

Memorandum of Understanding for the scientific intercalibration exercise for the WFD coastal and transitional waters in the North-East Atlantic

MoU between:

The environmental authorities (of 9 JPI Oceans member countries) represented by:

- Flemish Environment Agency (VMM), Belgium
- Federal Public Service Health, Food Chain Safety and Environment, Directorate General Environment, Belgium
- Lower Saxony Water Management, Coastal Defence and Nature Conservation Agency (Niedersächsischer Landesbetrieb für Wasserwirtschaft, Küsten- und Naturschutz), Germany
- Danish Nature Agency, Denmark
- The French National Agency for Water and Aquatic Environments (ONEMA, Office national de l'eau et des milieux aquatiques), France
- Environmental Protection Agency, Ireland
- Ministry for Infrastructure and the Environment (Rijkswaterstaat), Centre for Water Management, The Netherlands
- Norwegian Environment Agency, Norway
- Swedish Agency for Marine and Water Management, Marine and Water Administration, Sweden
- Department of Environment, Food and Rural Affairs (Defra), United Kingdom

The JPI Oceans and its Belgian members:

- Belgian Science Policy Office (BELSPO), Scientific and Technical Information Service (STIS)
- Department Economy, Science and Innovation (EWI)

1. Objectives

It is hereby agreed that the Parties shall launch a transnational Pilot Action “Joint funding of the scientific intercalibration exercise for the WFD coastal and transitional waters in the North-East Atlantic” which will be jointly financed by the participating European environmental authorities, and organized and administratively supported by JPI Oceans, with Belgium as lead country.

The aim of the Pilot Action “Joint funding of the scientific intercalibration exercise for the WFD coastal and transitional waters in the North-East Atlantic” is to promote cooperation between environmental authorities and research funding agencies in JPI Oceans by supporting transnational and interministerial cooperation and funding for the scientific intercalibration exercise of the European Water Framework Directive (WFD).

The specific aims of the Pilot Action are:

- finding experienced scientific Expert Leads to perform required analyses in the most cost-efficient way for phytoplankton and benthic invertebrate fauna, due to constraints in the availability of experts of national environmental authorities;
- reducing fragmentation (of comparison calculation efforts) and increase efficiency in relation to the Water (and Marine Strategy) Framework Directive;
- increasing experience with joint data collection and analysis;
- coordination of and testing a mechanism for joint funding from environmental authorities of 9

Member States (BE, DE, DK, FR, IE, NL, NO, SE, UK), surpassing the traditional model of joint calls, to obtain the performance improvements.

2. Implementation

The joint Pilot Action will be implemented by a collection of funding of environmental authorities of 9 countries, a selection of Expert Leads and performance of specific scientific comparison tasks by these Expert Leads. The Pilot Action will enable scientists in different countries to build an effective collaboration on a common transnational intercalibration project, based on complementarities and sharing of expertise.

3. Coordination

The central coordinating body for the Pilot Action is JPI Oceans, with Belgium as lead country. This central coordinating organisation is responsible for the overall organisation of the Pilot Action and the management of the selection process agreed upon by the Parties. The compilation of the funding and the contracting of the expert leads will be assured by the Scientific and Technical Information Service (STIS) of the Belgian Science Policy Office (BELSPO).

4. Funding commitment

This Memorandum of Understanding for the Pilot Action offers funding for Expert Leads until December 2014 included, according to the table below and Annex I (distribution of man-months among Expert Leads).

The environmental authorities have committed to the following funding for this action:

Environmental authority representation per country	Budget 2014 (in €)
<i>Belgium:</i>	
Flemish Environment Agency (VMM)	7.000
FPS Health, Food Chain Safety and Environment	7.000
<i>Germany:</i>	
Lower Saxony Water Management, Coastal Defence and Nature Conservation Agency (Niedersächsischer Landesbetrieb für Wasserwirtschaft, Küsten- und Naturschutz)	20.000
<i>Denmark:</i>	
Danish Nature Agency	10.000
<i>France:</i>	
The French National Agency for Water and Aquatic Environments (ONEMA)	10.000
<i>Ireland:</i>	
Environmental Protection Agency	10.000
<i>The Netherlands:</i>	
Rijkswaterstaat (Ministry for Infrastructure and the Environment), Centre for Water Management	15.000
<i>Norway:</i>	
Norwegian Environment Agency	11.000
<i>Sweden:</i>	
Swedish Agency for Marine and Water Management, Marine and Water Administration	4.000
<i>United Kingdom:</i>	
Department of Environment, Food and Rural Affairs (Defra), UK	10.000
TOT	104.000

The collection of funds will be done by the STIS of BELSPO. The funds should be transferred to the following STIS account number with the mention "JPI Oceans":

Name of account holder: DWTI-SIST
Name of Bank: LA POSTE FINANCIERE
SWIFT (BIC) code: PCHQBEBB
IBAN number: BE86 6792 0058 1650

To be able to contract the expert leads to perform the work in 2014 the transfer of funds should be done before 10th July 2014.

