MareFrame

Scientific Conference
"Advances in Ecosystem-based Fisheries Management"

14th December 2017
Brussels, Belgium

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no. 613571

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T-ONS A SWIFT TRANSPORTABLE AND USER FRIENDLY MULTISPECIES MODEL OF THE NORTH SEA THAT DESCRIBES THE MAIN TRADEOFFS USED IN DECISION SUPPORT IN EBFM

UNLOCKING EBFM I: THE T-ONS MODEL

John Pope NRC (EUROPE) Ltd.

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For Any Decision on an EBFM you will need Scientific input.

A Scientific working group or perhaps several will meet to give advice

BUT you will end up with a THICK report. Probably 2 or 3!!

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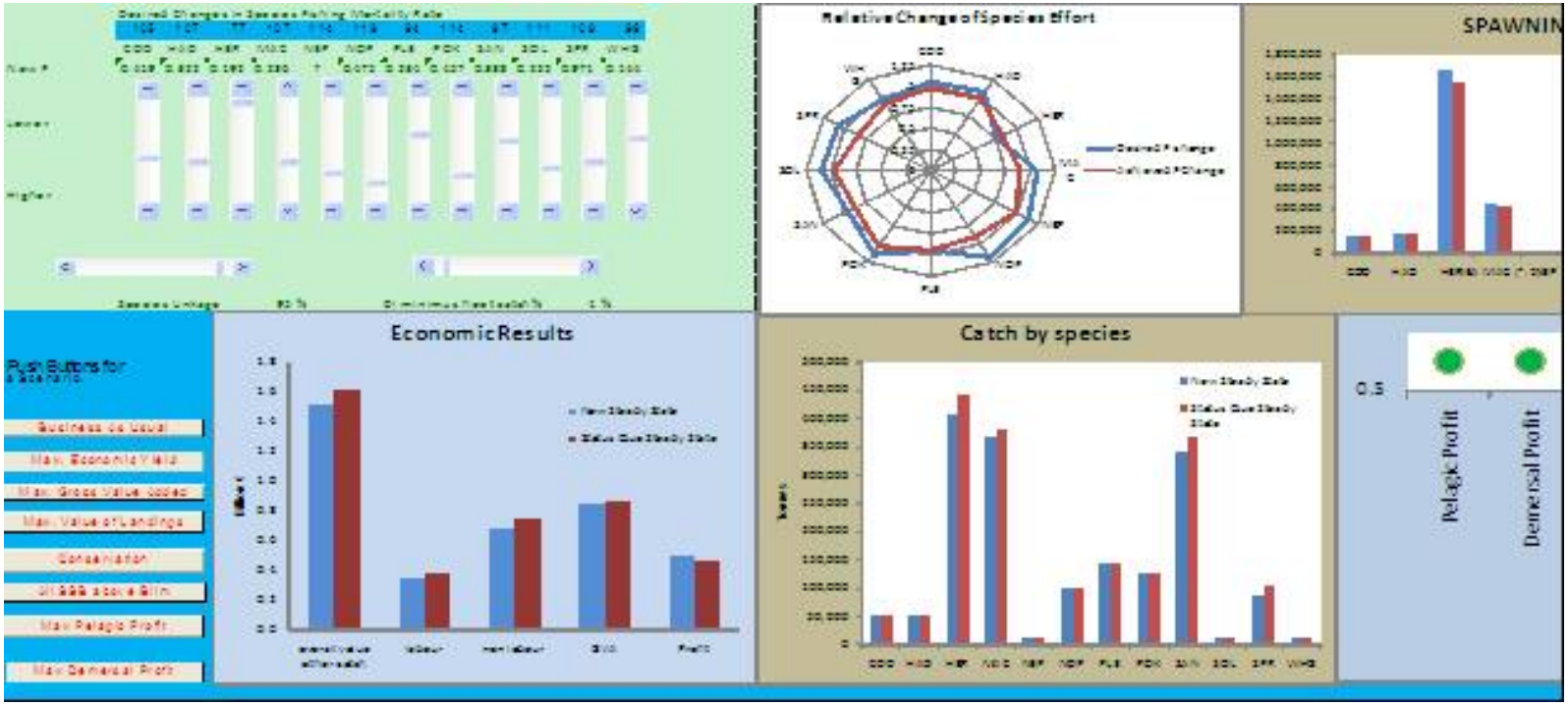
(T-ONS) The Trade-Offs North Sea MODEL



