CSA OCEANS
JPI Oceans support action

SEVENTH FRAMEWORK PROGRAMME

Recommendations for selecting, evaluating and monitoring different types of joint actions

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1. INTRODUCTION

The purpose of this report is to develop a set of recommendations for selecting, evaluating and monitoring different kind of joint actions in JPI Oceans. These recommendations will need to strike a balance between the desired level of detail and the desired level of usefulness: The recommendations and indicators need to be sufficiently generic to grasp even very different types of action.

This report builds on previous work in the CSA Oceans project. It represents the final deliverable in a series of six that gradually builds up a knowledge base and keen understanding of the JPI Oceans' tools and mechanisms for steering, learning and implementation. In the deliverable 2.4, proposals were developed for design and management of joint actions, and the report contained a number of typical actions that are foreseen as parts of the tool box for JPI Oceans. This report on recommendations will use these actions as its point of departure.

Further, a workshop on selecting, evaluating and monitoring different types of actions was held on the 13th March 2014 on which a workshop report was produced (Deliverable 2.5). This report developed several approaches and guidelines for evaluating not only joint actions as such, but JPI Oceans as an initiative to transform and align the policy systems of the JPI partnership. In sum, guidelines and recommendations are thought of as a two-level system of actions, where the JPI policy level is the most demanding, with multiple challenges relating to identifying and evaluating actions and impacts.

This report contains firstly a further introduction to the way JPI Oceans should be understood, including its goals and objectives, without reference to which recommendations would be difficult to develop. Objectives are here understood as end-states on a given variable or domain for action that may or may not be easily measured. Then, the typical actions are spelled out with corresponding recommendations for evaluation and monitoring. These are grouped in two: Actions related to the "process" or JPI level as such, and actions related to dedicated initiatives to induce changes on the given parameters. At the actual stage of JPI Oceans, these last actions are referred to as pilot actions and meant as tests for new modes of cooperation. The deliverable 1.4 "Scope Pilot Action" described in details the background and the scope of the different pilot actions within JPI Oceans. In this report, some examples from the pilot actions are spelled out to visualize if the recommendations may find their way into concrete cases, while fourthly issues on monitoring and organization of information flows and procedures are discussed.

The recommendations developed in this report should be read as a toolbox. They include a number of possible indicators on the various dimensions that have been identified for the evaluation of JPI Oceans. Hence, the intention is not to develop a final set of measurable indicators, but rather lay out a broad set that represents a flexible toolbox. Concrete suggestions for measuring these indicators will have to be developed by the evaluator(s) being contracted to perform the different kinds of evaluations. Different indicators can also be used for different joint actions.

2. JPI OCEANS: GOALS AND OBJECTIVES

JPI Oceans is:

- A high-level strategic initiative established to provide a long-term integrated approach to marine and maritime research and technological development in Europe;
- A coordinating and integrating platform across disciplines and sectors, open to all EU Member Countries and Associated countries to the Framework Program.

The goals and objectives of JPI Oceans are manifold and complex addressing the intersections between the marine environment, climate change and the maritime economy enabled by observations, infrastructure, technologies and human capacities. More precisely, JPI Oceans has three key goals:

Box 1: Goals of JPI Oceans

- ✓ Enable the advent of a knowledge based maritime economy, maximizing its value in a sustainable way
- ✓ Ensure Good Environmental Status of the seas and optimize planning of activities in the marine space
- ✓ Optimize the response to climate change and mitigate human impacts on the marine environment

These goals are associated with some key objectives. They are here presented as end-states, that is, results or achievements in a given area, while below a further discussion on key actions that should contribute to those achievements is developed.

Preliminary objectives for JPI Oceans were presented in the deliverable 2.5: "Evaluation Guidelines for JPI Oceans: Workshop Report". Subsuming them under the overarching goals above and rephrasing them to state end-states, a set of objectives may look like the following (bearing in mind that the end-states are the value against which impacts need to be understood and measured):

- Enable the advent of a **knowledge** based **maritime economy**, maximizing its value in a sustainable way:
  - A higher degree of cross-cutting technologies across the maritime sector
  - A significant increase in the activity level of the marine bio-economy (economic output and jobs)
  - A significant increase in the role and impact of marine renewable energy technologies
  - Knowledge and technologies have reached a level where the new deep-sea frontiers are assessed and realistic to achieve
- Ensure good **environmental status** of the seas and optimize **planning of activities** in the marine space:
  - A research to policy-mechanism in place, in particular to support the implementation of the marine strategy framework directive and marine spatial planning
  - Satisfactory inter-disciplinary human capacities necessary for achieving the JPI goals