5. Expert lead selection process

The selection process is designed to involve three steps: First, a check for eligibility is done, including the availability of the Expert Leads matching the predefined work plan for the intercalibration of the respective Biological Quality Elements. The second step includes an evaluation by the Belgian JPI Oceans Management Board members of the expertise and experience of the candidate Expert Leads, assisted by the JPI Oceans Secretariat. Finally, the proposed ranking is shared with the environmental authorities and JPI Oceans Management Board for comments, before a final decision is taken.

6. Expert lead selection criteria

The following selection criteria have been taken into account to select the Expert Leads:

Scientific expertise (score .../8) including

- Scientific ecological knowledge of biological quality element (phytoplankton or benthic invertebrate fauna) (score .../3)
- WFD applied research (score .../2)
- Statistical knowledge/experience (score .../3)

Intercalibration expertise (score .../10)

- Experience with intercalibration process (score .../5)
- Understanding of intercalibration problems, suggestion for way forward given, including new valid ideas for improvement, consistent with the guideline (score .../5)

After the ranking of the experts, also complementarities in scientific expertise has been taken into account, to select the most appropriate Expert Leads.

7. Expert lead contract

The selected expert leads will receive a contract from STIS/BELSPO describing their tasks. The contract will be made after reception of the total funding.

The experts will receive a fee for the total man-months to perform the intercalibration tasks, being 8800 euro per man-month of work (20 working days /month at 440 euro/day of work = 8 working hours).

8. Duration of the Memorandum of understanding

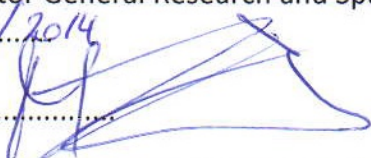
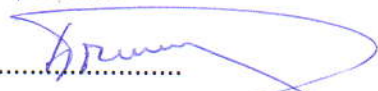
The Memorandum shall come into force on the date of its signature by all Parties. It shall cover the entire funding period of 2014. The Parties are aware that the agreement to their participation in a joint Pilot Action includes their financial commitment for the whole funding period of the 2014 project.

9. Annexes

- Annex I: Work plan as agreed on 3 March 2014 and endorsed by the independent Intercalibration Review Panel (organised by JRC), and task distribution per selected Expert Lead for 2014
- Annex II: Contact persons for this joint action
- Annex III: Preceding organization and decision on the Pilot Action by the JPI Oceans Management Board + Specific Aims of the Pilot Action
- Annex IV: Background on the Water Framework Directive and Added value of the JPI Oceans Pilot Action

We, the undersigned, do hereby agree to the terms and conditions specified in this Memorandum of Understanding including the annexes.

