



ICES

International Council for
the Exploration of the Sea

CIEM

Conseil International pour
l'Exploration de la Mer

Where does ICES scientific advice come from?

Presented by
Michael Sissenwine, Chair
ICES Advisory Committee

ICES Scientific Advice:

What are the ingredients?



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Data- from fisheries, research vessels, and Labs,
some required by the EC Data Collection Regulation

Models- of fish populations, fisheries, ecosystems,
and management strategies

Process- ToR, assessment groups, peer review,
advice drafting, approval by national consensus,
dialog with managers and stakeholders, observers

Scientists- 1500 from government and universities
of Europe, North America and beyond

Flotilla of research vessels

Contributing data to ICES advice



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And many more

Some key research vessels surveys



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International bottom trawl surveys

▪ IBTS North Sea

▪ IBTS Western and Southern Waters

Scottish surveys

Northern Ireland survey

English surveys

French surveys

Spanish surveys

Portuguese surveys

Baltic International Trawl Survey

Beam Trawl Survey

Acoustic Surveys

Ecosystem Surveys



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Fisheries Data

All about fishing activities and the catch:

- Amount by species, size, age
- Time and location
- Fishing effort by gear type
- Discards

Collected:

- In ports
- At Sea (logbooks and observers)
- By satellite (VMS)
- Fishermen's knowledge

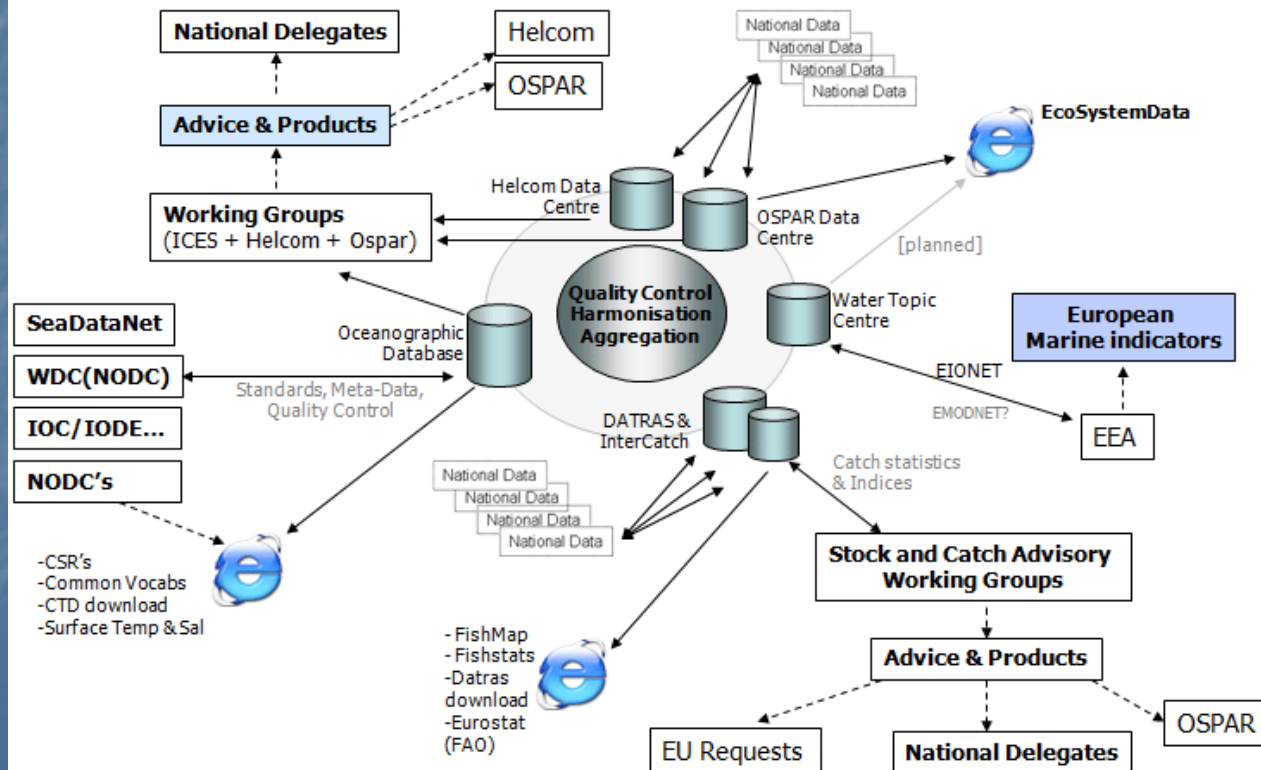


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ICES Data Centre

ICES Data Centre - Linkages



To turn data into information and advice

- Analysis of survey data to separate signal from noise
- Analysis of length frequency to estimate ages
- Assimilation of survey and catch data to estimate population trends
- Stock-recruitment models to link generations
- Forecast models to calculate TACs according to management plan harvest control rules
- Multispecies models to consider predator-prey interactions
- Ecosystem models to account for nutrients, energy, habitat, biodiversity
- Research models that evolve to operation software