    - A satisfactory level and quality of research infrastructures for an integrated data and information base enabling industrial development and supporting maritime governance
- Optimize the **response to climate change** and **mitigate human impacts** on the marine environment:
    - Good Environmental Status (GES) of the relevant seas and oceans has been reached by 2020 by mitigation of impacts of climate change and pressures from human activities on the marine environment
    - Knowledge based management and design of marine and maritime structures and activities that significantly improves mitigation and capacity for damage reduction related to climate change impacts on coastal areas

While these objectives may be said to be the long-term desired impacts of JPI Oceans on the "subject matter", i.e. the domain of JPI Oceans, a number of key actions need to guide the activities of the JPI towards these objectives. They were discussed in the above mentioned workshop on evaluation guidelines. These are related to three levels of actions making up the very nature of JPI Oceans:

1. Policy actions, i.e. processes of coordination and alignment within and among the partner countries, governance of the partnership and activities;
2. Structuring actions, i.e. actions intended to have an impact on the alignment of the European research and innovation landscape in the marine and maritime domain;
3. Pilot actions, i.e. actions of an experimental nature intended to ensure learning and if possible effective implementation of up-scaled structuring actions (pilot actions are pilot versions of the structuring actions).

A strategic evaluation of JPI Oceans will need to direct attention towards the very failures it is expected to address. In this context this includes the classical market failures normally being the basis of public investments in e.g. R&D. However the other two categories of failures warranting public intervention are even more relevant given the mandate of JPI Oceans. The systems failures in the marine and maritime research and innovation system are the target of JPI Oceans, leading to a need for the JPI to be assessed according to five dimensions:

- To what extent JPI Oceans helps address market failures in this field, such as improving the link between the private and the social optimum of investments in R&D;
- To what extent JPI Oceans helps correct infrastructural failures, in particular investments in and coordinated use of scientific infrastructure (including dual use of society and science);
- To what extent JPI Oceans helps address institutional failures, such as regulations as well as informal ones like norms and values that typically influence participating actors in this domain;
- To what extent JPI Oceans addresses network failures like limited interactions and cooperation in marine and maritime research fields;
- To what extent JPI Oceans contributes to addressing capabilities failures like inappropriate competences, skills and qualifications in the system.

On a higher level, the level of the policy system that JPI Oceans is meant contribute to and transform, the systems view specifies four types of transformational failures that a well-founded evaluation approach should include:

- Directional failure: Is JPI Oceans able to provide an agreed direction to the transformation of the policy system, with momentum, critical mass and commitment?
- Demand articulation failure: Is JPI Oceans able to identify key user needs that are poorly articulated and aggregate them to a level on which they become a manageable issue?
- Policy coordination failure: Is JPI Oceans capable of identifying coordination opportunities and costs, both with governments/MS, between them on European level, as well as vertically between European institutions and agencies and MS or regional levels?
- Reflexivity failure: Is JPI Oceans able to induce appropriate mechanisms for learning and reflection with potential for strategic decision making?

3. POLICY ACTIONS: COORDINATION AND ALIGNMENT

3.1 ACHIEVING OPTIMAL ALIGNMENT

For the sake of the evaluation approach, alignment is defined as the end-state on selected variables or efforts of coordination, while coordination will mean the different actions supposed to lead to better alignment. Following the coordination scale by Metcalfe (1994) discussed in the workshop report on evaluation guidelines (deliverable 2.5), alignment can be achieved on different levels pursuing different types of coordination actions. For JPI Oceans it is crucial to reach an optimal level of alignment in the overall system:

- Alignment between oceans-related ministries and agencies in the partner countries
- Alignment between the policies and priorities between the partner countries

Table 1: Evaluating coordination and alignment[1]

Step	***Evaluation issues***
9. Overall joint strategy	Is it attainable? Advisable? Justification of transaction costs? Which are the benchmarks for having a joint strategy?
8. Establishing joint priorities	Have the involved parties laid down common/aligned priorities?
7. Setting mutual parameters	Have the involved parties agreed on what they **can not** do?
6. Arbitration of intergovernmental differences	In case of deep differences, is there in place a machinery for arbitration?
5. Intergovernmental search for agreement	Do they work together in a structured way? (yes: JPI)
4. Avoiding divergencies among countries/agencies	Are there rules/practices in place to ensure non-diverging positions/policies?
3. Consultation with countries/agencies	Do governments/agencies consult with others when formulating policies/positions?
2. Communication to/with other countries/agencies	Do they keep each other up-to-date? According to which rules?
1. Independent decision making	In which areas/to what degree do national players retain autonomy?

