

# Intercalibration for the EU Water Framework Directive (WFD)

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ECOLOGICAL  
ASPECTS OF  
MICRO-PLASTICS  
IN THE MARINE  
ENVIRONMENT

Start non-  
fragmented

Compare  
the  
fragmented

SCIENTIFIC  
INTERCALIBRATION  
OF THE WFD  
COASTAL AND  
TRANSITIONAL  
WATERS

# Joint funding for the scientific intercalibration exercise of the WFD coastal and transitional waters in the North-East Atlantic

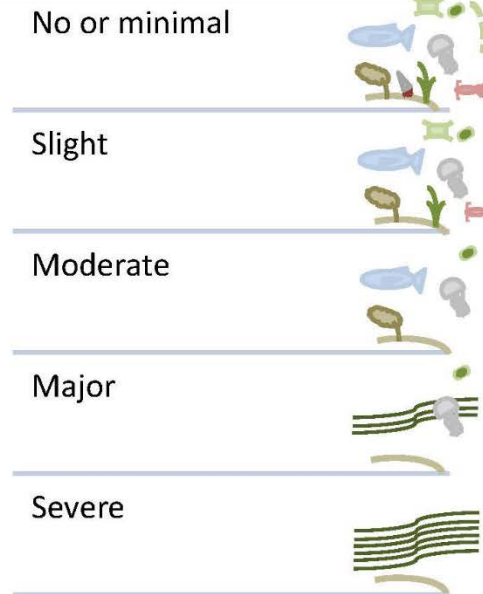
11 Member countries: BE, DE, DK, FR, IE, NL, NO, SE, UK + PT & ES (in-kind)

## Background

Need:

- Scientifically sound and comparable thresholds to judge environmental quality !
- WFD: Obligation to intercalibrate thresholds for environmental quality that Member States + NO are legally bound to reach

### Deterioration



### Ecological status

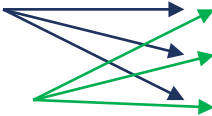


Adapted from J. Rodriguez-Romero – P. Pollard

## Background

- Deadline for last gaps EUROPEAN COMMISSION DECISION WFD with **comparable** quantified thresholds in autumn 2016
- Significant gaps still existed despite 2 cycles of intercalibration (2004 - 2012) with voluntary intercalibration leads and fragmented efforts, without contracted scientific consortium to work on it.

## Aims of the pilot action

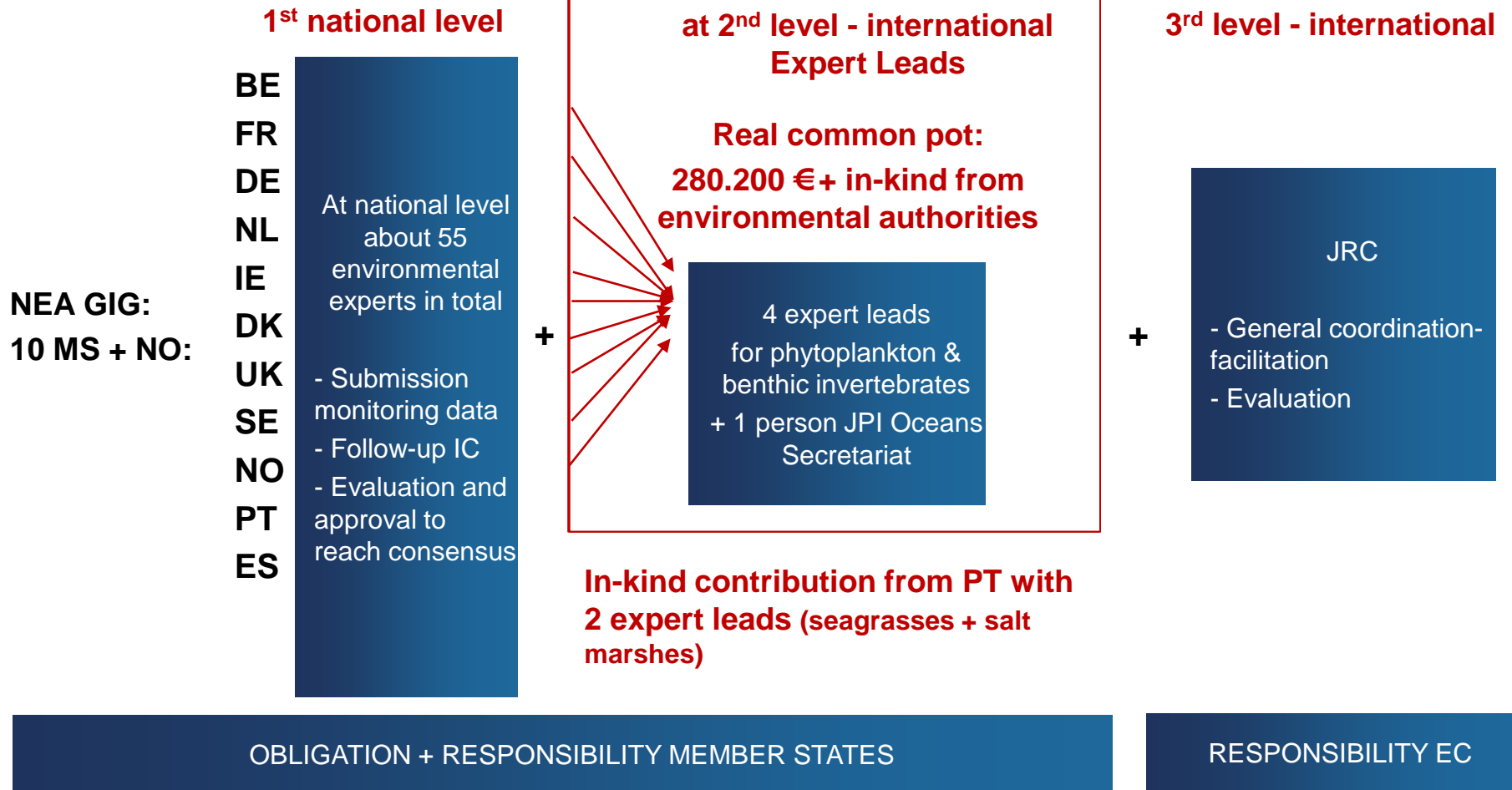
- solve the last remaining issues in a more cost-efficient way,
  - **find experienced scientific expert leads** to perform required analyses
  - **reduce fragmentation** of calculation efforts,
  - increase experience with **joint data compilation and analysis**;
- test a mechanism for **joint funding from environmental authorities** of 9 member countries, surpassing the traditional model of joint calls.
- 6 exercises were contracted:
  - Benthic invertebrate fauna
  - &
  - Phytoplankton Chlorophyll a