1. Amalgamates as much advice as possible
2. Puts it on your desk top to consult how you want.

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Simple Interactive Overview

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Requirements

Its Fishy Structure should:-

- Cover Both Species Interactions and Fisheries Interactions
- Handle the main range of TAC species.
- Allow fishing to be changed in a realistic fashion

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Simple Interactive Overview

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Requirements

- Its should show the important trade offs:-e.g.
- Species Yield, Fleet Economics
- Social implications,
- Ecosystem Effects
- BUT most of all it MUST BE:-
- Transportable, Easy to understand and Responsive.

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To Be used by Stakeholders Model Needs to be Transportable, Easy to understand and Responsive.

So T-ONS Is Based Upon EXCEL . It Uses Approximations To More Complex Multi-species Models.

Simple Interactive Overview

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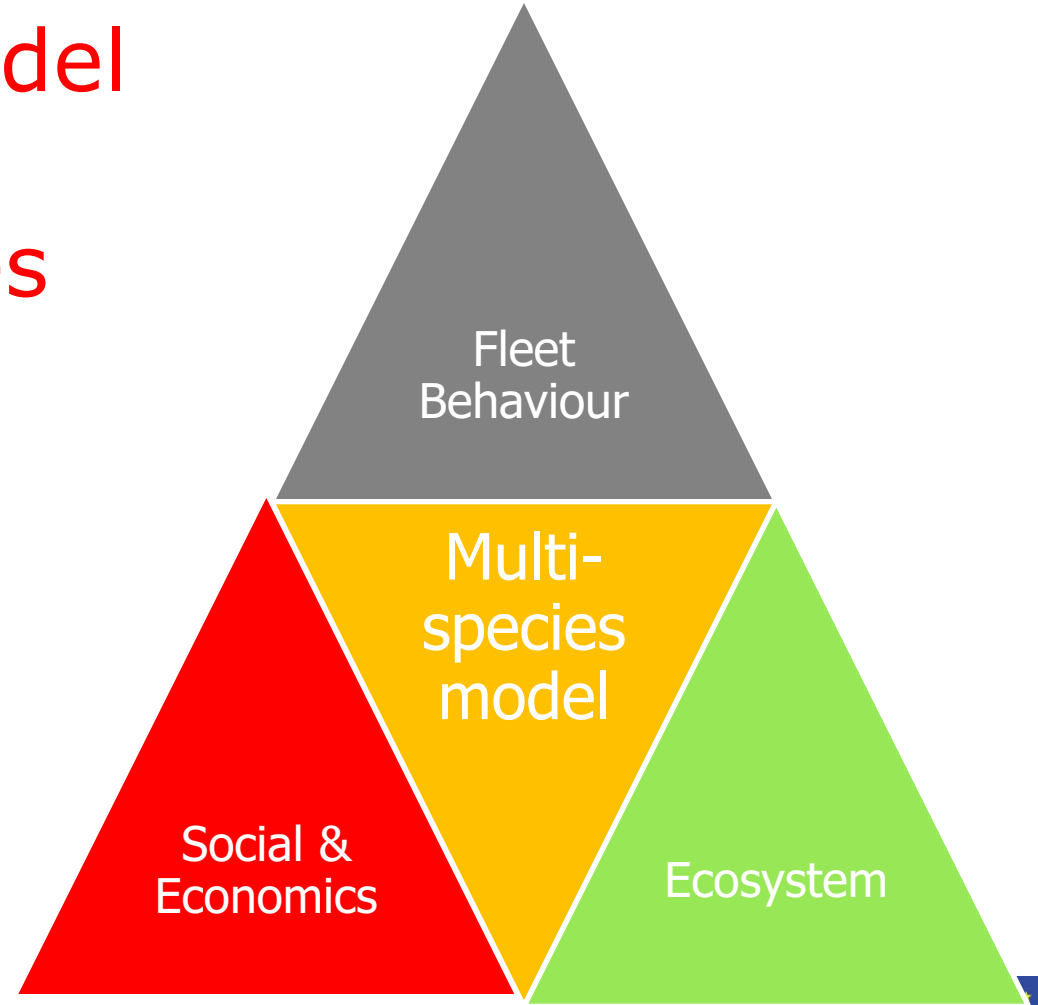
How does T-ONS Work

