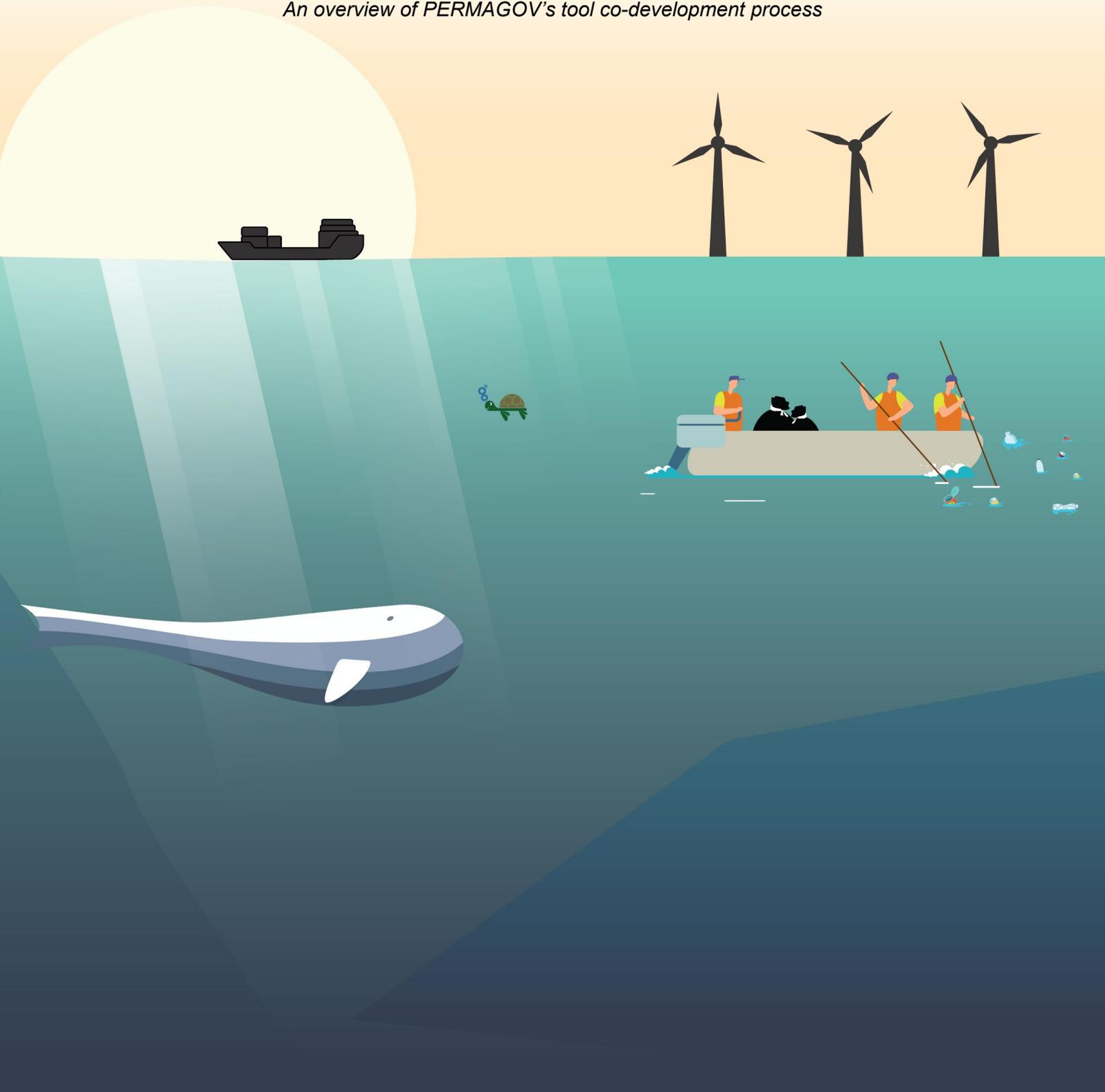


PERMAGOV

D3.2 Report on the Development of Diagnostic Tool

An overview of PERMAGOV's tool co-development process



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Authors	<p>Wesley Flannery (QUB)</p> <p>Lindsey West (QUB)</p> <p>Kåre Nolde Nielsen (UiT)</p> <p>Maaike Knol-Kauffman (UiT)</p> <p>Cristian Passarello (RIFS)</p> <p>Ben Boteler (RIFS)</p> <p>Nelson F. Coelho (Aalborg University)</p> <p>Sun Cole Seeberg Dyremose (AAU)</p> <p>Päivi Haapasaari (Syke)</p> <p>Troels Jacob Hegland (AAU)</p> <p>Shannon McLaughlin (WUR)</p> <p>Hilde Toonen (WUR)</p> <p>Riku Varjopuro (Syke)</p> <p>Judith van Leeuwen (WUR)</p>
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Executive summary

Institutional barriers are critical obstacles to policy implementation. Such barriers hamper the performance of marine policies and may also limit the potential for adapting governance arrangements in order to improve policy performance. Instigating transformation within longstanding governance arrangements is very challenging and is often hampered by institutional barriers such as path dependency, bounded rationality, and institutional inertia. Addressing institutional barriers is imperative for the effective implementation of the EU Green Deal. The performance of existing governance regimes must, therefore, be evaluated to ensure that they deliver on current policy, to understand their capacity to implement new policies and to identify institutional barriers that may impede effective policy implementation and adaptation. While there is an emerging literature on identifying these barriers, very little research has been conducted on developing and implementing solutions to them. The PERMAGOV project will go beyond the state-of-the-art by developing an in-depth understanding of these and other institutional barriers in different case studies and co-develop collaborative marine governance strategies that overcome them and improve the performance of marine policies. To develop an in-depth understanding of institutional barriers, PERMAGOV will develop an institutional barrier diagnostic tool.

This deliverable describes PERMAGOV's process of co-developing a simple diagnostic tool for identifying institutional barriers in practice. The tool builds on the systematic literature review, reported in Deliverable 3.1 (See here for a summary of [Deliverable 3.1](#)). To turn the literature review into a usable diagnostic tool we co-developed an approach with end-users, experts and stakeholders to simplify how institutional barriers are described and to make it easier to identify and analyse them in our case studies. Building on in previous research (Oberlack 2017) the systematic review identified 11 institutional attributes which may give rise to institutional barriers: actor eligibility; actor roles and responsibilities; actor control; actor accountability; actor connectivity; conflict mechanisms; development and use of knowledge; scale of institutions; rigidity of institutions; formality of institutions; and institutionalized incentives.

