Assessment for All (a4a) kick-off meeting

(29/02 – 02/03/2012, JRC, Italy)

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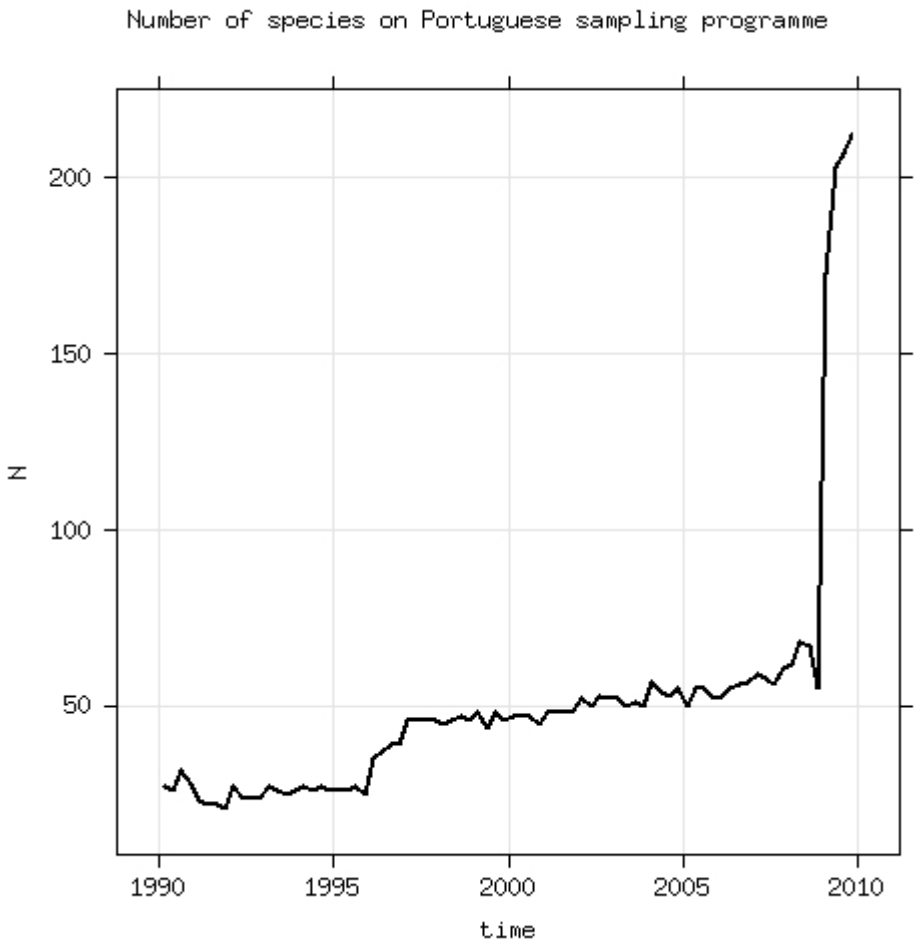
Setting the scene

- 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*)

- 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 !!

Problem

These are not

Data-poor nor data-rich

stocks !!

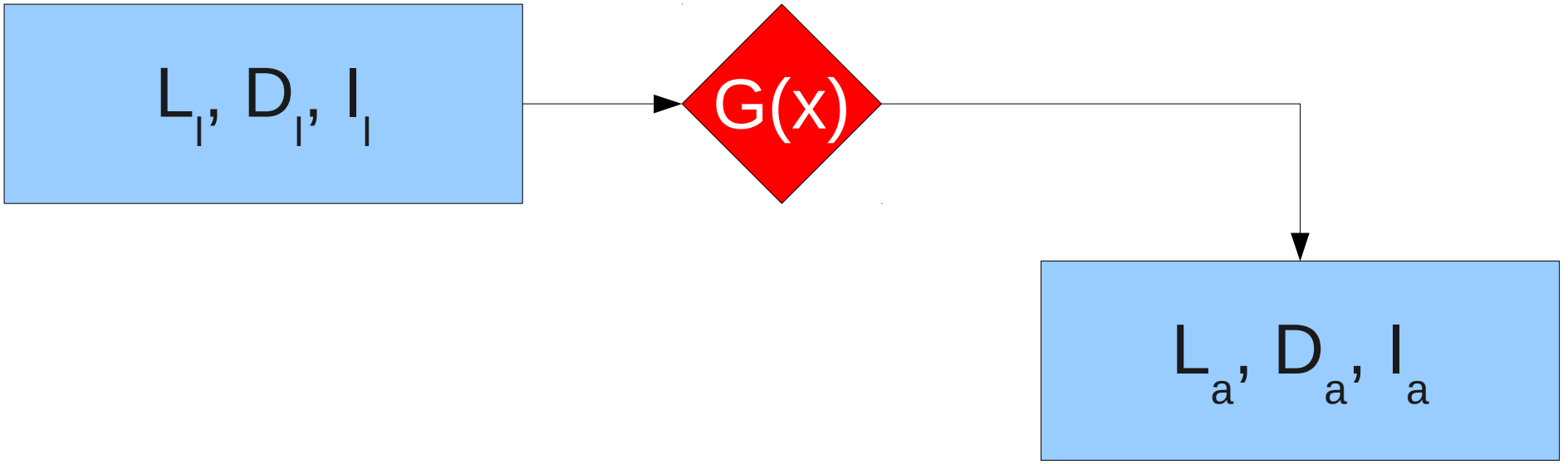
Solution !?

Estimate what you know,

MSE what you don't,

and keep it simple !!

Solution !?