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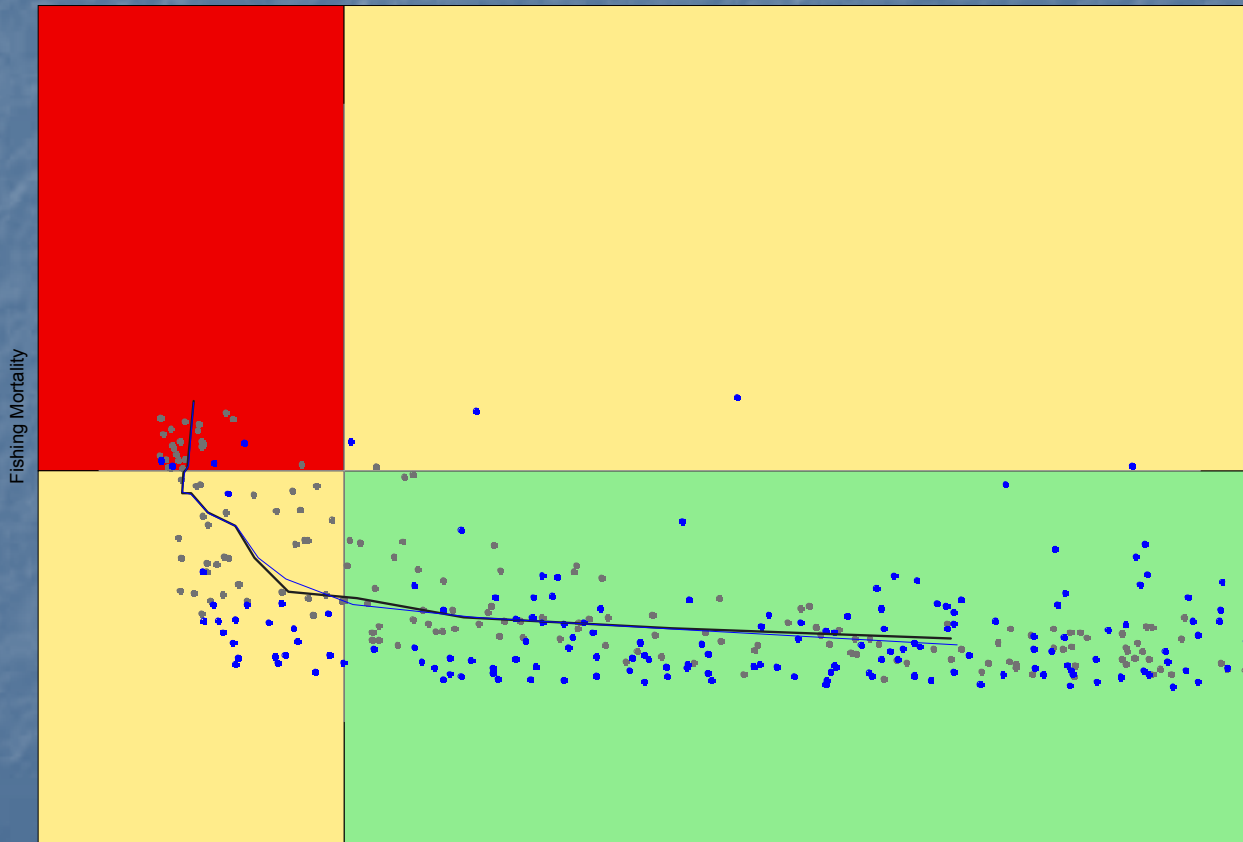
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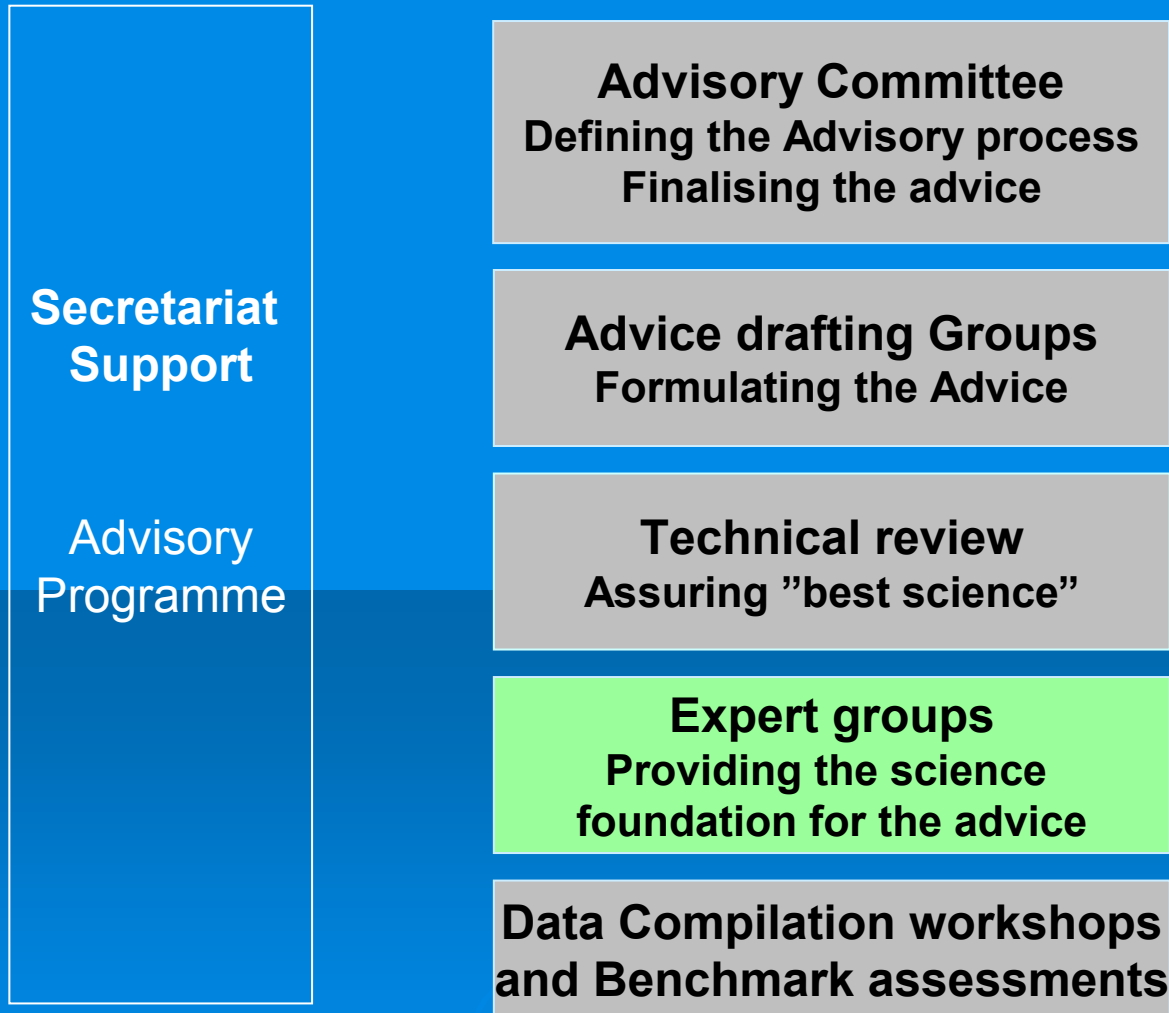
Models for management plan evaluation