Flemish Environment Agency (VMM), Belgium Name: Philippe D'Hondt Function: Administrator General Flemish Environment Agency Date <u>3/07/2014</u> Signature <u>Dirk Waegeman</u> Algemeen Directeur Integraal Waterbeleid	FPS Health, Food Chain Safety and Environment, Belgium Name: Roland Moreau <u>20/06/2014</u> Function: Director General Environment Date Signature <u>[Signature]</u>
Lower Saxony Water Management, Coastal Defence and Nature Conservation Agency, Germany Niedersächsischer Landesbetrieb für Wasserwirtschaft, Küsten- und Naturschutz - Betriebsstelle Brake-Oldenburg - Dienstgebäude Oldenburg 26122 Oldenburg, Ratsherr-Schulze-Str. 10 26028 Oldenburg, Postfach 38 44 Telefon 04 41 / 7 99 - 0 Name: Jürgen Knaack Function: Head of working group Date <u>26.06.2014</u> Signature <u>[Signature]</u>	Danish Nature Agency, Denmark Name: Sara Røpke Function: Head of Division Date <u>3/7-14</u> Signature <u>[Signature]</u>
The French National Agency for Water and Aquatic Environments (ONEMA), France Name : Elisabeth Dupont-Kerlan Function : General Director Date <u>25/06/2014</u> Signature La Directrice Générale de l'ONEMA Par délégation, La Secrétaire générale Sophie GRAVELLIER	Environmental Protection Agency, Ireland Name <u>ANDREW FANNING</u> Function <u>PROGRAMME MANAGER, EPA</u> Date <u>2/7/2014</u> Signature <u>[Signature]</u>
Rijkswaterstaat (Ministry for Infrastructure and the Environment), Centre for Water Management, The Netherlands Name: H. de Wilde Function: General Director Date <u>15-07-2014</u> Signature <u>[Signature]</u>	Norwegian Environment Agency, Norway Name: Yngve Svarte Function: Head of Department Date <u>20.06.14</u> Signature <u>[Signature]</u>
Swedish Agency for Marine and Water Management, Marine and Water Administration, Sweden Name: Marie Berghult Function: Head of Division for Marine and Water Management Date <u>1 July 2014</u> Signature <u>[Signature]</u>	Department of Environment, Food and Rural Affairs (Defra), United Kingdom Name <u>DAVID COOPER</u> Function <u>Deputy Director Water Quality - Defra</u> Date <u>5/6/14</u> Signature <u>[Signature]</u>

The JPI Oceans Name: Kathrine Angell-Hansen Function: Director JPI Oceans Date 07.07.2014 Signature 	
Belgian Science Policy Office (BELSPO), Scientific and Technical Information Service (STIS) Name: Frank Monteny Function: Director General Research and Space Date <u>26/6/2014</u> Signature 	Department Economy, Science and Innovation (EWI) Name: Dirk Van Melkebeke Function: Secretary General Department EWI Date <u>26/6/14</u> Signature 

Annex I

Work plan as agreed on 3 March 2014 and endorsed by the independent Intercalibration Review Panel (organised by JRC), with task distribution per selected Expert Lead for 2014

CW PHYTOPLANKTON all parameters	Member States	Man-months needed = 20 working days/month	Man-months to be performed in 2014
Type NEA 1/26a	FR, ES, IE, NO, UK	4,5	1
Type NEA 1/26b	BE, FR, NL, UK	4,5	2
Type NEA 3/4	NL, DE	6	1
TW PHYTOPLANKTON all parameters			
Type NEA 11	BE, FR, ES, IE, NL, PT, UK	4	(2015)
CW BENTHIC INVERTEBRATES			
Type NEA 1/26	BE, FR, DE, DK, NL, ES, IE, NO, UK, PT	3,25	3.25
Type NEA 3/4	DE, NL	2,25	(2015)
TW BENTHIC INVERTEBRATES			
Type NEA 11	BE, FR, DE, ES, IE, NL, PT, UK	8	3.55
Total lead experts		32,5	10.8

Expertise JPI Oceans		2	1
-----------------------------	--	---	---

Total months	8800 euro/month	34,5	11.8
Total cost		303.600	103.840 To be paid: 104.000

Annex II

Contact persons for this joint action

Environmental authority	Contact person(s)
<i>Belgium:</i>	
Flemish Environment Agency (VMM) Address: A. Van de Maelestraat 96, 9320 Erembodegem	Veronique Van Den Langenbergh, Wim Gabriels
FPS Health, Food Chain Safety and Environment Address: Place Victor Horta, 40/10, 1060 Saint-Gilles	Michael Kyramarios
<i>Germany:</i>	
Lower Saxony Water Management, Coastal Defence and Nature Conservation Agency (Niedersächsischer Landesbetrieb für Wasserwirtschaft, Küsten- und Naturschutz) Address: Ratsherr-Schulze-Str. 10, 26122 Oldenburg	Jan Witt
Federal Ministry for the Environment, Nature Conservation und Nuclear Safety Division WA I 1 "General, Fundamental, International and European Aspects of Water Management" Address: Postfach/PO, Box 120629, 53048 Bonn	Axel Borchmann
<i>Denmark:</i>	
Danish Nature Agency Address: Haraldsgade 53 DK, 2100 Copenhagen Ø	Sara Røpke Ivan Karottki
<i>France:</i>	
The French National Agency for Water and Aquatic Environments (ONEMA, Office national de l'eau et des milieux aquatiques) Address: DAST, 5 square Félix Nadar, 94300 Vincennes	Marie Claude Ximenes
Ministère de l' Ecologie, de l' Energie, du Développement Durable et de l' Aménagement du territoire Address: La grande Arche - Paroi Sud, F-92055 - Paris La Défense	Isabelle Terrier