[1] Adapted from Metcalfe, L. Building capacity for integration, the future role of the Commission. Lecture given at the Schuman seminar, May 1994

For JPI Oceans, the main alignment objective is not to reach maximum integration, i.e. all relevant marine and maritime research and innovation efforts to be conducted through a highly integrated strategic agenda. Rather, and this will be a key evaluation issue, it will be to reach an optimal level of alignment, with appropriate attention to and successful efforts on the lower parts of the scale.

The scale illustrates the very types of processes JPI has to conduct to achieve a balanced alignment, i.e. alignment with acceptable transaction costs. The evaluation should include a focus on all the steps with attention to how the JPI is able to identify and initiate concerted coordination across the scale. In terms of transaction costs, it should be noted that the more coordination can be ensured on the lower end of the scale, the less costly it will be. But to ease the evaluation set-up for JPI Oceans, a simplified scale is presented below, transferred to the reality of JPI Oceans and in line with the subsequent evaluation recommendations in this document.

Table 2: Coordination and alignment actions for JPI Oceans

Optional actions	**Issues**	**Indicator example**
Overall joint strategy	High degree of complexity in JPI Oceans, and not advisable on that level?	▪ Joint strategy achieved in selected areas
Establishing joint priorities	Synergies may be reached	▪ Visible joint priorities across JPI partner countries across sectors, disciplines and countries ▪ Effective national implementation ▪ Institutional/budgetary synergies
Setting mutual parameters	Negative coordination	▪ Agreement between JPI partners on refraining from action or activity and areas of control for others
Arbitration of intergovernmental differences	Effectiveness of governance bodies in JPI Oceans	▪ Absence of open conflicts ▪ Consensus on division of labor
Intergovernmental search for agreement	Structured cooperation in governance bodies	▪ Effective procedures ▪ Low levels of opportunism
Avoiding divergences among countries/agencies	Avoiding conflicting positions	▪ Procedures in place for early warning of diverging positions ▪ Capacity for negotiation
Consultation with countries/agencies	Consultation as part of policy formulation	▪ Joint understanding of the need for consultation ▪ Effective procedures to ensure consultation
Communication to/with other countries/agencies		▪ Effective communication channels
Independent decision-making	Coordination through competition	▪ Full autonomy? ▪ Identifiable duplication/overlaps

While evaluating JPI Oceans' capacity to achieve alignment, an assessment of the JPI's capability to identify and seek solutions for coordination on lowest possible meaningful level should be included. Lower levels of coordination may be more cost-effective than higher levels; hence the imperative inherent in this system will be to ensure that coordinating actions on lower levels are preferred to those on higher levels.

3.2 PARTNERSHIP AND GOVERNANCE

While the former section addressed the alignment of the broader policy system to identify optimal capacities and levels or modalities of coordination, this section delineates the partnership on a more operational level. In this case it is recommended to lean on work done in the context of the Joint Programme – Neurodegenerative Disease Research (JPND) (see reference in the workshop report). This section is addressing the two different but highly associated areas of partnership and governance separately.

Based on the workshop on evaluation guidelines and other related work such as with JNPD, the following recommendations are suggested for evaluating and monitoring the JPI Oceans' partnership:

Table 3: Evaluating partnerships: recommended issues and indicators

Issue	Key question	Indicator example
Participation rate in JPI Oceans	Is the participation representative?	▪ Share of EU/AC MS ▪ Participation rate in dedicated actions
Mix of partnering organizations	What do they bring to the partnership?	▪ Experience in marine/maritime areas ▪ Credibility ▪ Commitment ▪ Strategies/agendas ▪ Attitudes towards JPIs goals
Attribution of results	Are observed changes attributable to JPI?	▪ One or more partners or others claim ownership
Social capital	Is the JPI endowed with sufficient human and social resources?	▪ Effective communication between partners ▪ Commitment to procedures and agendas ▪ A widespread sense of mutual trust
Available resources	Are the partners equipped with available resources?	▪ Available funding for the partnership ▪ Pooling capacities ▪ Capacities for co-funding

Evaluating JPI Oceans as governance is more demanding and relates to three key issues:

- Representative efficiency: The JPI Oceans' governance structure includes representative bodies like the Management Board and Strategic Advisory Board. Representative efficiency addresses the degree to which partners are effectively represented and so ensures legitimacy of their decisions.
- Administrative efficiency: This concerns the efficiency of management structures and processes of the JPI Oceans' secretariat.
- Relational efficiency: This addresses the management of interfaces with other ERA-related objectives, bodies and programs, and includes the overall benefits of coordination and how to measure them.

4. STRUCTURING ACTIONS

The structuring actions of JPI Oceans are here meant to be all dedicated actions or activities implemented with a clear intent to address one or more of JPI Oceans goals and objectives. It includes actions focused on the research and innovation system as such, rather than the policy system and partnership behind it, which was discussed above. This means that structuring actions

are those that intend to structure the research and innovation performing landscape and/or the very programs and policies on a national level that influence these.