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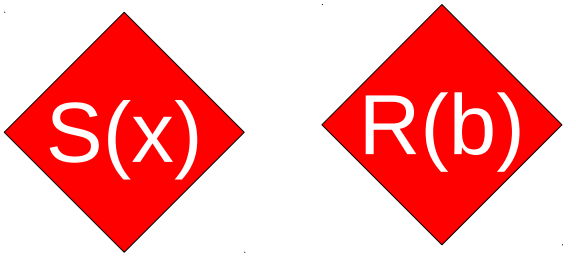


Solution !?

SC@A

Diagnostics

L_l, D_l, I_l, $V_.$

Sensitivity analysis with MSE

(what's the impact on advice ?)

Challenges

- How to set up generic HCR ?
- How to set automatic stock assessment methods ?
- How to consider multi-fleet in such simple method ?
- How to take into account space/time effects ?
- How to deal with the weighting of likelihood components in a transparent way for users ?
- How to interchange information from similar stocks ?
- How to consider multi-species ?
- ...

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 Ecossystem 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 initiative

Operational tools:

(a) scientific meetings;

(b) small contracts;

(c) short term visits (Gislason, Hillary, Cadrin, ...);

(d) participation in conferences and meetings (ICES WKLIFE & ASC & WGMG, other ?)

(e) FLR (dev. environment, HPC, team)

Budget for 2012 supported by JRC.

a4a kick-off meeting

Brainstorm

Consolidate ideas

Design experiment

a4a kick-off meeting

Wednesday

Introduction

Identify and describe the problem (group)

Compile a set of possible solutions to the problem (group)

Thursday

Seminar to JRC on Fisheries Modelling (09:30 – 11:00)

Elaborate on advantages and disadvantages of each solution (group)

Revisit the solutions and decide which are the most promising (group)

Agree on a framework for testing: MSE, statistical analysis, simulated data, etc. (group)

Friday

Discuss implementation and testing of the best solutions (group)

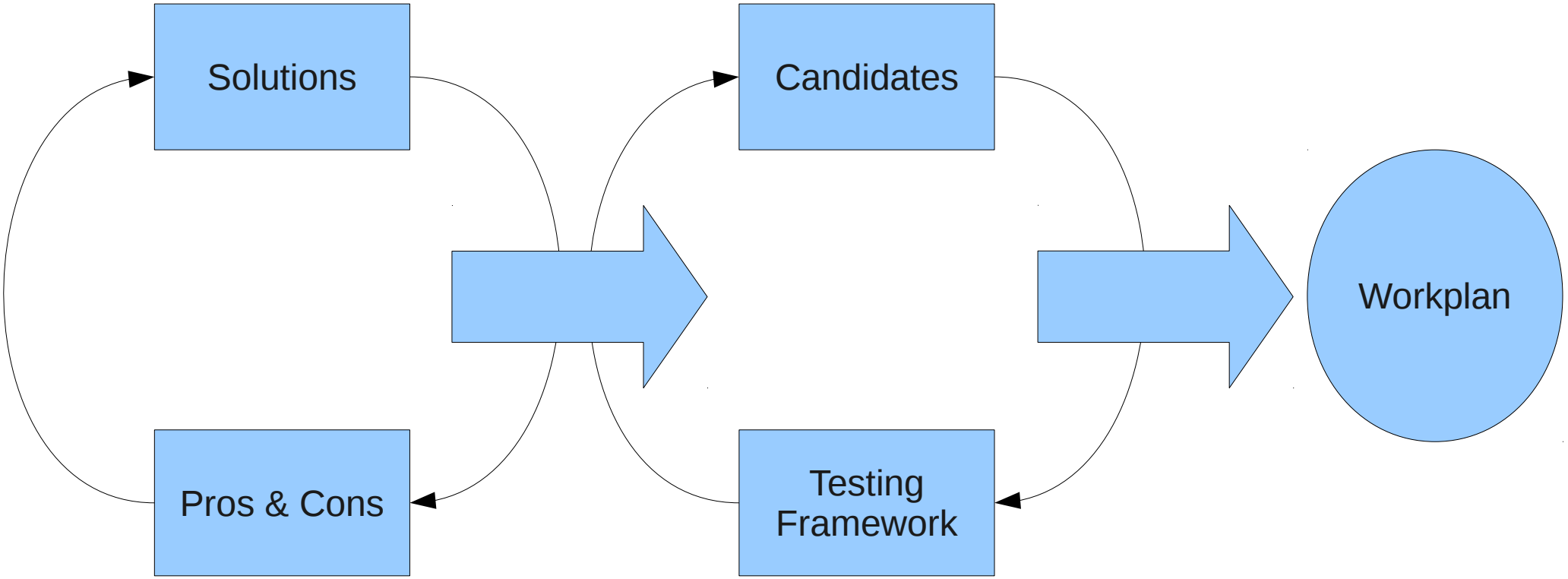
Elaborate on the expected outcome (group)

Challenges and opportunities (group)

Workplan (group)

a4a kick-off meeting

How it will work



a4a kick-off meeting

Leire Ibaibarriaga (AZTI, Spain)

Jose de Oliveira (CEFAS, UK)

Finlay Scott (CEFAS, UK)

Andrew Cooper (SMU, Canada)

Ruben Roa (SAU, South Arabia)

Einer Nielsen (DTU, Denmark)

Gary Carvalho (Bangor, UK)

Manuela Azevedo (IPIMAR, Portugal)

Chato Osio (JRC, EC)

Iago Mosqueira (JRC, EC)

Ernesto Jardim (JRC, EC)

Jann Martinsohn (JRC, EC)

a4a kick-off meeting

Expectations

- Creative discussions
- Consolidate ideas
- Progress on designing study
- Network
- Step forward on cordinating with others: ICES, South Hem, tRFMOs, etc