The Model has 4 modules



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The Model works by changing the amount of Fishing on 12 main species (**vertical sliders**).

Alternatively you can push buttons for the 8 preset Scenarios

In this ... the cod ... 80% of ... quo. NB: Possible change ... limited to ± 25%.

BUT A... change obeys Fleet Catch Cons... (horizontal sliders modify)

... used in DSF

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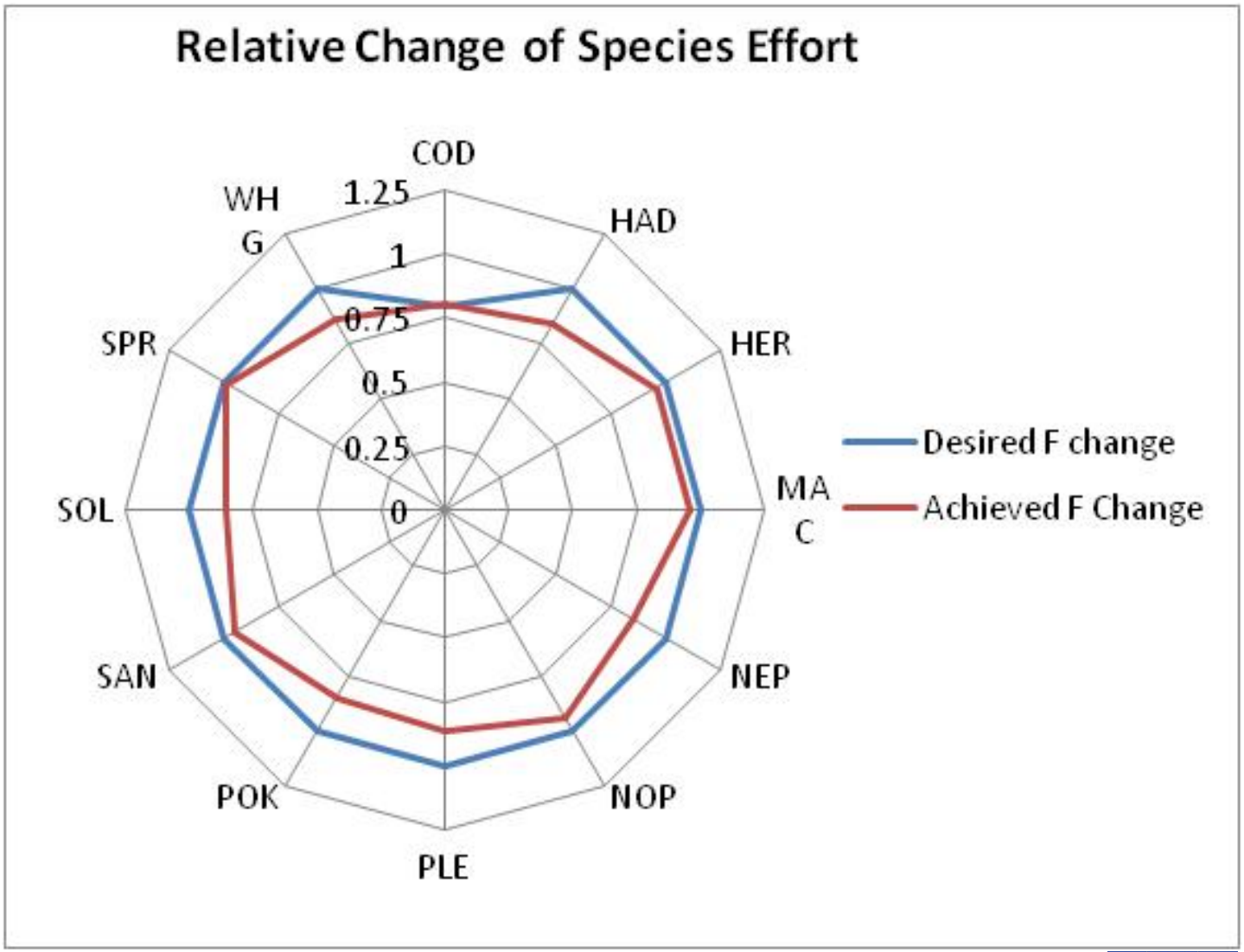