While many of these actions are for the JPI Oceans' domain, they are typically also in line with the over-arching objectives of ERA. This is obviously important for JPI Oceans, being an ERA-instrument on its own. But coherence with ERA objectives should be an evaluation indicator, ensuring that the JPI, as other ERA initiatives, make up a coherent inner market and system for research and innovation.

The ERA objectives are:

- Increased effectiveness of national research systems
- Optimal levels of transnational co-operation and competition (e.g. joint programs)
- A more open labor market for researchers
- Optimal circulation, access to and transfer of scientific knowledge

Table 4: Evaluating governance

Issue	**Key question**	**Indicator example**
Representative efficiency	Is representation legitimate?	▪ High level representatives in Management Board (ministries and funding agencies) ▪ Existence of clear mandate ▪ Stakeholder legitimacy, representativeness and involvement of Strategic Adv Board ▪ Integrated advice across sectors/stakeholder groups
	Is representation effective?	▪ Effective chairing of Board meetings ▪ Competent representatives in Executive Committee ▪ Effective variable geometry in actions ▪ Development of a consistent and coherent strategic research and innovation agenda (SRIA) & implementation plan ▪ Proven capacity for implementation of agreed actions
Administrative efficiency	Is the management of JPI Ocean's secretariat effective?	▪ Well-functioning organizational structure and procedures ▪ Well-functioning preparation of board and committee meetings ▪ Capacity for learning and adaptation ▪ Capacity for negotiating diverse interests and agendas ▪ Effective/efficient implementation of MB decisions ▪ Establishment of sound governance structures in actions that require these ▪ Capability to induce appropriate analyses of gaps and bottlenecks to ensure planning and decision making
Relational efficiency	Are interfaces with other agendas effective to ensure alignment?	▪ Adherence to marine and maritime policy frameworks ▪ Cross-sectorial dialogue and coordination with ERA agendas and objectives with EU Commission and H2020

		▪ Interfaces and dialogues with industry groups ▪ Identification of non-technological barriers ▪ Effective involvement of academics, industry, regulatory agencies and policy makers ▪ Address differences or inconsistencies in policy frameworks that have impacts on a given product or process ▪ Involvement of experts and the external advisory board in ethical, regulatory and safety matters ▪ Effective communication and information system for interaction with users and producers of knowledge ▪ Effective contribution to global/regional activities through variable geometry

In the workshop on evaluation guidelines (deliverable 2.5), it was agreed that the evaluation approach should not be too detailed and complex, or focus too much on tangible outputs and outcomes that are typical of the normal evaluation procedures (often cast in an intervention logic linking challenges, rationales, objectives, activities or inputs, outputs, outcomes and impacts). Rather priority should be given to a certain simplification, with attention to the nature of JPI Oceans being a structuring tool for aligning policy and research systems in Europe. The current section reflects this focus. Table 4 presents a set of structuring actions derived from the deliverable 2.4 (Proposal for procedures for design and management of joint actions). That deliverable excluded the item of joint calls which was the focus of deliverable 2.3, and will not be included in this list either. Further, the recommendations also broadly follow the one of GPC[2] – High level group of joint programming, but adapted here as in the deliverable 2.4.

The recommendations below on structuring actions do not follow the structure of objectives for JPI Oceans. This was also the case of policy actions discussed above. Rather, the policy and structuring actions are by nature multi-purpose, and contribute typically to more than one objective. Hence, the intention in this set-up is to make the evaluation approach manageable, and flexible depending on which of these actions JPI Oceans decides to choose and implement, and to what extent. Ideally, there should be a weighting system in this set-up, illuminating the importance that the governance bodies of JPI Oceans attach to each of the actions. However, this will indirectly be done through the development of the Strategic Research and Innovation Agenda (SRIA). Herein a number of strategic choices will be made related to the substantive objectives mentioned earlier, with references to gap or bottleneck analysis, policy or structuring actions in this document, and operationalized impacts foreseen in the research and innovation system. Hence, the SRIA and the recommendations for monitoring and evaluation set out in this report should be seen as related documents.

[2] European Research Area Committee, Groupe de Programmation Conjointe (ERAC-GPC), Voluntary Guidelines on Framework Conditions for Joint Programming in Research 2010.

