- Contribute to Ecosystem Based Management
- ...

a4a initiative

The initiative aims to:

- (a) **develop an assessment method** targeting stocks that have a reduced knowledge base on biology and moderate time series on exploitation and abundance;
- (b) **trigger the discussion** about the problem of massive stock assessment.

Side objective:

- capacity building

a4a kick-off meeting

Brainstorm

Consolidate ideas

Design experiment

a4a kick-off meeting

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a4a kick-off achievements

What is a “moderate data stock”

- Exploitation
 - Nominal effort
 - Volume (L, D)
 - Length frequencies
- Biology
 - Information based knife edge mat ogive (minimum)
 - Indications for growth model (minimum)
 - L-W
- Index of abundance

a4a kick-off achievements

Genetics

Biomass model/stock assessment model

- Model to be applied rapidly to a wide range of situations
- Results must be used for advise on a quantitative basis

Assessment/advise methodology

Simulation experiment

Operationalise