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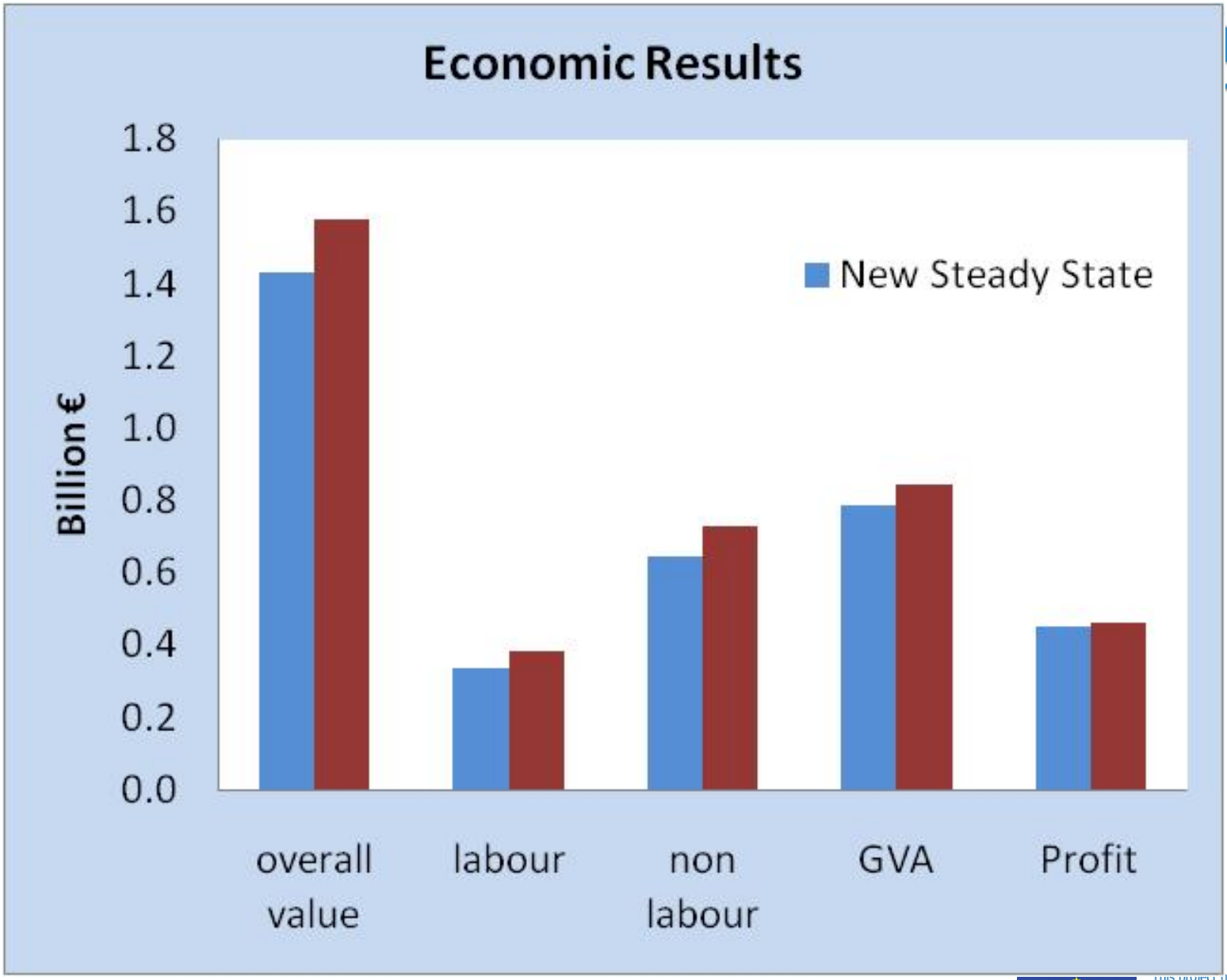