Table 5: Evaluating structuring actions

Type of action	Action/instrument	Key issue	Indicator example
Research and innovation	Design and management of joint calls	Successful launch of joint calls	• See separate doc on joint calls (deliverable 2.3) • Web link:
	Joint public procurement	Implemented JPP projects	▪ Agreed platform for JPPs for selection and implementation ▪ Number and scope of JPPs ▪ Significant impact on aggregate demand ▪ Identifiable new solutions on the market
	Engaging structural funds	Inclusion of JPI Oceans activities in strategic planning of structural funds for enhanced synergies between structural funds, H2020, and national/regional funding	▪ Inclusion in strategic documents for selected regions ▪ Number of co-funded activities ▪ Scope of co-funded activities ▪ Regional economic impact ▪ Regional impact on research and innovation
Connectivity	Research alliances	Creation of strategic research alliances in marine/maritime domain to achieve a more coordinated institutional structure in Europe	▪ Coverage of marine and maritime research fields ▪ Number of alliances ▪ Identifiable coordination/alignment of strategic research programs ▪ Number of co-publications and scientific impact ▪ Improved science-to policy links
	Knowledge hubs	Creation of dedicated knowledge hubs to achieve a more coherent institutional structure with critical mass in selected areas	▪ Increased scientific and tech excellence ▪ More effective tech transfer and innovation of products/technologies ▪ A significant improvement in critical mass ▪ Improved external funding ▪ Improved access to and sharing of data and results ▪ Better visibility and communication to policy makers ▪ Improved scientific output/productivity ▪ Capacity to better address challenges and ensure uptake/relevance
	Networks of people	Creation of networks of excellence as virtual networks to enhance structuring of the research landscape in Europe	▪ Greater intensity of collaboration in selected fields ▪ Higher scientific output ▪ Improved basis for continued funding ▪ Better use of infrastructures ▪ Contribution to and capacity in risk assessments in emergencies and emerging issues, like expert panels
	Network of bilateral agreements	Reduce the fragmentation stemming from bilateral agreements	▪ Number of agreements in formal networks ▪ Achieved synergies in selected fields
	Mutual opening of programs	Reduce the fragmentation stemming from independent national programs	▪ Number of openings ▪ Number of countries in participation ▪ Size of budgets in synergy
	Interacting with ERA-Nets and other activities	Creation of synergies in the ERA landscape	▪ Synergy in funding with ERA-Nets ▪ Alignment with ERA initiatives (ESFRI, SFIC, HGRM, etc) ▪ Synergies achieved with KICs, JTIs and ETPs

Capacity building	Training	Structured actions to enhance human resources in marine and maritime research and innovation	▪ Organized training for young scientists ▪ Organized training in key fields ▪ Training in research management ▪ Dedicated Ph.D. programs ▪ Cafeteria system for short term courses ▪ Industrial Ph.D.s
	Mobility	Enhanced exchange of human resources in marine and maritime research and innovation	▪ Increased intra-Europe mobility rate in the domain ▪ Greater participation of young researchers novel to international cooperation ▪ Better career paths in the research community ▪ Establishment of research management careers for female candidates
	Accessing/sharing marine infrastructures	Better alignment and exploitation of infrastructural resources	▪ Intergovernmental agreements to share selected infrastructures ▪ Intergovernmental agreements to a division of labor/responsibilities over key infrastructures ▪ Significant cost reduction impacts ▪ Significant increase in activity levels of shared infrastructures
	Procedures/agreements for TNA and sharing of infrastructures	Transparent and effective procedures agreed among partners in JPI Oceans	▪ Establishment of a legal procedural framework for transnational access ▪ Regulation of in-kind contributions ▪ Agreed rules for JPP connected to new infrastructures (see action on joint public procurement for innovation)
	Access to data	Cost-effective data collection and management	▪ Adherence to ERAs open access policy ▪ Pan-JPI agreement on location and management of key data resources ▪ Actual use of data in research by researchers external to location ▪ Effective virtual infrastructures with open access to data
Supporting actions	Feasibility study, impact assessments, workshops	Support to decision making in governance bodies	▪ Transparent and manageable system for evaluation and monitoring in place ▪ Monitoring procedures for pilot actions (see below) ▪ Effective use of supporting actions results in governance bodies
	Foresight	Forward-looking tool for decision making	▪ Selective use of foresight studies in priority areas related to gap analysis ▪ Effective exploitation of existing studies
	Emergencies/	Support to decision making in evaluation and intervention	▪ Relevance for action by JPI Oceans ▪ Contribution to pan-European contingency plans ▪ Contribution to and capacity in risk assessments ▪ Reduction of time scales for intervention ▪ Preparedness and organization of scientific input in emergency situations, e.g. expert boards ▪ Creation of structured dialogue/procedure in addressing emergencies
	Emerging issues	Issues of significant future potential	▪ Relevance for action by JPI Oceans ▪ Capacity for identifying the issue ▪ Capacity for agenda setting and mobilization

5. MONITORING ACTIONS

APPROACH TO MONITORING

JPI Oceans will develop joint actions on a voluntary basis. Each country can take part in an action on the basis of its own strategy and opportunities. In general, an action can be carried out with a combination of different typologies of actions, with the involvement of many stakeholders with different roles and responsibilities. This implies that the complexity of the structuring and governance of an action requires an appropriate approach for the monitoring of the process and of the results. Information and data can therefore be large and very diversified, which will make it difficult to manage.