These attributes are best understood as components of the governance system where barriers may occur. Tracing barriers back to specific institutional attributes is key to our diagnostic approach. For example, institutional inertia might arise due to the rigidity of an institution, making it difficult to adapt to new issues or situations, or it might arise due to actors exerting control over an institution to preserve the status quo. Building on these 11 institutional attributes we developed simple descriptions of the types of barriers that might arise in each component. The simplified descriptions were tested and refined through end-user consultations, where they also provided real-world examples to exemplify these barriers, and a stakeholder workshop. A final diagnostic table was co-produced, which will be used in each case to identify and diagnose institutional barriers.

1. Introduction

Institutional barriers curtail the performance of governance arrangements. Institutions are understood here as “the cluster of rights, rules, and decision-making procedures that give rise to social practices, assign roles to participants in the practice, and guide interactions among occupants of these roles” (Young, 2008 xxii). Institutions impose form and consistency on human activities, foster expectations and the creation of societal norms, and structure social action (Ostrom, 2000). Often new marine policies are developed without reflecting on the institutional changes that are necessary for effective implementation. Implementation of new marine policies tends to be facilitated within the existing fragmented governance frameworks which can negate their effectiveness. The institutional analysis literature illustrates that this approach to policy implementation is hampered by several well-recognised issues, including, policy layering, path dependency, bounded rationality, institutional inertia, and resistance by powerful actors. These types of institutional barriers are deeply rooted in prevailing regime complexes, and if left unaddressed will continue to hamper effective policy implementation. PERMAGOV considers these issues to be the symptoms of deeper institutional design issues. To develop solutions to these barriers it is important to trace their origin to specific institutional attributes. Institutional diagnostics has generated considerable interest over the last two decades, especially among those seeking to assess how particular design choices affect the performance of institutions established to address environmental issues (Young, 2019). However, it has not yet developed into a practice that is useful to policymakers and stakeholders in making choices for the design or adaptation of regimes (Young, 2019).

Institutional barriers to the implementation of marine polices can be recognized as a transdisciplinary challenge: It is a challenge that will not be effectively addressed through the development of scientific alone knowledge but through collaboration between researchers and actors that have a role in the relevant governance arrangements. PERMAGOV’s co-creation approach sought to address this issue. PERMAGOV project has adopted a co-creation approach (Mauser et al. 2013) to identify and address institutional barriers. This work is organised into three stages. First, we performed a structured review of institutional barriers (Task 3.1, reported in Deliverable 3.1). Second, based on this review, we developed a diagnostic tool for identifying institutional barriers in cooperation with end-users (T3.2). The development of this tool is the focus of this document. Third, and as the final step, the diagnostic tool will be used by end-users to identify institutional barriers in the context of the PERMAGOV case studies (T3.3). This report outlines the outcome of T3.2, i.e. the diagnostic tool and how it was developed. Therefore, together with T3.1, it contributes to PERAMGOV’s specific objective to develop a typology and a diagnostic tool to identify institutional barriers.

Due to the complexity of institutional barriers, it was decided to make the diagnostic tool as simple as possible and to ensure it was understandable and useable by non-academic partners and stakeholders. After the completion of the systematic scoping review (outlined in Section 2 below), the diagnostic tool was developed in two phases, with each seeking to simplify the language and approach used in the tool. The first phase in developing the diagnostic tool involved translating the output of the literature review into non-academic language and sense-checking this with PERMAGOV end-user partners (see Section 3 and associated appendices for a fuller description of this process). The main outcome of this phase was the need to further refine our description of institutional barriers down to one simple sentence each and to provide examples of each barrier to make it easier for non-experts to understand.

The second phase of tool development was a workshop with external stakeholders and experts. Here, the simplified description and examples for each barrier were presented to stakeholders. They were then asked to rank them on two matrices (see Section 4 for a more detailed account of the workshop tasks). Reflecting on the outcomes of the workshop, the tool was refined a final time (see Section 5) and will be used in PERMAGOV cases to diagnose institutional barriers in practice. Through key informant interviews and desk-top reviews, the diagnostic tool will be applied in PERMAGOV case

studies to (1) identify existing barriers; and (2) refine and validate the tool. The outputs of this initial diagnosis will be reported in a policy brief in June 2024.

2. Systematic Scoping Review

A large number of studies have reported on barriers to marine policy implementation in Europe. The focus of the systematic scoping review was to extract the cumulative learning from this body of literature. 82 articles were systematically analysed with regard to institutional barriers to marine policy implementation in Europe (see summary of [Deliverable 3.1](#)). The review built on Oberlack (2017) who provides a useful categorisation of key governance features, which he calls institutional attributes, that can give rise to institutional barriers. Oberlack (2017) proposed a set of institutional barriers for the context of climate change adaptation. An adapted version of Oberlack's typology provided the initial set of types of institutional attributes, barriers and indicators of barriers used in the coding of articles. Additional attributes, barriers and indicators were added in the process of coding articles. Our scoping review produced a list (typology) of 11 institutional attributes, related barriers and issues they may cause (See Table 1). From the analysed articles, institutional barriers identified under the institutional attributes Scale of Institutions, Development and Use of Knowledge, and Actor Control were the most frequently cited. Owing to its origins in the academic literature, the review was highly conceptual and needed to be translated into non-academic language to ensure it was usable by our end-users.

