



# RET TOUCH NEXUS

REsilient water gOvernance Under climate CHange  
within the WEFE NEXUS

## Deliverable 2.1

Mapping of stakeholders and engagement mechanisms  
in RET TOUCH NEXUS case studies and at European level

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## Mapping of stakeholders and engagement mechanisms in RETOUCH NEXUS case studies and at European level

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## ***Executive summary***

Increasingly, the role of stakeholders is becoming crucial in addressing issues of sustainable development, climate change, and environment. In our inter-connected world, any decision or intervention in relation to our natural resources, like water, impacts others directly or indirectly. Water is needed for human consumption, which is a non-negotiable requirement. Water is required for the functioning of our economies, running industries, generating energy and for the production of food. Without water, our ecosystem and biodiversity will collapse. There are competing demands by all these inter-linked sectors, all of whom have a stake on the common resource - water. With the climate crisis, the water scarcity is increasing, rivers and lakes have less water, droughts are more frequent, forest fires are on the rise and in Europe, these changes are observed more frequently. This is impacting the availability of water for various purposes and within Europe, numerous measures are being introduced to address these unfolding challenges. To ensure that countries in Europe adapt to these new scenarios in a cohesive manner, and to avoid delays, disruptions and conflicts, it becomes paramount to engage with stakeholders at the earliest. Stakeholder groups are very diverse, and some like government agencies play crucial roles in making decisions, while others like farmers, and the public are impacted by these decisions. Hence, consultation, communication, negotiation, agreements on trade-offs and joint decision-making become crucial to ensuring that a balanced and just water governance system is put in place. Numerous policies and strategies of the European Union (EU) reviewed for this report mandate engagement with stakeholders for addressing issues around natural resources, environment, energy, climate, and sustainable development.

RETOUCH NEXUS is an initiative supported by the European Union's Horizon Europe research and innovation program that implements approaches on water governance to help prepare European countries adapt to a changing climate and environment. The project focuses on water, energy, food and ecosystems (WEFE) NEXUS and the objective of the project is to promote robust, integrated, sustainable, inclusive and up-scalable water governance practices. As a part of this project, one of the initial key deliverables is the undertaking of stakeholder mapping and documenting current mechanisms for stakeholder engagement within the RETOUCH case studies. These RETOUCH case studies spread over six countries are diverse in scale; from business parks to river basins, each case has a variety of issues to address. This deliverable (D2.1) focuses on the mapping of stakeholders and engagement mechanisms in each of the case studies and at the European level that can contribute to Objective 4 of the project focused on *transparent and inclusive water governance* and an *empowering environment of participation*.

The stakeholder mapping exercise and subsequent analysis has helped in identifying the various stakeholders and understanding what their stake and key roles in relation to WEFE Nexus are. In addition, this exercise has illuminated existing collaborations as well as potential conflicts between the various stakeholders. The mapping exercise within the case studies was conducted at an early stage of the project and as a result there are some gaps in identifying all relevant stakeholders. This needs to be considered during the course of the project since new stakeholders might be identified who play a key role in a particular case study. A set of recommendations accompanies this report that can support future stakeholder mapping and analysis.

In addition, the case studies shared existing stakeholder engagement mechanisms; the most common included application of web-based tools and platforms to engage and inform stakeholders about



decisions, processes and initiatives. Meetings, workshops, conferences are other popular means of engagement and there has been an emphasis on ensuring transparency in governance within the case studies. Transparency, public participation, addressing gender and inclusion of vulnerable groups including youth have been outlined as special areas of focus within RETOUCH NEXUS. However, from the information gathered by the cases studies, there have not been many initiatives identified that address gender and social inclusion. The report recommends some next steps to strengthen stakeholder engagement that will be explored further during the course of this project.