<i>Ireland:</i>	
Environmental Protection Agency Address: Richview Clonskeagh Road, Dublin 14	Shane O'Boyle Robert Wilkes
<i>The Netherlands:</i>	
Rijkswaterstaat (Ministry for Infrastructure and the Environment), Centre for Water Management Address: PO Box 17, NL 8200 AA Lelystad	Hans Ruiter
<i>Norway:</i>	
Norwegian Environment Agency Address: postboks 5672, 7485 Trondheim	Maria Pettersvik Arvnes Steinar Sandoy
<i>Sweden:</i>	
Swedish Agency for Marine and Water Management, Marine and Water Administration Address: Box 11 930, 404 39 Gothenburg	Anneli Harlen, Jonas Svensson
<i>United Kingdom:</i>	
Environment Agency UK Address: Kingfisher House, Goldhay Way, Orton Goldhay, Peterborough, PE2 5ZR, England	Alison Miles

<i>JPI Oceans Secretariat:</i>	
Address: Troonstraat 130, 1050 Brussels, Belgium	Wendy Bonne Kathrine Angell- Hansen
<i>BE Management Board members JPI Oceans:</i>	
Belgian Science Policy Office Address: Avenue Louise 231, 1050 Brussels, Belgium	David Cox
Flanders Authority, Dept. Economy, Science and Innovation Address: Koning Albert II-laan 35 box 10, 1030 Brussels, Belgium	Rudy Herman Gert Verreet (from 1 October 2014)

Annex III

Preceding organization and decision on the Pilot Action by the JPI Oceans Management Board

- Following the conclusion of the Water Directors at their meeting of 4 December 2013, the NO and BE SCG representatives sent a request to JPI Oceans on 19 December 2013, to ask how JPI Oceans could be of assistance in completing the North-East Atlantic (NEA) intercalibration, in due time before a NEA meeting on 22 January 2014.
- In this request, JPI Oceans was approached concerning its potential involvement in finding a fit for purpose solution to
 - o coordinate a joint funding from the environmental authorities,
 - o find sufficient leadership expertise where this is lacking, due to constraints in the availability of national experts to take up these leadership tasks.
- The proposal of outline, prepared by the Belgian delegation in JPI Oceans, together with NO and BE environmental authorities, was agreed as the best way forward by the environmental representatives from 9 of the 10 attending involved countries at the meeting of 22 January with JRC and DG ENV. SE, who was not present at the meeting, agreed later to contribute as well.
- The proposal was presented as a JPI Oceans Pilot Action at the JPI Oceans Strategic Advisory Board meeting of 26 March and the Management Board meeting of 27 March, where it received approval.

Specific aims of the Pilot Action

- In relation to **(a) the coordination of a joint funding from the environmental authorities**, JPI Oceans started to work out the following solution:
 - The Belgian Science Policy Office (BELSPO), one of the Management Board members of JPI Oceans, involved one of their existing services (STIS - Scientific and Technical Information Service) that is mandated to deal with incoming and outgoing budgets from and to different countries, transparently and independently from the other Belgian government administration. BELSPO has kindly offered to cover the administration costs for the joint funding.
 - DE, FR, BE, NO, NL, IE, UK, SE, DK environmental authorities have committed budgets, PT environmental authority will contribute in-kind with 2 expert leads from Portuguese universities.
 - The Belgian delegation in JPI Oceans has been organising a budget compilation, based on the work plan that was agreed with JRC on 3 March 2014 to amount to 34,5 full time man-months needed. One man-month of the work plan was specified to include 20 working days. This work was envisaged to be spread over 2 years: 2014-2015, the budgets for this to be paid in 2 payments or 3 payments, dependent on the administrative possibilities.
 - The amount of the first payment in 2014 currently amounts to 104.000 euro, which can cover 10,8 man-months of work in 2014 + 1 man-month from JPI Oceans' side to assist the expert leads.
 - Environmental authorities would be able to start transferring their budget from the beginning of June 2014 onwards.
- In relation to **(b) finding sufficient leadership expertise where this is lacking**, JPI Oceans started to work out the following solution:
 - A selection procedure has been organised to contract experienced scientific expert leads that will perform required analyses from a joint funding mechanism. The experts needed to apply in their own name, between 22 April and 18 May. They are not allowed to delegate the work to any other colleagues if not specified from the beginning, as they will be selected based on personal skills and intercalibration experience.