Institutional Attribute	Description of barriers pertaining to institutional attributes	Governance Issues
Actor eligibility	Lack of (appropriate) boundary rules that regulate the set of eligible actors in action situations.	<ul style="list-style-type: none"> • Lack of clarity about actor eligibility • Key actors excluded • Too many non-key actors involved
Actor roles and responsibilities	Inappropriate rules that regulate the positions available to participants and the set of required, prohibited and allowed actions assigned to positions.	<ul style="list-style-type: none"> • Lack of clarity about positions and roles of actors • Limits on actors' capacity to act in specific times, or to specific issues • Competence creep (actors taking an institutional role for which they are not authorized)
Actor control (power distribution)	Lack of (appropriate) rules that establish the kind of control actors have over outcomes of action situations.	<ul style="list-style-type: none"> • Powerful actors (or coalitions) inappropriately control action situations • Weak actors cannot influence institutions or policy outcomes • Tokenistic participation • Weak institutional provisions for leadership • Unclear distribution of power and responsibilities
Actor accountability	Inappropriate institutional provisions for monitoring, evaluating, rewarding, and enforcing responsibilities.	<ul style="list-style-type: none"> • Lack of transparency in decision making processes • Absence of feedback mechanisms • Ineffective compliance and enforcement mechanisms (i.e. institutions not facing consequences when not fulfilling responsibilities).
Actor connectivity	Inappropriate structures that connect actors within and across multiple tiers of social organization.	<ul style="list-style-type: none"> • Poorly networked actors within and/or across tiers of social organization
Conflict mechanisms	Lack of (appropriate) institutional provisions for regulating, preventing or resolving conflicting values, preferences and actions among actors.	<ul style="list-style-type: none"> • Conflicts among actors • Disputes over rules-in-use • Dispute settlement mechanisms lacking or ineffective
Development and use of knowledge	Inappropriate institutional attributes that shape how information, knowledge claims and values are constructed, communicated, accepted, and used.	<ul style="list-style-type: none"> • Weak process(es) for reflexivity and institutional learning • Inappropriate science-policy interfaces • Exclusion or marginalization of relevant knowledge providers

		<ul style="list-style-type: none"> • Too many, too diverse, or not sufficiently relevant knowledge providers • Data fragmentation: lack of coordination and organisation of data processes resulting in a lack of harmonisation and interoperability of data causing inefficiencies and gaps in knowledge production and use
Scale of institutions	Inappropriate spatial and temporal implications of institutions.	<ul style="list-style-type: none"> • Mismatch between temporal and/or spatial scale of issue and institution • Fragmentation: Disintegration or lack of coordination among different institutions or levels of governance, leading to inefficiencies and gaps • Insufficient division of institutions into manageable problem areas, leading to inefficiencies
Rigidity of institutions	Change in the rules-in-use is inappropriately constrained by higher-order rules, transaction costs and path dependence.	<ul style="list-style-type: none"> • Stickiness of institutions • Path dependency • Institutional drift
Formality of institutions	Inappropriate degree to which rules-in-use are embedded in written laws, plans, documents.	<ul style="list-style-type: none"> • Over-formalized institutions • Under-formalized institutions
Institutionalized incentives	Inappropriate provision for institutionalized incentives for actors.	<ul style="list-style-type: none"> • A lack of incentives of actors to take engage in governance processes • Mis-alignment between incentives and objectives • Over-ambitious policy goals • Poorly specified objectives

Table 1. List of institutional attributes, barriers and indicators

3. Sense checking with end users

To translate our review into a non-academic format we first translated the barriers from the literature review into non-academic language. In a second phase, we engaged PERMAGOV end-user partners to check if the barriers made sense to them and if they were able to identify barriers from their sector that could be ascribed to one of our 11 examples. The case leads engaged with end-user partners to discuss and refine the descriptions of the barriers and issues we have identified, and to provide examples of these barriers for their sector. Section 3.1 details the process case leads followed. Section 3.2 contains the descriptions of the institutional barriers that were refined from the literature review.

Instructions sent to case leads

In Task 3.2, we want to take what we reported in D3.1 and translate it into something that non-experts can use to 'diagnose' institutional barriers. The first step in translating D3.1 is to engage with our case study end-users to check whether our description of the symptoms of each barrier is understandable to them and to gather examples from them if they have experience with or knowledge of such a barrier. We have produced a description of the symptoms that could indicate the presence of a barrier for each institutional attribute. We want you to discuss these descriptions with your end-users and:

1. Check that the description of the symptoms makes sense to your end-user and their context, asking them to provide an alternative description if it does not;
2. Ask them about each barrier and how it may or may not be present in their context;
3. Collect examples of when these barriers may have created policy implementation issues that your end-user experienced or knows about; and
4. Collect solutions that have or could be implemented to address these barriers.

To facilitate this, we want you to ask your end-user partner four simple questions about each barrier and its symptoms:

1. Is the description of the barrier and associated issues clear? Would your non-PERMAGOV colleagues understand them? If not, what would you change in these descriptions?
2. Do you know of any examples in your sector where these issues resulted in poor policy design or implementation?
3. Can you point to any solutions you know of that could address this barrier?

We suggest that you send the description of the barriers and symptoms to the end user in advance of your discussion. We have provided you with a document that you can send them (see Descriptions of Barriers for End-Users).

We have also provided you with a report template (See Case Symptom Report Template). The completed template for each should be returned to us task leads by 12th Jan 2024. We will then refine the description of each barrier symptom and use these and the examples in our WP3 task at the stakeholder workshop in February.

3.1. Description of Institutional Barriers for end-user partners

1. **Actor Eligibility:** This barrier describes a situation where there are insufficient rules to regulate who is eligible to participate in governance actions.

Issues: The guidelines and criteria for deciding who participates in decision-making situations are unclear or absent altogether. Consequently, actors with relevant knowledge and expertise may not be invited to participate. Instead, the inclusion or exclusion of actors is a reflection of the kinds of knowledge, expertise or abilities that are valued or privileged in certain governance situations. Lack of clear rules about who participates may result in decisions being made by actors who are pursuing personal interests, creating an increased risk of conflict. Decision-making processes can also be lengthy and ill-informed if there are a large number of actors involved who lack the relevant knowledge and expertise.

2. **Actor Roles and Responsibilities:** This barrier describes a situation where inappropriate rules regulate the roles and responsibilities within governance arrangements.

Issues: There is a lack of mutual understanding of the roles and responsibilities assigned to actors involved in decision-making processes. Lack of clarity creates confusion about the nature of the task and the specific outcomes being pursued and may decrease motivation. In the absence of clear rules, some roles and responsibilities may be assigned to individuals who lack the necessary skills and expertise to carry out the role, or an individual may adopt a role for which they do not have the required authority. There may also be overlapping roles and responsibilities, leading to inefficiency and potential conflict.

3. **Actor Control (Power Distribution):** This barrier describes situations where there is a lack of clarity about the control actors have over outcomes.