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## Abbreviations

ARJ	Acequia Real Del Júcar
CHJ	Jucar Basin Agency/ Confederación Hidrográfica del Júcar
CJT	Canal Jucar-Turia
EC	European Commission
EIR	Environmental Implementation Review
ENV	Directorate-General for Environment
ERA	Environment and Resources Authority
EU	European Union
EWA	Energy and Water Agency
FA	Farmers Associations
GESI	Gender and Social Inclusion
GNS	Global Nexus Secretariat
HHNK	Hoogheemraadschap Hollands Noorderkwartier
ICT	Information and Communication Technologies
JCRMO	Junta Central de Regantes de la Mancha Oriental
MAFA	Ministry for Agriculture, Fisheries, and Animal Rights
MARD	Ministry of Agriculture and Rural Development
MCESD	Malta Council for Economic and Social Development
MEEE	Ministry for Environment, Energy, and Enterprise
MS	Member States
NECP	National Energy and Climate Plans
NGO	Non-Governmental Organization
NT	Nature Trust Malta
OECD	Organisation for European Economic Co-operation
REWS	Regulator for Energy and Water Services
SR	Slovak Republic
STMUV	Bavarian State Ministry of the Environment and Consumer Protection
UK	United Kingdom
USUJ	Jucar Users Union
VITO	Vlaamse Instelling voor Technologisch Onderzoek
WEFE	Water-Energy-Food-Ecosystem
WFD	Water Framework Directive
WIN	Water Integrity Network
WSC	Water Services Corporation



## Chapter 1: Introduction: concepts on stakeholder engagement, method and structure

### *Box 1: About the Report (D2.1)*

This report (D2.1), titled " Mapping of stakeholders and engagement mechanisms in RETOUCH NEXUS case studies and at European level" serves as a comprehensive overview of stakeholders involved in the six case studies conducted under Work Package 2 (WP 2) of the [RETOUCH NEXUS project](#). Its main objective is to identify stakeholders and examine their relationships within the project, and to summarise existing stakeholder mechanisms focused on Nexus-smart water governance practices within the case studies. By examining stakeholder engagement practices, the report aims to contribute to a more transparent and inclusive water governance framework, and establish an empowering environment of participation.

Furthermore, the report sheds light on various policies and strategic approaches emphasising the requirement and importance of stakeholder engagement and public participation at the European level. The report focuses on the importance of active involvement of women and other vulnerable segments of society in stakeholder processes.

The primary purpose of this report is to lay the groundwork for the development of innovative and transparent mechanisms for citizen engagement in the RETOUCH NEXUS project. By identifying gaps and barriers within existing stakeholder engagement practices, the report offers an opportunity for the case studies to devise strategies for stakeholder engagement and enhance public participation. Notably, the report highlights lack of information around participating of women and vulnerable groups across most of the case studies. The findings presented in this report serve as a starting point for the case studies to address these shortcomings and create more inclusive and participatory approaches.

It is important to note that this deliverable is the second among the various work packages, and while it provides a comprehensive overview, it may not capture all information due to certain gaps in knowledge at this stage of the project. The RETOUCH NEXUS project will generate additional information throughout its duration, which will supplement this report. Additionally, as the project progresses, the mapping of stakeholders may change, as it was conducted in the early stages and did not fully integrate the perspectives and knowledge of all stakeholders.

Water is a finite resource that is critical to the well-being of people, ecosystems, and economies. There are multiple stakeholder groups that are involved in the formulation of policies, laws, governance, management and use of water as a resource for various services and activities. Engagement with stakeholders, both formal and informal becomes crucial when the resource needs to be shared with various sectors competing for the same resource. Apart from the basic need of water for human consumption (Qin, 2021), some key sectors that are increasingly competing for water are energy, food and ecosystems (WEFE). It is important to recognize that WEFE Nexus is a multi-stakeholder process



(WIN, 2023). In relation to WEF Nexus, the stakeholder relations are more complex where the array of stakeholders across sectors include both technical and non-technical actors.