Any action has a country as a lead agency and acts as the focal point. The lead agency of an action has the responsibility for the elaboration, implementation and management, acting as a hub for the other participating actors to the action. JPI Oceans will analogously act as a supranational hub for guaranteeing impact, open participation and access to results and information.

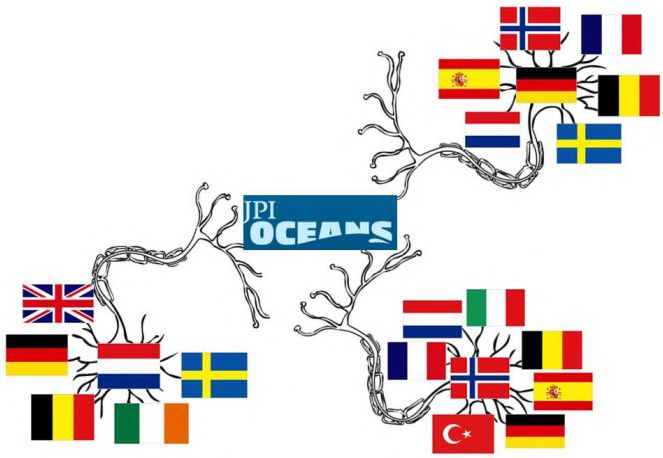

Figure 1: Sketch of an organizational form for managing information of joint actions.

Any proposer/country of an action has the responsibility for the elaboration and implementation of the proposal and acts as a hub for the other participating to the action. Relevant information is transferred to the secretariat of JPI Oceans, which acts as the liaison towards the countries which are not participating in the action. In addition relevant results will be communicated to the stakeholders and a back-up memory with specific access rules.

The approach for managing the actions, and consequently monitor them, is therefore only partially centralized, requiring a procedure to support the identification, the selection of the relevant information and the organization of the information flow.

This approach requires the establishment of a link between the de-centralized management of an action and the secretariat of JPI Oceans, in order to ensure the transparency, maximize the dissemination of the activities and results, and to increase the impact.

Each action needs therefore to define which information is relevant to describe its state of the activities, the relative level of confidentiality, and the best way to ensure that the monitoring and exchange of information is efficient and not causing too much transaction costs.

The most suitable framework condition to provide a coordinated and agreed procedure regarding the information flow would be a non-binding agreement between the lead agency, the MB and the secretariat. In the agreement, the chain of responsibility and access regarding the management of information, indicators, data and metadata, results, can be defined.

Access modes levels should include:

- restricted to action participants (for documents not relevant to stakeholders or general public);
- restricted to action participants and MB;
- freely available to the public (preferably addressed to different target groups).

It is out of the scope of this document to conceive a comprehensive list of information typologies and their possible common access levels, and given the flexibility of the actions, it would only be a limitation. Nonetheless, to define the details needed to categorize information from different sources, we provide a possible text, which is in practice the set of metadata useful to correctly describe the relative information.

INFORMATION METADATA SCHEME

Action title/sub-title:
The action that produced the piece of information (workshop, observing campaign, joint call etc.)
Authors/Organization(s):
The list of who produced/provided the piece of information
Date of production/publishing:
Date
Dissemination level:
Restricted to the Action participants, MB, stakeholders, paid access, freely available
Typology of information:
participant list to workshop, panels of experts, funded projects, scientific publication, metadata set, dataset, daily article, dissemination article, agreement etc.
Target group:
MB, public authorities, specific stakeholders, public
Location:
Link to the source of information (journal, webpage, interview, repository, organization etc.)
Short description:

6. PILOT ACTIONS

6.1 GUIDELINES FOR EVALUATION

Pilot actions have emerged as a way for JPI Oceans to launch early activities aiming at demonstrating the benefits of joint actions within the JPI framework. They have been endorsed as a tool to test procedures and instruments of cooperation to see how joint programming can add value to other activities.

More precisely, they have been defined by JPI Oceans as:

"an early action that aims to test new instruments for cooperation to demonstrate the added value of JPI Oceans".

Hence, pilot actions represent experimental approaches to develop the joint programming modality. As such, pilot actions are vehicles for moving JPI Oceans forward and evaluation becomes a necessary tool to ensure consistent learning and feedback from them to ensure corrective measures.