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Pros and Cons of the T-ONS Model

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Advantages

1. Quick, Transportable, User friendly,
2. Includes both MS and Multifleet constraints.
3. Includes many tradeoffs & can optimize these.
4. Close approx. to SMS in the ±25% F range.
5. Is a good way to compare MS models.

Disadvantages

1. Does not provide a time-trend (but could provide current predictions
2. Multiarea description is limited to what SMS (or other input models) can do.
3. Please tell me!

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So get a copy
and try it out for yourself!

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Thats all Folks

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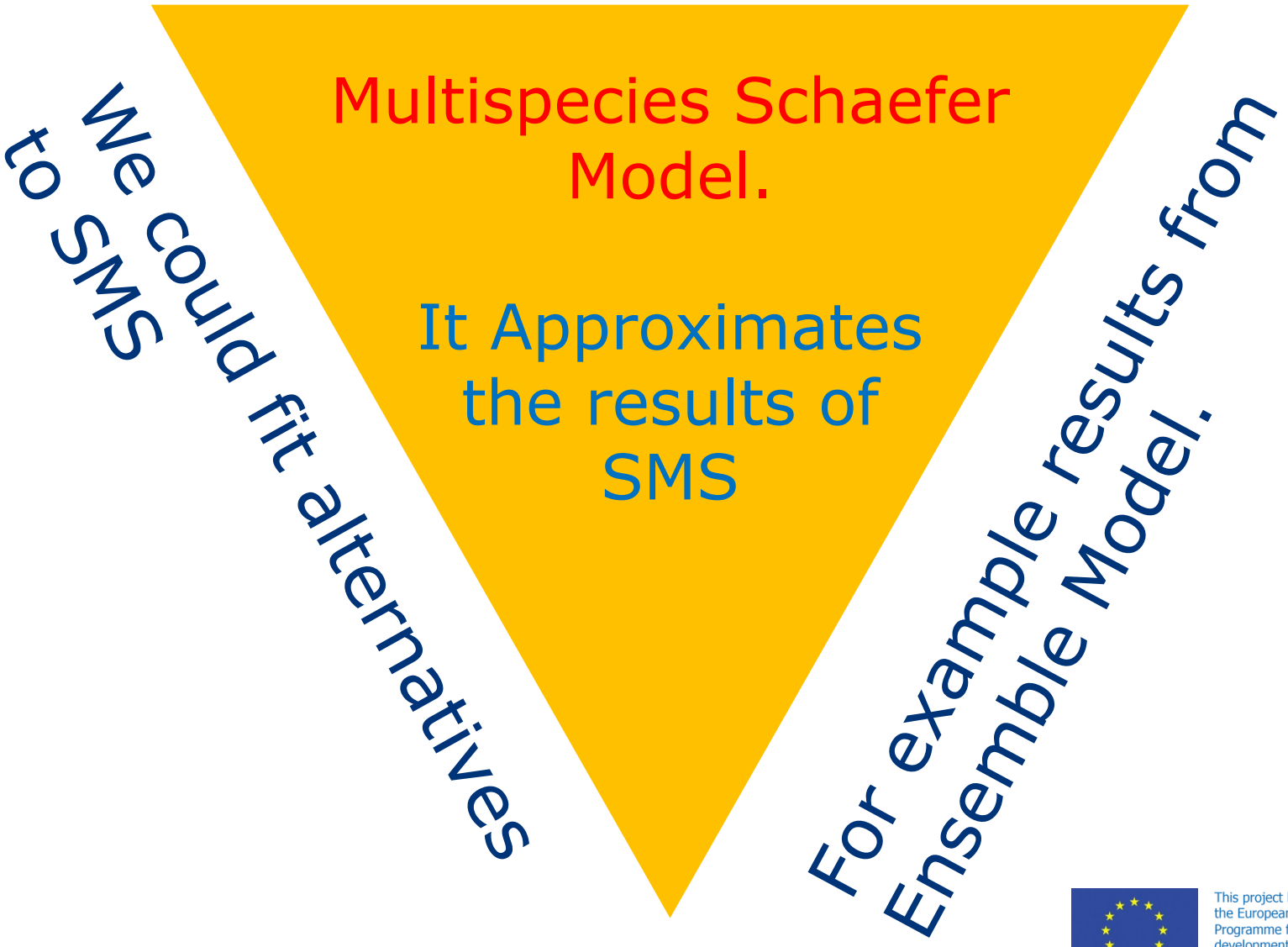