Engaging with stakeholders ensures that diverse perspectives and interests related to water use and management are considered, which is crucial for balancing competing demands and priorities. Stakeholder engagement can lead to better decision-making, more effective implementation, and increased support for water management initiatives. A key component of stakeholder engagement is public participation that is defined as “the involvement of individuals and groups in the design, implementation and evaluation of a project or plan” by the Organisation for European Economic Co-operation (OECD). The public is defined as local communities and citizens of all ages, backgrounds, values and interests. Public participation is an important aspect of effective water governance since participation in decision making processes encourages active involvement in the implementation of these decisions instead of only relying on top down governmental decisions (OECD, 2015). In the context of WEF Nexus, participation implies that those “who are interested or affected by decisions on the management of water, energy, food and ecosystem resources have the opportunity to participate, engage, intervene and influence the related decision-making processes” (WIN, 2023, p. 10).

Furthermore, stakeholder engagement can promote transparency and accountability, which is important for building trust and ensuring that water management decisions are informed, inclusive, and sustainable (Wehn et al., 2018).

### 1.1 Challenges in stakeholder engagement

Stakeholder engagement can be challenging, especially when dealing with diverse stakeholders who are linked to several sectors like WEF and this can become even more complicated due to the climate crisis, which destabilizes established processes. Numerous studies including the OECD publication on stakeholder engagement highlight these challenges. Table 1 below clusters some of the key barriers encountered in stakeholder engagement (Jager et al., 2016; OECD, 2015; Rimmert et al., 2020; Ruiz-Villaverde & García-Rubio, 2017). The challenges have been categorized aligned to the OECD Principles on Stakeholder Engagement. It should be noted that some barriers could potentially fit into multiple categories.

*Table 1: Typical challenges encountered for engaging stakeholders based on OECD (2015); Jager et al. (2016); Ruiz-Villaverde and García-Rubio (2017); Rimmert et al. (2020)*

OECD Principles on Stakeholder Engagement	Challenges	Brief Description
Inclusiveness and equity	Differing priorities and values	Stakeholders have diverse perspectives, priorities, and values, which can hinder consensus and inclusivity in decision-making.
	Power imbalances	Unequal distribution of power among stakeholders can lead to marginalized voices and



OECD Principles on Stakeholder Engagement	Challenges	Brief Description
		limited representation in decision-making processes
	Lack of stakeholder and public concerns, esp. women and minorities	Certain groups, such as women and minorities, may be underrepresented or face barriers to meaningful participation in decision-making.
Clarity of goals, transparency, and accountability	Lack of transparency	Insufficient access to information and decision-making processes can hinder stakeholder understanding and trust.
	No clarity	Ambiguity or lack of clear goals and objectives can lead to confusion and hinder effective stakeholder engagement
	Lack of trust	Lack of confidence or trust in the process and outcomes can impede meaningful engagement and collaboration among stakeholders.
	Poor awareness on issues	Inadequate understanding or awareness of the relevant issues can limit stakeholders' ability to contribute effectively to discussions.
	Lack of public awareness	Limited awareness among the general public about the importance and potential impacts of the issue can hinder their engagement.
	Information asymmetries	Unequal access to information between stakeholders can create disparities in knowledge and influence in decision-making.
Capacity and information	Lack of motivation	Stakeholders may lack the incentive or interest to actively participate in engagement processes.
	Communication barriers	Ineffective communication channels or language barriers can hinder meaningful dialogue and understanding among stakeholders.
	Limited resources or funding	Insufficient resources or funding can limit stakeholder engagement efforts, including outreach and participatory activities
	Time-consuming and resource-intensive	Extensive time and resource requirements for engagement processes can be a challenge for stakeholders with limited capacity and resources.
Efficiency and effectiveness	Weak legal and administrative framework	Inadequate legal and administrative structures and processes can impede efficient and effective stakeholder engagement.
	Misaligned objectives	Conflicting goals and objectives among stakeholders can hinder collaborative decision-making and progress towards desired outcomes.
	Resistance to change	Stakeholders may resist or be reluctant to embrace new approaches or ideas, hindering progress and innovation in engagement processes.