Issues: Powerful individuals or small coalitions are able to exert control over decision-making processes when weak rules and regulations are guiding the mandate of actors in leadership positions. In this situation, the interests and priorities of powerful actors may dictate outcomes. Less powerful actors have minimal opportunity to influence decisions, while the needs and interests of other parties are poorly represented due to limited or tokenistic participation. Misuse of power creates conditions for mistrust and reinforces existing inequalities in the distribution of power and responsibilities.

4. **Actor Accountability:** This barrier relates to inappropriate provisions for monitoring, evaluating, rewarding and enforcing responsibilities.

Issues: Weak or inappropriate processes and procedures for monitoring and evaluating the performance of actors limits the extent to which they are held accountable for the implementation of their roles and responsibilities and the decisions they make. Opportunities to provide input and feedback into decision-making processes are absent, leading to a lack of transparency. The lack of adequate mechanisms to ensure roles and responsibilities are fulfilled creates an environment where there are no consequences for poor performance.

5. **Actor Connectivity:** This barrier describes a situation where there are inappropriate structures to connect actors within and across multiple tiers of governance.

Issues: The level of coordination and cooperation between actors is weak due to inadequate or inappropriate structures to support collaboration and problem-solving on common issues. As a

result of weak connections, the benefits of horizontal and vertical communications, information sharing, and learning are poorly recognised as tools for efficient and effective decision-making. Hence, actors/groups of actors work to address complex issues independently from other sectors and governance levels, which decreases the ability to adapt and respond to emerging issues and leads to inferior outcomes.

6. **Conflict Mechanisms:** This barrier arises when there is a lack of provisions for regulating, preventing or resolving conflicting values, preferences and actions among actors.

Issues: Conflicts among actors arise as a result of diverse values, priorities, and preferences. In the absence of appropriate policies and procedures for managing, preventing, and resolving conflicts there is an increased likelihood of tensions and mistrust among actors, as well as persistent disputes about processes and procedures. These disputes are unlikely to be settled satisfactorily if conflict resolution procedures are lacking or ineffective. In this situation, collaboration between actors is minimal.

7. **Development and use of Knowledge:** This barrier arises when there is an inattention to the way new knowledge is produced and used, and only knowledge from certain actors has an impact on governance.

Issues: Contributions to knowledge production are limited to certain actors holding specific types of knowledge, thereby excluding or marginalising input from a range of knowledge holders. Alternatively, contributions are sought from too many diverse actors whose knowledge has limited relevance to the issue. As a result, knowledge development occurs slowly and provides only partial insights into a problem or issue. The efficiency of knowledge production is hampered by a lack of coordination between actors that generate data, resulting in a limited ability to optimise, standardise, or exchange data and an increased likelihood of data gaps. Inadequate processes to monitor, evaluate, and reflect on institutional learning enable knowledge production to continue in this manner.

8. **Scale of Institutions:** A mismatch between an issue and the scale of the governance system creates a barrier to action.

Issues: Mismatches in spatial scale arise when the scale at which an issue occurs and the scope of the management and governance systems that have jurisdiction over the issue are incompatible. Temporal mismatches occur when the time scales required for achieving short or long-term goals are incompatible with time-controlled events such as annual budgeting processes, planning cycles or legislative procedures. Scale mismatches are aggravated by a lack of coordination and cooperation between actors, and across multiple jurisdictions, resulting in conflicting goals and objectives. Fragmented approaches lead to the inappropriate division of roles and responsibilities and inefficiencies in decision-making. Choices about the prioritisation of resources are ill-informed and there is an increased risk of policy implementation gaps.

9. **Rigidity of Institutions:** The rigidity of institutions becomes a barrier when they are constrained from adapting to new issues or approaches.

Issues: Rules and procedures are rigid and inflexible, and there is resistance amongst actors to consider new practices and approaches, often to protect personal interests or because change is considered too costly and increases uncertainty. In this situation, existing rules and procedures endure over time, even when there is a clear misalignment between the rules and the problems they are intended to solve and the need for adaptation is apparent. The design and implementation

of new rules and procedures are constrained by the range of solutions that are willing to be considered, and there is a strong tendency for decisions to be influenced by what has gone before. Hence, decision-makers continue along established paths and the possibility of change is diminished. The rigidity of rules and procedures may result in the change occurring in a non-deliberate and non-strategic way, characterised by actors unintentionally deviating from the rules and procedures in the course of carrying out their roles and responsibilities. If these changes are tolerated by others, then the rigidity of the rules is disrupted and new practices are accepted as the norm.

10. Formality of Institutions: The degree to which rules-in-use are embedded in written laws, plans, and documents may become a barrier.

Issues: The extent to which rules and procedures are formally embedded in written laws, plans, and documents affects the flexibility and willingness of actors to adapt to a changing external environment. In over-formalized institutions, rules and procedures are deeply entrenched throughout organisational plans and documents, and act as a constraint on innovative and creative problem-solving. In contrast, in under-formalized institutions, rules and procedures are not well embedded into plans and documents, creating an environment where actors can misuse their power, particularly where informal networks emerge, and accountability and transparency are limited.

11. Institutionalized Incentives: A barrier arises when there are inappropriate incentives for actors to participate in governance actions.

Issues: In the absence of appropriate incentives, actors may perceive the costs of engaging in governance processes as exceeding the potential benefits it will deliver. In this situation, actors lack motivation to take action or resist efforts to work more collaboratively, particularly if existing connections between governance actors are weak. Where incentives are provided (e.g. financial reward, increased autonomy, redistribution of powers, opportunities for training and/or promotion, the existence of accountability mechanisms, and performance monitoring), they may be misaligned with the task or the context in which they are provided or distributed amongst actors inappropriately. Over-ambitious policy goals or poorly defined objectives may act as a disincentive to engage in governance arrangements as they may be perceived as unachievable.

3.2. Summary of end-user feedback

Overall, the case leads and end-users found the descriptions a little cumbersome, long and a bit too complicated. We further simplified our descriptions and presented them at a stakeholder meeting in Brussels on February 15th, 2024.