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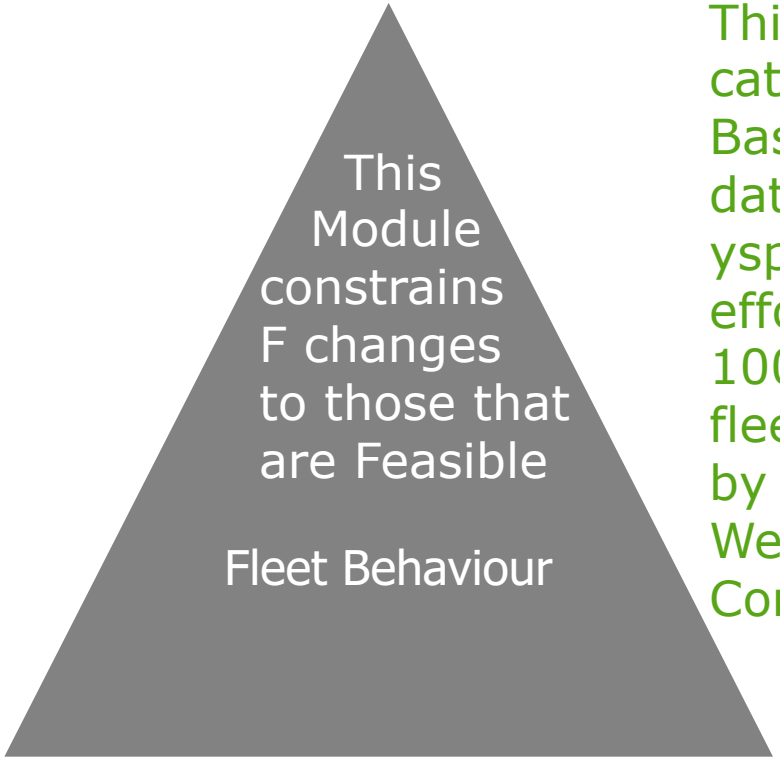
The fleet structure of the North Sea means not all combinations of F are possible.



This is based the STECF catch and effort Data Base and Nor.wegian data This gives catch by yspecies and fishing effort for the more that 100 different fishing fleets. These are defined by Country, Gear types. We could also add special Conditions as an extra fleet element.