Pilot actions are not based on the Strategic Research and Innovation Agenda (SRIA). Routine procedures and well-known instruments such as simple calls for proposals shall not be the prime focus of pilot actions as they have been extensively tested through ERA-nets and other European initiatives. A pilot action should demonstrate the added value of JPI Oceans as a coordinating and integrating platform. They should be fit for purpose and could take on a number of different forms (incl. any combination of typology of actions, such as networking, joint calls, foresight activities etc., see deliverable D2.4 for more details). Pilot actions are therefore also supposed to test and provide potential templates for activities to be developed on the basis of the SRIA. Background and scope of the different pilot actions within the JPI Oceans have been fully detailed in deliverable 1.4.

In order to monitor and evaluate the process and the impact of any action, some pilot actions are described adopting the terminology commonly used within the framework of JPIs, with the view that the Management Board and the implementing organizations focused their activities in finding the best way to achieve feasible objectives and not in the procedures or instruments adopted to achieve them.

Pilot actions may include one or more of the following activities (or other if relevant):

- Developing common monitoring programs for data collection
- Developing common research programs through (open) calls
- Developing common data bases and standards for sharing data
- Sharing infrastructures for monitoring and research
- Developing joint strategic studies and foresight activities
- Establishing sustained networks for training and exchange of researchers
- Establishing other networks at the interface of science, society and economy.

When selecting, evaluating and monitoring pilot actions, attention needs to be directed towards the fact that they are not linked to one single objective or policy/structuring action. Rather, they contain a number of instruments and mechanisms that typically address several objectives and actions. Hence they must be assessed according to their ability to add value to the JPI Oceans repertoire in broad terms.

Some explicit criteria have been developed to ensure appropriate selection and initiation of pilot actions:

- The pilot action addresses cross-cutting issues in line with the goals and objectives of JPI Oceans, as expressed in the Vision document.
- The pilot action will have a quick start, making primarily use of existing capacities and resources. Pilot actions should ideally be aimed at “low hanging fruit”.
- The pilot action requires the support of at least 4 countries represented in JPI Oceans.
- The pilot action has a committed leader.

The workshop on guidelines for evaluation (deliverable 2.5) highlighted several items that should be covered for pilot actions:

For selection:

- Assessment of general eligibility of a proposed action within the realm of the vision and goals of JPI Oceans
- Assessment of relevance related to a specified check-list
- Assessment of a-priori added value of the action
- Assessment of likely outputs and impact of the action
- Assessment of the action's resource-base and commitment among partners

For evaluation:

For evaluation of the pilot action there should be a standard procedure, bearing in mind that these pilot actions are not standard interventions where their usefulness lies in the immediate output or outcome, but rather in their role in enhancing the toolbox of transnational cooperation and coordination in the area of marine and maritime research. This means that the evaluation of the pilot actions, taking the shape of a summative evaluation where results are key, could include the following items:

- Input assessments, with indicators such as resources committed, committed leader
- Output assessments: with identification of tangible outputs produced by the pilot action
- Outcome assessments, with a focus on less tangible results with indicators such as potential for avoiding not necessary duplication and reducing fragmentation.
- Impact assessments, with a preliminary evaluation of the likely overall impact the pilot action could have if up-scaled as a normal initiative. This means that this part of the evaluation needs to relate to the outcomes to the very objectives of JPI Oceans as a platform for aligning European efforts and creating synergies.
- A final SWOT-analysis bringing the elements of the evaluation together in a coherent view on strengths, weaknesses, opportunities and threats related to the action as a decision-making tool feeding back into the strategic process of JPI Oceans.

6.2 EXAMPLES FROM PILOT ACTIONS

Pilot actions indicators have not yet been defined but are here suggested as recommendations for future actions.

Ecological aspects of Micro-plastics: this action is the more complex and diversified in terms of typologies of adopted activities. It was proposed in order to address an emerging issue. It has then dynamically developed with the interaction and negotiation between researchers, Management Board representatives and other stakeholders in order to plan a feasible roadmap to address the challenge of filling a research gap and finding solutions to the possible risks of the impacts of micro-plastics for economy and human health. In this case, experts were selected and asked to discuss the topic and make a proposal to the Management Board. This proposal has been also submitted for peer review by external experts (this first phase can therefore be associated to what is commonly referred to as a 1) knowledge hub). An 2) inter-laboratory study (first in the world) will be carried out

(implying a sort of research alliance between the infrastructures' owners) and 3) a joint call will be probably launched in the near future. The process has been also supported by 4) a foresight study and a 5) bibliometric study for the analysis of the research expertise and capacity at international level.

In this case, the system has adapted successively in order to fit the purpose of addressing the emerging issue with feasible actions adopting a coordinated approach.