4. Stakeholder workshop

Representatives from all four regime complexes (Marine Life, Maritime Transport, Marine Energy and Marine Plastics) as well as governmental actors from different institutional layers were invited for a full-day PERMAGOV workshop in Brussels on February 15th, 2024. The workshop focused on the various components of the PERMAGOV Multi-Layered Collaborative Marine Governance model. One session focused on assessing institutional barriers. Before the workshop, QUB held a pilot workshop with post-docs working on other marine governance projects. This helped to gauge how non-PERMAGOV participants might understand the workshop activities and our description of institutional barriers. Based on their feedback, the description of each barrier was refined.

4.1. Brussel Workshop Tasks

At the workshop, stakeholders were assigned tables based on their knowledge and experience of specific regime complexes, meaning that those from an energy background sat at the energy table, those from a shipping or port background sat at the transport table, etc. The institutional barrier session began by briefly introducing participants to the work conducted by PERMAGOV on this topic. The final output of the systematic literature review was presented, and a brief explanation was provided about how PERMAGOV will use the barriers identified in the review in the rest of the project.

Each table was provided with: 1. a set of institutional barrier cards (see Appendix A); 2. an Impact / Priority matrix (see Appendix B); and 3. a barrier interaction matrix (see Appendix C). The institutional barrier cards consisted of two parts (see Figure 1 below). The front of the card described our institutional barriers, their characteristics and the governance problem that they might cause. The reverse of the card contained an example of the barrier that had been provided by PERMAGOV end-user partners during phase 1 of the diagnostic tool development. The examples were tailored for each table i.e. the cards provided to the energy table contained energy examples.

Participants were then tasked with placing the institutional barrier cards on the impact/priority matrix. A high-impact barrier is one that has a major impact on policy implementation or policy change. A high-priority matrix is one that participants thought PERMAGOV should focus on throughout the project. The task aimed to identify the three most impactful barriers that stakeholders thought PERMAGOV should focus on. We also were interested in comparing the three high-impact / high-priority barriers from each table with the three most prominent barriers identified in our literature review. During the workshops, participants engaged in discussions and deliberations about each barrier and where it should be placed on the matrix.

The second part of the workshop focused on identifying connections between the high-impact / high-priority barriers and the other barriers. The broad aim of this task was to explore whether stakeholders believed that addressing the high-impact / high-priority barriers would also create a better chance of addressing the other barriers. Using the barrier interaction matrix, workshop participants were tasked with noting the other barriers that would become more resolvable if the high-impact / high-priority barriers were resolved. At the end of the session, each table was asked to share their three high-impact / high-priority barriers (See Table 2).

Regime Complex	High Impact – High Priority Barriers		
Maritime Transport	Actor accountability	Institutional incentives	Actor control
Marine Energy	Actor Connectivity	Development & Use of Knowledge	Scale of Institutions
Marine Litter	Development & Use of Knowledge	Institutional incentives	Actor control
Marine Life	Development & Use of Knowledge	Institutional incentives	Actor accountability

Table 2: High Impact / High Priority barriers per regime complex.

Front of card

1. ACTOR PARTICIPATION

Inappropriate rules for determining who participates in governance actions.

Characteristics of the barrier	Governance problems
<ul style="list-style-type: none">• Rules are either absent (i.e. open access to decision-making context), unclear, or too complex• Key actors are not invited to participate• Too many non-key actors are involved	<ul style="list-style-type: none">• Relevant knowledge and expertise are missing• Decision-making processes are lengthy and ill-informed• Decisions are made by actors pursuing personal interests

Reverse of card

Example: The identification of suitable areas for offshore wind in X has been a process led by public bodies. However, neither fisheries associations nor offshore wind companies were part of this initial mapping at the start of the planning process, which excluded consideration of their knowledge and expertise.

Figure 1. Example of institutional barrier card.

The workshop session was very useful in terms of helping the project further refine the institutional barrier diagnostic tool:

- The language used to describe institutional barriers needs to be further simplified.
- A key point noted by participants was that these barriers (including the high impact and priority barriers listed above) were overlapping and addressing one problem could trickle down to many other barriers being addressed. The barrier interaction task was therefore a little redundant and we should assume that resolving high-impact barriers will have a positive impact on our capacity to resolve nearly all other barriers.
- There is a need to further emphasize that barriers may only impact certain groups within a governance regime and that these barriers may be seen as positives by others. When identifying barriers through the tool it will therefore be important to note which stakeholders view particular institutional aspects as barriers.
- There is a need to reflect on the transboundary nature of many sectors and how barriers may be specific to individual jurisdictions.
- The highly interrelated nature of the barriers means both ranking and mapping unidirectional relationships can be difficult. However, overall, the participants agreed that some prioritization of barriers per case/regime would be useful when PERMAGOV begins working on solutions.

5. PERMAGOV Diagnostic Table

The diagnostic tool was originally intended to be applied by end-users. However, the PERMAGOV experience of co-developing the tool, and testing key components with external stakeholders indicated that the tool would have to be applied jointly by academic and end-user partners (i.e. the case leads). It was decided to develop the tool as a table (see Table 3 below) that would be completed collaboratively by case study academic leads and case study end-user partners.

These partners will apply the diagnostic tool in their case studies, to identify the ‘real world’ experience of institutional barriers. The focus of the case studies will be on applying the diagnostic tool to identify and understand where and how institutional barriers have hampered policy implementation and, on the refinement, and validation of the tool. This task will be conducted through key informant interviews and desk-top reviews.

Case study partners will not complete each row in the diagnostic table, they will simply populate it with the most prominent barriers from their case. The first column lists the institutional attributes developed from the systematic review, with which both academic and end-user partners are now familiar. The second column contains a simple one-sentence statement about the type of institutional barriers that may arise under each attribute.

The next two columns are empty. These will be completed by the case study partners by filling in the rows that are relevant to the issues they find in their case study. We have also left some blank rows for any new barriers or issues that they find but struggle to classify. Work package leads will work with case leads to help them classify these issues.

In the second column, case leads will **report** and **evidence** barriers to policy implementation or change they have found in their case study. In terms of evidence, what we are looking for here are references to specific documents, including quotes, and/or the interviews. See the mock report in Appendix D for an example of what we mean by evidence.

In the third column, case leads will report their **analysis** of this issue as a particular type of **institutional barrier**. In this column, their analysis might also reflect on how well the issues they identify fit neatly with one governance function and can mention if it relates to more than one function.