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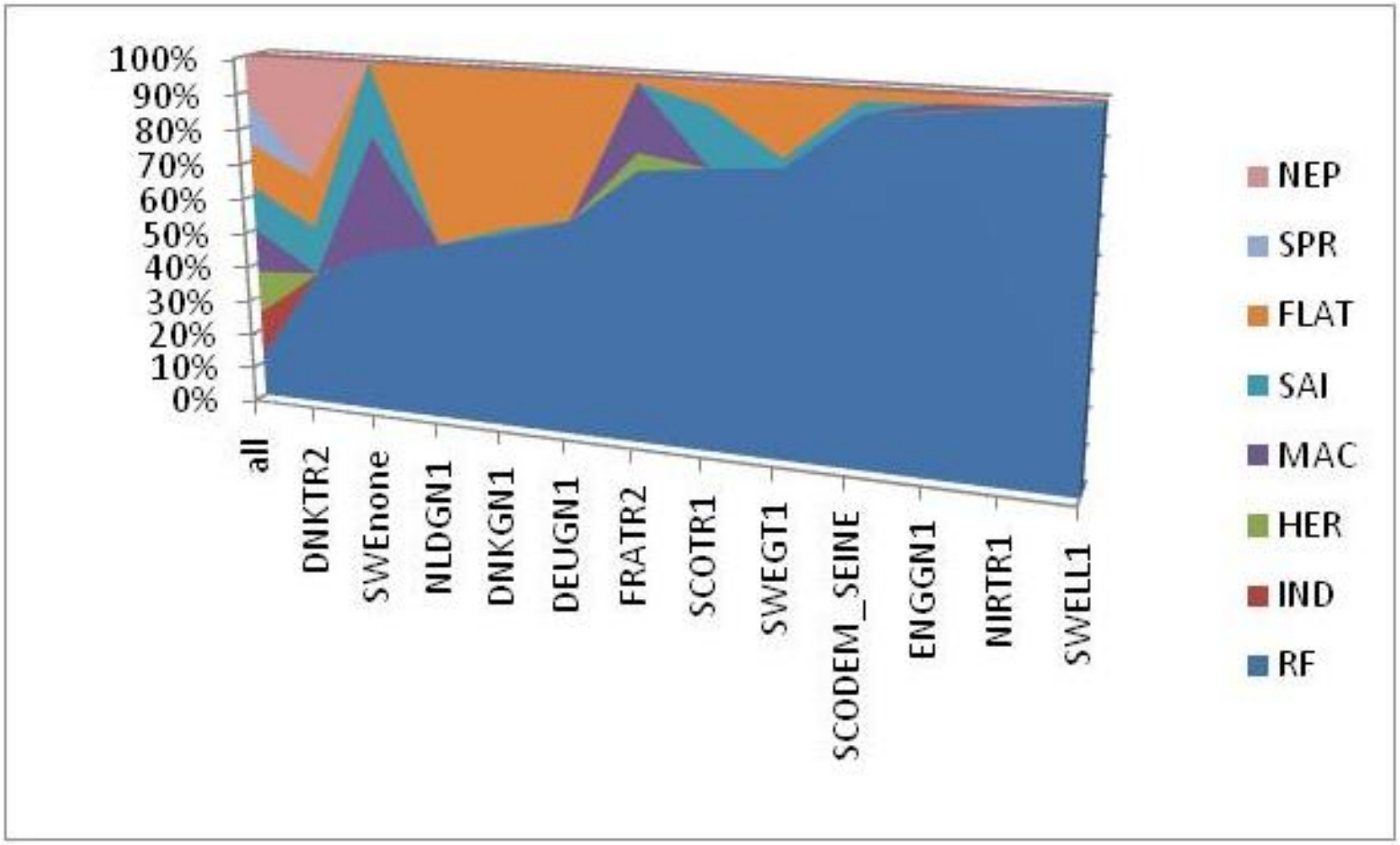
The Fleet Problem:- e.g. Roundfish



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RESTRICTED TO SCIENTISTS

International Commission for the Northwest Atlantic Fisheries

Serial No. 000½
(WOW)

ICNAF Dumm.Doc. 75/2

ANNUAL MEETING - JUNE 1975

Estimation of Unknown Natural Mortality

by

J.G. Pope

M = ?

M = ?

M = .2

M = .2

M = 0.2

EUREKA!!!

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But Big Fish Eat Little Fish.
Moreover, Little Fish may eat the young of Big Fish

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You will also get Input from Stakeholders

These inputs will be disparate and contradictory,

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