Multi-use of Infrastructure for monitoring in the North Sea: this action aims at supporting the observing system reducing the fragmentation and costs of acquisition and management of data. It is a collaborative action, in which researchers are not the primary actors. Indeed, infrastructures' owners and managers are mainly involved to set-up integrated monitoring surveys, enhance integration of monitoring efforts and promoting data sharing and integrated information systems. In these terms, the governance is evolving from an independent decision making process to a coordinated long-term process which is, in this case, not linked to the duration of a project, such as an I3 coordinated and support action funded by EC.

WFD intercalibration for coastal and transitional waters: this action aims to solve remaining scientific challenges of the Water Framework Directive, proving the comparability of different assessment methods. Primarily, the main result of this action is in the joint funding from environmental authorities for targeting the expertise and reducing the fragmentation at national level, achieving a cost efficient scientific support to policy. This implied an interaction with different public authorities and will impact on the quality of the assessments too.

Ecological aspects of deep-sea mining: this action can be, at first glance, associated to a joint observing campaign, as many others. It consists in fact of a research cruise on board of a German vessel where researchers from different countries are hosted. Indeed, this is not purely a pool of researchers who self-organized for a curiosity driven project but it is a Member State driven joint initiative, involving joint funding and a structured dialogue with high level representatives for addressing the impacts of deep sea mining as a challenge for governments to balance the support to the economy and the environmental protection.

6.3. RECOMMENDED SELECTION AND EVALUATION CRITERIA FOR PILOT ACTIONS

Based on the above, a number of criteria for selecting and evaluating pilot actions have been developed. As many of the selection criteria also represent evaluation criteria, the table below highlights both. It should also be noted that evaluating the pilot actions needs to be based on the very objectives that are formulated for each one. The yes/no in the evaluation column means that this criteria is relevant/useful for evaluation in terms of factual outcomes/results.

Table 6. Selection and evaluation criteria for pilot actions

General eligibility		*Selection*	*Evaluation*
1	Can the pilot action cause a prejudice, conflict of interest or unfair cost/benefit to any of the partners in JPI Oceans?	*YES/NO*	*YES*
2	Does the pilot action clearly address cross-cutting issues between the marine environment, climate change and the maritime economy, relevant for JPI Ocean (as described in the vision document)?	*explain*	*NO*

	Which ones in particular?		
3	Does the pilot action fit the goals and objectives of JPI Oceans? Which ones in particular?	*explain*	*YES*
Relevance			
4	Does the pilot action test procedures, instruments and ways of co-operation, which may become part of standard tools and instruments of JPI Oceans? Which ones in particular?	*explain*	*NO*
5	Does the pilot action have a clear European or regional dimension in terms of its objectives?	*YES/NO*	*YES*
6	How many countries have expressed their interest in participating in the pilot action?	*give #*	*give #*
7	Does the pilot action reflect societal, scientific and/or economic needs, calling for an integrated, coordinated approach? Which ones in particular?	*explain*	*NO*
Added value			
8	Does the pilot action address an issue that clearly profits from a multi-national approach, as compared to national actions?	*YES/NO*	*YES*
9	Does the pilot action contribute to avoid duplication at national level, and creating critical mass at the European level?	*YES/NO*	*YES*
10	Does the pilot action contribute to reduce fragmentation on a European level?	*YES/NO*	*YES*
11	Does the pilot action explore and/or utilize supranational synergies and complementarities? Which ones in particular?	*explain*	*YES*
12	Why should this action be implemented by JPI Oceans as opposed to another national or international body?	*explain*	*NO*
Impact			
13	Does the pilot action impact on societal, economic, scientific, technological and/or political drivers of importance to the goals and objectives of JPI Oceans? Which ones in particular?	*explain*	*NO*

14	Does the pilot action establish structures or processes that facilitate future collaboration of partners in JPI Oceans? Which ones in particular?	*explain*	*YES*
15	Can the pilot action be conducted with the current capacities and resources of the interested countries?	*YES/NO*	*YES*
16	Can the pilot action be realized within a realistic time frame?	*YES/NO*	*YES*
17	Does the pilot action overlap with or duplicate ongoing initiative at the European level?	*YES/NO*	*YES*
Other issues			
18	Does the pilot action require a substantial amount of seed money?	*YES/NO*	*YES*
19	Is it feasible to implement the pilot action with in-kind contributions?	*YES/NO*	*YES*
20	Will the pilot action deliver tangible outcomes? Which ones in particular?	*explain*	*YES*
21	Will the pilot action deliver outcomes on a relatively short term (< 2 years)?	*YES/NO*	*YES*
22	Will the pilot action deliver outcomes aimed at (1) providing policy advice, (2) scientific progress, (3) societal relevance, (4) economic development	*Yes/NO*	*YES*