Fishing mortality



Stock Size

ICES Advisory Services



EG	EG dates	RG dates	ADG dates	ADG Meeting Place	Web Conference date	Advice Release date	Topics
WGSSDS	30 April-6 May	2-5 June	9-12 June	ICES	23-Jun	27-Jun	Demersals Celtic sea
WGHMM	30 April-6 May	2-5 June	9-12 June	ICES	23-Jun	27-Jun	Northern hake, megrim, and aglerfish
		19-21 May	shifted date: 4-6 June	ICES	18-Jun	27-Jun	Southern Hake, Monk, Megrin, Nephrops
WKBALSAL (Baltic salmon request)	13-16 May	22-23 May	29-30 May	Corresp	9-Jun	13-Jun	Baltic Salmon Management plan request
WGNSSK	7-13 May	26-28 May	3-5 June	ICES	17-Jun	27-Jun	North Sea Demersals
WGNSDS	15-21 May	2-5 June	9-12 June	ICES	23-Jun	27-Jun	Northern Shelf Demersals, Nephrops,
WGANC	13-16 June	17-Jun	18-Jun	ICES	19-Jun	20-Jun	Anchovy Bay of Biscay
Extracted from 2008 workplan							

EG	EG dates	RG dates	ADG dates	ADG Meeting Place	Web Conference date	Advice Release date	Topics
WGECO	6-13 May	15-20 May	20-22 May	ICES	28-May	30-May	OSPAR advice on impact of fisheries
AFWG	21-29 April	9-10 May	12-15 May	ICES	2-Jun	6-Jun	Arctic Fisheries (Barents Sea)
NWWG	21-29 April						Northwestern stocks (Iceland and Faroe Islands)
Extracted from 2008 workplan							

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HUMAN RESOURCES

- 47 EGs (X15persX8days)- 5640 pers.days
- 31 RGs (X3persX3days)- 279 pers.days
- 29 ADGs (X6persX5days)- 870 pers.days
- 29 ACOM WebConf. (X20pers.X2days)- 1160 pers.days
- 2 ACOM meetings (20pers.X10days)- 200 pers.days
- 2 Data/Benchmark assessment meetings (X15 pers.X10days)- 300 pers.days
- 12 *Secretariat pers.years*

TOTAL-50.40 pers.yrs or about 10 M. Euros

Challenges



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- **Data quality-** some fisheries data quality has deteriorated
- **Workload and Stress-** scientists, managers, policy makers, industry representatives, industry workers, environmental NGOs
- **Integration for an ecosystem approach**
- **Investing in science for the future**
- **Interactive Communications-** managers, scientists, stakeholders