-
- The JPI Oceans Management Board has been invited to send names of experts to include in the selection process (focusing on the gap for phytoplankton) by 2 May.
 - All the experts that have been communicated by environmental authorities represented in the WGA ECOSTAT and by scientific institutions in JPI Oceans have received an invitation to respond to a list of selection questions for submission of their candidature, as all candidates would be screened.
 - On 26 May, environmental authorities and JPI Oceans Management Board members have received an overview of the ranking of the experts, for potential comments from their side. The selection of BQE expert leads is a shared ownership of Member States (JPI Oceans and the environmental authorities). Therefore it was considered appropriate to give both an opportunity to comment on the ranking of the experts.
 - In June-July contracting can start when the following criteria are met:
 - The contract man-months for the lead experts for comparison calculations should only start to run when the data sets are considered to be complete for all involved Member States to start further comparison work.
 - The MoU is signed by all parties, the funds are transferred + the contract with the expert lead is signed by both parties.
 - A limited short-term effort from Wendy Bonne, working in the JPI Oceans Secretariat, is considered feasible to provide further additional guidance to the NEA expert leads (2 man-months in total, with 1 man-month in 2014).

Annex IV

Background on the Water Framework Directive

The EU Water Framework Directive (WFD) was adopted in 2000, the purpose being the establishment of a framework for protection of inland surface waters, transitional waters, coastal waters and groundwater. The overall aim for these surface and groundwater 'water bodies' is to achieve good chemical and ecological status by 2015.

The WFD is the legislation tool with strongest emphasis on regional cooperation and comparability and underwent a scientifically underpinned intercalibration exercise. The essence of intercalibration is to ensure that the definition of ecological status in Member States' assessment methods for biological quality corresponds to comparable levels of ecosystem alteration. Comparable environmental assessments are of crucial importance for industry to receive equal treatment on environmental sustainability criteria at the European internal market, instead of heterogeneous assessment levels and protection measures.

Significant gaps still exist despite 2 phases of intercalibration for coastal and transitional waters. A review concluded that a degree of unevenness in the results of intercalibration across Europe reflects differences in the degree to which nations have been politically willing, and/or economically able, to prioritise basic and applied aquatic research and invest in water resource management⁽¹⁾.

Added value of the JPI Oceans Pilot Action to the 3rd intercalibration phase

The main reasons why JPI Oceans can add value to the 3rd intercalibration round for the NEA GIG and therefore to the Member States:

- There was a lack of available experts to fulfil the expert lead tasks for intercalibration, due to constraints in the availability of national experts to do this.
- Environmental authorities were prepared to pay the expert leadership tasks through a joint funding mechanism to increase the value and cost efficiency of their national investments in the intercalibration.
- This action would reduce fragmentation and increase efficiency in relation to the Water and Marine Strategy Framework Directive.
- JPI Oceans can add value by increasing the critical mass (where needed) and awareness in the scientific community to be able to deal with the remaining scientific problems of the WFD intercalibration.
- Research on scientifically sound and comparable environmental assessment can be a competitive advantage of Europe in relation to other parts of the world. Unfortunately, too few scientists have exploited this area.
- Make a step to start a long-term dialogue between environmental authorities and the scientific community of the Member States to solve remaining scientific challenges jointly where appropriate and acceptable, possibly also in connection to the Marine Strategy Framework Directive.

Benefits for JPI Oceans

- JPI Oceans could show its added value and the beneficial impact it could have to facilitate cooperation across and within Member States.
- It will increase experience with joint data collection and analysis.

¹ Davis, S.P. [Ed.] (2012), Peer Review of the Intercalibration Exercise Phase II, European Water Framework Directive. Final draft report, Joint Research Centre - European Commission, 261 pp.

- Marine industry needs homogeneous and comparable assessment of impacts of pressures and equal treatment on environmental sustainability criteria instead of heterogeneous assessment levels and protection measures.
- It is a typical example where a very strong science-policy interface is needed. JPI Oceans can gain experience through this pilot action on how to further pursue science to policy being one of the core objectives of JPI Oceans as spelled out in the vision document.
- The pilot action will test procedures for the implementation of joint funding that surpass the traditional model of joint calls.