The diagram consists of a central point from which six arrows originate. Three arrows are blue and three are green. The blue arrows point to the first, second, and third location boxes on the right. The green arrows point to the second, third, and fourth location boxes on the right.

  - coastal waters North-East Atlantic
  - coastal waters Wadden Sea
  - transitional (estuarine) waters

# Schematic overview

Potential solution increased cost-efficiency for 2014 - 2016



## Organisational administrative & financial

- 2 subsequent multilateral **Memoranda of Understanding** signed for 2 phases
- **Real common funding pot** created, governed in-kind by 1 research funding body (BELSPO) that contracted
- Different expert leads after a specifically designed questionnaire selection process
- Common pot with **strict conditions** for deliverables agreed with countries in MoU + with scientists in their contract :
  - Scientists free to come up with fit-to-purpose simple models that reflect ecological & regionally distinct relations – with obligation for outcome on specific parameters to feed in statistical protocol for legal boundary comparison
- **Very cost-efficient** for countries, fairly financially shared by all! On average 42.000 euro per intercalibration

## Scientific

- Solutions obtained for already long-time existing complex problems - **1<sup>st</sup> commonly agreed model outputs** obtained for pressure-impact relationships in North-East Atlantic for legal applications
- For 1 current intercalibration result further JOINTLY scientific work is proposed by 2 countries to refine sub-regional impact of co-variables

## Results : 10 threshold adjustments for environmental quality for 7 different countries

Area	Biological Quality Element	Impact of scientific results on legal thresholds of countries	Total cost (euro)	Total person months
Coastal waters North-East Atlantic	Benthic invertebrates	1 country	28.600	3,25
Coastal waters Wadden Sea	Benthic invertebrates	1 country	19.580	2,23
Transitional waters North-East Atlantic	Benthic invertebrates	1 country	66.440 + in-kind ES, JRC	7,55 + in-kind ES, JRC
Coastal waters North-East Atlantic	Chlorophyll-a phytoplankton	4 countries	59.400	6,75
Coastal waters Wadden Sea	Chlorophyll-a phytoplankton	1 country	50.160 + in-kind BE	4,95 + in-kind BE
Transitional waters North-East Atlantic	Chlorophyll-a phytoplankton	2 countries	26.400 + in-kind UK	3 + in-kind UK
In-depth guidance for targeted policy output for all elements			22.000 (mainly for Chlorophyll a intercalibration)	2,5 + in-kind BE
Total		10 threshold adjustments 7 different countries	272.580 + in-kind from BE	31,25 + in-kind from BE
Still available for data transfer/archiving to JRC			6.980	0,8

## Added value and impact

- Juridical: all **results included in the European Commission Decision** as thresholds for environmental quality (formally voted in WFD Regulary Committee of 4 October 2017)
- Very strong **science-policy interface** based – allowing good scientific basis of environmental quality assessment
- In-depth scientific analyses showed that in all cases the initial judgements of a group of countries about comparability or incomparability between each-other had to be adjusted. Biogeographical differences were often not correctly taken into account before.
- Enable a **long-term dialogue between environmental authorities across Member countries and the scientific community** to solve remaining scientific challenges jointly;

## Lessons learned

- **Data-management** issues substantial (WFD monitoring data + other data) – at least 30% of investment !!!
- Calculation capacity not always sufficient to work efficiently
- **Human capacity** of well-trained people (fragmented knowledge in group versus centralised knowledge in few available appropriate experts) subject to high quality / investigation logic / problem solving capacity requirements
- Requiring **VERY FLEXIBLE working** with step-by-step contracting and guidance, that allowed necessary updating, checking and feed-back loops with environmental authorities

# JPI OCEANS

THANK YOU

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