Case Study Description: *As discussed in the debrief after the Brussels stakeholder workshop, when assessing the institutional barriers at the case level, we need to be explicit about what they are/might be barriers to - what is being prevented from happening in your case due to these barriers. Each case lead should outline here what they assume any barriers they identified will prevent, delay or frustrate from happening. For example, in the QUB case, we will explore what institutional barriers prevent or delay the deployment of floating wind in the Celtic Sea. You should also outline any relevant contextual factors that would enhance how we report the barriers. See Appendix D for a worked example*

Institutional Attributes	Barriers	Issue(s) identified and supporting data	Analysis of issue(s) as a barrier
Actor eligibility	The rules and processes for determining who participates in governance actions have created a barrier.		
Actor roles and responsibilities	The rules and processes for regulating the roles and responsibilities of governance actors have created a barrier.		
Actor control (power distribution)	Some people can exert control over governance outcomes and/or exclude people with less power.		
Actor accountability	The rules and processes for holding governance stakeholders to account are not working and are creating a barrier.		

Actor connectivity	The structures to connect stakeholders within and across multiple tiers of governance have created a barrier.		
Conflict mechanisms	The rules or lack of rules for regulating, preventing or resolving conflicts among stakeholders has created a barrier.		
Development and use of knowledge	How knowledge is produced, used, or communicated has caused a barrier.		
Scale of institutions	There is a mismatch between the scale of an issue and the scale of the governance arrangements.		
Rigidity of institutions	Rules and procedures are rigid and inflexible due to formal structures and practices and this has created a barrier.		

Formality of institutions	The extent to which rules and procedures are embedded into written laws, plans, and documents is too strong/weak and this has created a barrier.		
Institutionalized incentives	The provision of incentives for stakeholders to participate in governance actions (e.g. financial reward, increased autonomy, redistribution of powers) is too weak and has created a barrier.		

Table 3. PERMAGOV Diagnostic Table

6. Next Steps

The diagnostic table will be collaboratively applied in the case studies by academic and end-user partners. Their findings will be reported in a Policy Brief in June 2024. Case partners will also provide feedback on the applicability of the tool. The findings from the case studies will also feed into the refinement of the PERMAGOV model and the development of governance solutions.

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8. Appendices

8.1. Appendix A: Workshop Cards

1. BARRIER: ACTOR PARTICIPATION

Inappropriate rules for determining who participates in governance actions.

Characteristics of the barrier	Governance problems
<ul style="list-style-type: none"> Rules are either absent (i.e. open access to decision-making context), unclear, or too complex Key actors are not invited to participate Too many non-key actors are involved 	<ul style="list-style-type: none"> Relevant knowledge and expertise are missing Decision-making processes are lengthy and ill-informed Decisions are made by actors pursuing personal interests

Example: The identification of suitable areas for offshore wind in X has been a process led by public bodies. However, neither fisheries associations nor offshore wind companies were part of this initial mapping at the start of the planning process, which excluded consideration of their knowledge and expertise.

2. BARRIER: ACTOR ROLES & RESPONSIBILITIES

Inappropriate rules for regulating the roles and responsibilities of governance actors.

Characteristics of the barrier	Governance problems
<ul style="list-style-type: none"> Roles and responsibilities of governance actors are unclear Roles and responsibilities are assigned to actors without the skills and expertise to carry out the role Roles are adopted by actors who do not have authority to make decisions 	<ul style="list-style-type: none"> Confusion about the nature of the task and the specific outcomes being pursued Actors become demotivated to participate in governance actions Decision-making processes are inefficient Potential conflict between actors

Example: Floating wind development crosses several different policy domains (e.g. energy, planning, environment, climate change). In the UK there are several different governance actors involved. Hence, the governance structure is complex, making it challenging to identify key actors and their specific roles and responsibilities.

3. BARRIER: ACTOR CONTROL (POWER DISTRIBUTION)

Inappropriate rules for establishing the control that actors have over governance outcomes.

Characteristics of the barrier	Governance problems
<ul style="list-style-type: none"> • Powerful individuals or small coalitions exert control over decision-making processes • Less powerful actors have minimal opportunity to influence decisions • Tokenistic participation of key stakeholders 	<ul style="list-style-type: none"> • The needs and interests of broader stakeholder groups are poorly represented • Mistrust between actors • Existing power inequalities are reinforced • Potential misuse of power

Example: In written public consultation processes, less powerful stakeholders (e.g. fisheries) often submit input, but these inputs may not be taken into account, which limits their opportunity to influence decisions.

4. BARRIER: ACTOR ACCOUNTABILITY

Inappropriate mechanisms for holding governance actors to account.

Characteristics of the barrier	Governance problems
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<ul style="list-style-type: none"> • Inappropriate rules for monitoring and evaluating the performance of governance actors • Inadequate mechanisms for ensuring roles and responsibilities are fulfilled • Limited opportunities to provide input and feedback into decision-making processes 	<ul style="list-style-type: none"> • Actors can avoid accountability for their actions • Limited transparency over decision-making processes • Lack of consequences for actors who demonstrate poor performance
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Example: State actors are accountable for delivering on overall climate change targets, but there is limited accountability for delivering on specific floating wind targets due to complex governance structures.

5. **BARRIER: ACTOR CONNECTIVITY**

Inappropriate structures to connect actors within and across multiple tiers of governance.

Characteristics of the barrier	Governance problems
<ul style="list-style-type: none"> • The level of coordination between actors is weak • Actors/groups of actors work to address complex issues independently from other sectors and governance levels • The benefits of horizontal and vertical communications, information sharing, and learning are poorly recognised 	<ul style="list-style-type: none"> • Ability to adapt and respond to emerging issues is decreased • Decision-making is inefficient and ineffective • Increased likelihood of inferior outcomes from governance processes

Example: Although Norway has integrated management plans for its ocean areas, offshore wind has so far not been actively included in these integrated management plans (coordinated by the Ministry of Climate and Environment). Instead, offshore wind planning happens in a parallel but separate process led by the Ministry of Energy, indicating a clear lack of coordination between the various sector ministries.

6. BARRIER: CONFLICT MECHANISMS

Inappropriate rules for regulating, preventing or resolving conflicts among actors.