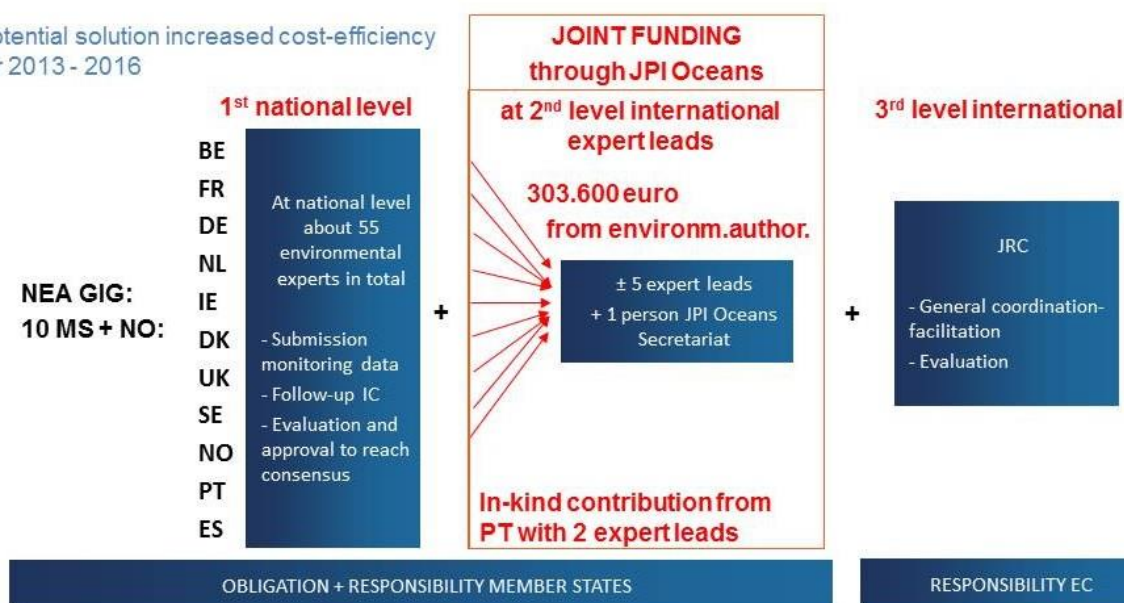
More background information on the intercalibration exercise for coastal and transitional waters

A past of fragmented funding, dependence on in-kind contribution of leaders that were overloaded with scientific and statistical difficulties

In the past, the expert leaders were provided by in-kind contributions of a few Member States, loading specific Member States with a lot of responsibility on sometimes complex analytical problems, without the help of an organisation supporting them to perform required analyses in the most cost-efficient way. MS were responsible at 2 levels: (1) for the monitoring, compilation of data, (2) scientific comparisons and the needed expert leaderships for the biological quality elements. The need for scientific coordination, exchange between and back-up for Member States and sea basins is substantial and could only be covered partly in the past, which led to repetition and inappropriate training for similar analysis tasks among the Member States and, therefore, at times also to unsuccessful intercalibration, in addition to the complexity of the analyses and the nature of coastal and transitional waters. The 3rd level of responsibility was facilitation, evaluation and cross-sea basin information exchange performed by the European Commission. Therefore, the Commission's Joint Research Centre (JRC) coordinated the overall process, the reporting, the European meetings and the evaluation of results, but was not responsible for the efficiency of scientific expert performance of the Member States.

Simplified figure of the intercalibration responsibilities:

Potential solution increased cost-efficiency
for 2013 - 2016



A future of joint funding

Environmental authorities from Member States in the North-East Atlantic have expressed that they are prepared to jointly fund the minimum needed scientific work by joint budget raising from FR, DE, DK, IE, NL, NO, SE, UK, BE. PT also supports the initiative through in-kind contribution with 2 expert leads from Portuguese universities. In cooperation with JPI Oceans a fit for purpose solution could be found for joint funding, increasing the value of the investment and finding the most appropriate expert leads.

The challenges to overcome remaining difficulties are:

- to find experienced scientific expert leads to perform required analyses in the most cost-efficient way,
- reduce fragmentation (of comparison calculation efforts),
- coordinated training,
- a mechanism for joint funding from a substantial number of environmental authorities to obtain these performance improvements.

The scientific community could also contribute significantly to some potential remaining scientific gaps, as it is very difficult to solve the gaps solely with adopted routine calculation tasks.