Characteristics of the barrier	Governance problems
<ul style="list-style-type: none"> • Persistent disputes about processes and procedures • Disputes are rarely settled satisfactorily 	<ul style="list-style-type: none"> • Increased likelihood of tensions and mistrust among actors • Collaboration between actors is minimal

Example: In Norway, there have been no arenas for early dialogue between public authorities and the various marine industries (e.g. wind and fisheries) on offshore wind development. This means that there are no rules in place for regulating or preventing conflict or resolving conflicts once they arise.

7. BARRIER: DEVELOPMENT AND USE OF KNOWLEDGE

Knowledge is produced, used, or communicated in inappropriate ways.

Characteristics of the barrier	Governance problems
<ul style="list-style-type: none"> • Input from diverse knowledge holders is excluded or marginalised • Coordination between actors that generate and use data is limited • Power dynamics influence how knowledge is accepted, communicated, and used • Procedures to support knowledge exchange and learning amongst actors are inadequate 	<ul style="list-style-type: none"> • Knowledge development occurs slowly and provides only partial insights into a problem or issue • The ability of actors to optimise, standardise, or exchange data is limited • Opportunities to improve the way knowledge is produced, communicated and used are missed • The quality of information feeding into the science-policy interface is compromised and diverse values and priorities are not well represented

Example: In the UK, there is limited coordination of environmental data collection for offshore wind leasing and consenting processes. Data are collected by a range of actors at different stages of the floating wind development process (i.e. at leasing and consenting stages), and at different resolutions,

and across different timeframes. Data are also stored in different data repositories. Combined, these issues hamper knowledge production on environmental receptors likely to be affected by offshore wind.

8. BARRIER: SCALE OF INSTITUTIONS

A mismatch between the scale of an issue and the scale of the governance arrangements.

Characteristics of the barrier	Governance problems
<ul style="list-style-type: none"> • The spatial scale at which an issue occurs and the scale of the corresponding governance system are incompatible • The time scales at which an issue occurs are incompatible with time-controlled events (e.g. annual budgeting processes, planning cycles, or legislative procedures) • Lack of coordination and cooperation between actors operating at the different governance scales and jurisdictions 	<ul style="list-style-type: none"> • Inappropriate division of roles and responsibilities between actors • Conflicting goals and objectives amongst actors at different governance scales • Fragmented approaches to the governance issue • Choices about the prioritisation of resources are ill-informed • Decision-making is inefficient • Increased risk of policy implementation gaps

Example: Achieving the ambitious targets set by the UK government (5GW of floating wind by 2030) needs a rapid scale-up of deployment, but floating wind takes 10-12 years from leasing to operation. Therefore, these long timescales are mismatched with five-year political cycles, which is when targets and funding mechanisms are agreed upon.

9. BARRIER: RIGIDITY OF INSTITUTIONS

Rules and procedures are rigid and inflexible due to formal structures and practices.

Characteristics of the barrier	Governance problems
<ul style="list-style-type: none"> Actors are unwilling to consider new approaches and practices There is a strong tendency for decisions to be influenced by what has gone before The need for adaption is acknowledged but disregarded 	<ul style="list-style-type: none"> Existing rules and procedures endure over time Decision-makers continue along established paths The possibility of change is diminished Change occurs in a non-deliberate and non-strategic way

Example: Adopting a strategic regional approach has been put forward as an industry recommendation to deliver on floating wind targets and it has also been supported in a recent report by the UK Offshore Wind Champion. However, the rigidity of government departments acts as a constraint on actors and prevents them from making policy changes quickly in support of this new approach.

10. BARRIER: FORMALITY OF INSTITUTIONS

The extent to which rules and procedures are embedded into written laws, plans, and documents.

Characteristics of the barrier	Governance problems
<ul style="list-style-type: none"> Rules and procedures are deeply entrenched throughout organisational plans and documents (over-formalised) Rules and procedures are not well embedded into organisational plans and documents (under-formalised) 	<ul style="list-style-type: none"> In over-formalised institutions, innovation and creative problem-solving are constrained The flexibility and willingness of actors to adapt to a changing external environment is compromised In under-formalised institutions, accountability and transparency are limited Informal networks emerge Actors can misuse their power

Example: In Norway, until 2021, there were no formal licensing procedures for offshore wind development, which hampered the progress of projects through the planning system.

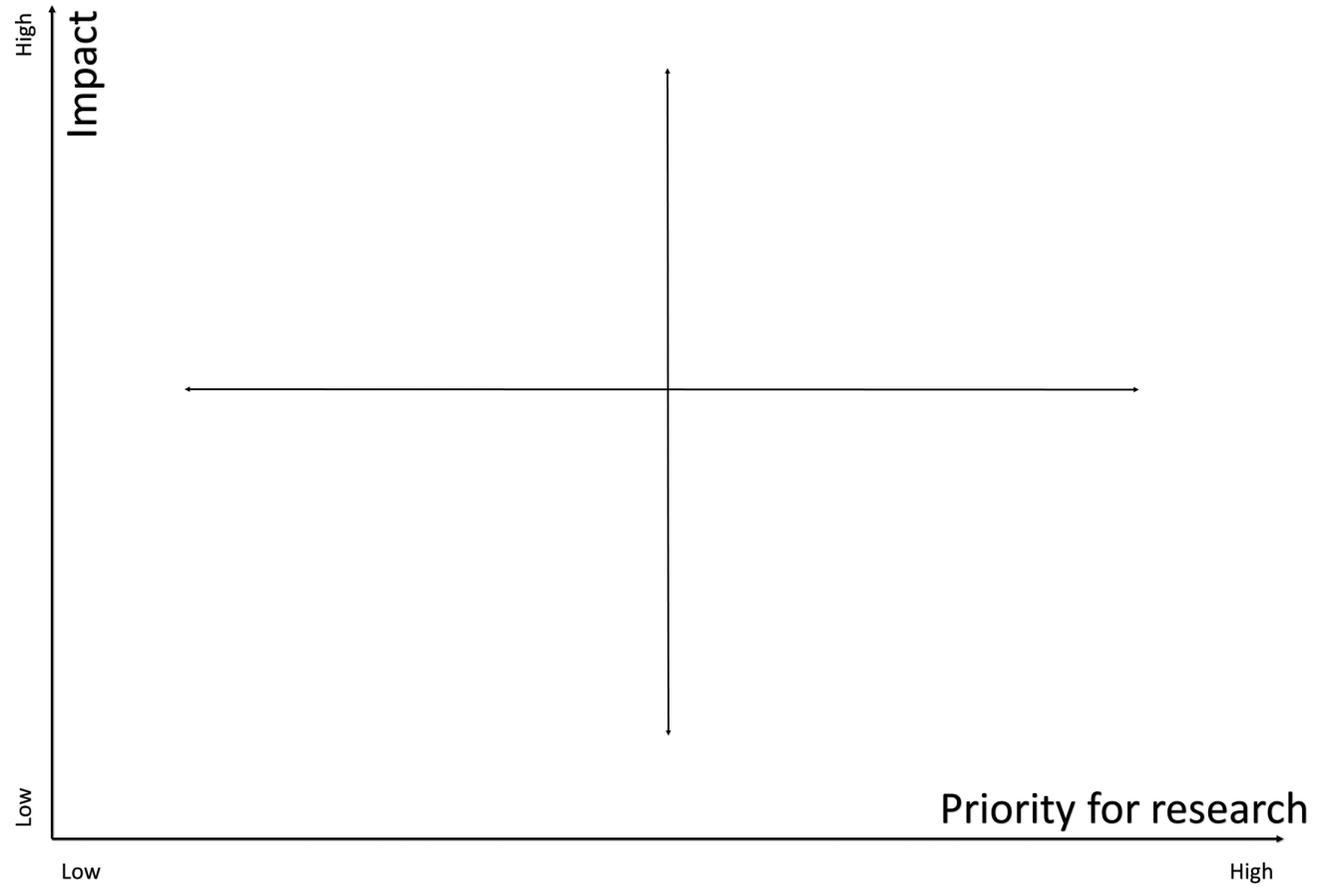
11. BARRIER: INSTITUTIONALISED INCENTIVES

The provision of incentives for actors to participate in governance actions (e.g. financial reward, increased autonomy, redistribution of powers) is inappropriate.

Characteristics of the barrier	Governance problems
<ul style="list-style-type: none">• Policy goals are over-ambitious• Governance actions have poorly defined objectives• Incentives are misaligned with the task or the context in which they are provided• Incentives are distributed amongst actors inappropriately	<ul style="list-style-type: none">• Actors perceive the costs of engaging in governance processes as exceeding the potential benefits it will deliver• Actors perceive desired outcomes to be unachievable• Actors lack motivation to take action• Actors resist efforts to work more collaboratively

Example: The UK post-Brexit governance arrangements for fisheries are complicated and highly sensitive, and there are still many unresolved issues related to quotas. There are limited incentives for state actors to invest time in tackling conflicts related to fisheries and offshore wind, which are considered a lower priority due to assumptions about co-existence.

8.2. Appendix B: Impact / Priority Matrix



8.3. Appendix C: Barrier Interaction Matrix

	1	2	3	4	5	6	7	8	9	10	11
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											

8.4. Appendix D: Diagnostic Tool: Worked Example

Case Study Description: In this case study we assume that the barriers identified block, delay or frustrate efforts to deploy floating wind in the Celtic Sea. Our case focuses on the intersection of energy policy and marine spatial planning. We have adopted a nested case study approach and will explore transboundary energy and planning issues at the Celtic Sea level and policy innovation at the national level in the UK and Ireland. These policy innovations include a streamlined planning process for renewable energy infrastructure (via a new Energy Policy Statement) and a streamlined consenting process (via the Offshore Wind Environmental Improvement Package) in the UK, and the development of sub-national marine plans in Ireland. Our analysis of institutional barriers includes a discourse analysis of documents related to these policy developments and interviews with key actors in the UK and Ireland.

Governance Function	Issue identified and supporting data	Analysis of this issue as a barrier
<p>Actor eligibility: the rules and processes for determining who participates in governance actions have created a barrier.</p>	<p>There has been a recent shift in Ireland from a developer-led approach to offshore renewables towards a plan-led approach. The offshore industry views this as a barrier to development.</p> <p>Energy lobbyists have commented: The chief executive of industry body Wind Energy Ireland, said: “This is a radical change in policy from government that has created massive levels of uncertainty among international investors and the global supply-chain. They are gambling that state agencies can identify designated marine areas quickly. Unfortunately, our experience is that those agencies are grossly under-resourced and will struggle to deliver in time unless the right people with the right skills are put to work on it as soon as possible.” See: https://www.pinsentmasons.com/out-law/news/developers-need-certainty-over-pipeline-offshore-wind-development-ireland</p>	<p>This issue relates to actor eligibility in that rules about who participates and how have changed. Actors who were critical to determining where FLOW would be developed must now wait for state agencies to complete their work. This is a barrier for the industry actors but may be seen as an enabler for the NGOs.</p>
<p>Actor roles and responsibilities: the rules and processes for regulating the roles and</p>		

responsibilities of governance actors have created a barrier.		
Actor control (power distribution): Some people can exert control over governance outcomes and/or exclude people with less power.		
Actor accountability: The rules and processes for holding governance stakeholders to account are not working and are creating a barrier.		
Actor connectivity: The structures to connect stakeholders within and across multiple tiers of governance have created a barrier.	The issue of fragmented governance has delayed the development of floating wind energy in Ireland. This issue was mentioned in multiple industry statements, interviews, and academic papers.	The issue of fragmented governance as a barrier in this case is linked to the issue of actor connectivity. There is little or no governance mechanism linking offshore licensing and terrestrial planning. This issue is, therefore, also related to the scale of institutions, with a disconnect between national-level ambitions and the capacity of local planning to deliver on this.
Conflict mechanisms: The rules or lack of rules for regulating, preventing or resolving conflicts among stakeholders has created a barrier.		
Development and use of knowledge: How knowledge is produced, used, or communicated has caused a barrier.		
Scale of institutions: There is a mismatch between the scale of an issue and the scale of the governance arrangements.		
Rigidity of institutions: Rules and procedures are rigid and inflexible due to formal structures and practices and this has created a barrier.		

Formality of institutions: The extent to which rules and procedures are embedded into written laws, plans, and documents is too strong/weak and this has created a barrier.		
Institutionalized incentives: The provision of incentives for stakeholders to participate in governance actions (e.g. financial reward, increased autonomy, redistribution of powers) is too weak and has created a barrier.		

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