OECD Principles on Stakeholder Engagement	Challenges	Brief Description
	Complexity of issues	Highly complex issues can pose challenges in understanding, decision-making, and finding common ground among diverse stakeholders.
	Geographical distance from decision-making cores	Physical distance or location can make it difficult for stakeholders residing farther away from decision-making centres to participate.
Institutionalization, structuring, and integration	Consultation "capture"	Stakeholder engagement processes may be influenced or co-opted by specific interests, undermining the credibility and legitimacy of engagement efforts.
	Stakeholder consultation "fatigue"	Repeated engagement or consultation processes without visible impact or outcomes can lead to stakeholder disengagement or apathy
	Political discontinuity	Changes in political leadership or priorities can disrupt ongoing stakeholder engagement efforts and continuity in decision-making.
	Multiple authorities across levels of government (fragmentation)	Fragmentation of responsibilities and decision-making authority across multiple government levels can complicate stakeholder engagement.
Adaptiveness	Lack of political will and leadership	Inadequate commitment and support from political leaders can

Apart from the challenges outlined above around multi-stakeholder processes, the impact of the climate crisis on WEF Nexus is enormous. Climate change is making water more scarce, which affects energy and food production, and degrades the ecosystem (Gaetani et al., 2023). With these changes, the competition for water as a resource increases among the various stakeholders across sectors.

Gender equality and social inclusion including the participation of youth have been identified as the missing link and challenge in WEF Nexus approaches. Often only men are recognized as authorities to natural resources and consequently only men are traditionally included in decisions on how to use and manage these resources even though women rely on these resources for their livelihoods on a daily basis. This traditional framework can often further exacerbate inequalities and limit influence on decision making to those who have the most to gain or lose from the decisions being made (Jalonen et al., 2022).

Current leadership within nature conservation is in need for new strategies to face the multi-layered and challenging changes that climate change will cause. Therefore, new approaches are needed to adopt and develop long-term strategies to new circumstances the best way possible, that engages the youth and women. Despite the acknowledgment of global organisations to solve problems always by integrating the intergenerational perspective (in the [United Nations Brundtland Report "Our Common Future" \(1987\)](#)), the role of intergenerational collaboration in global governance is not sufficiently considered in policy and planning. Other key documents that point out the importance of intergenerational governance are the [Earth Charter \(2000\)](#) initiated by the UN and the [UN Secretary-](#)



[General's Report on Intergenerational Solidarity and the Needs of Future Generations \(2013\)](#) (Zurba et al., 2020).

Another major challenge around multi-stakeholder engagement is data related. This can include the availability and quality of data, accessibility and interpretation of data by various stakeholders and how data is communicated (OECD, 2015).

Overall, effective stakeholder engagement requires a deep understanding of the issues at hand, strong communication skills, and a willingness to collaborate and find common ground. It is important to approach stakeholder engagement as a process of building relationships, rather than as a one-time event.

There are a series of complementing steps that are required and are useful for establishing stakeholder engagement mechanisms. In such a process, applied different steps are defined below.

## 1.2. Stakeholder identification and mapping

One of the first steps in a process of engaging with stakeholders is to identify individuals, groups, or organizations that are affected by or have an interest in a particular project or process like WEFE Nexus. Stakeholder identification is an important step because it helps ensure that all relevant stakeholders are considered when making decisions or implementing actions and their concerns are addressed or a mutually agreed compromise is reached. It also helps to prioritize stakeholders based on their level of influence and interest, which can be useful in determining communication strategies and developing effective engagement plans. While engaging with stakeholders, it is important to identify women who are equal stakeholders but often ignored. Similarly, minority and disadvantaged groups also need to be specially identified to ensure their voice and active participation.

A second important step is to establish existing relations, roles and responsibilities and their functionalities via a stakeholder mapping exercise. Stakeholder mapping is considered to be an informal mechanism for stakeholder engagement (OECD, 2015). It is an exercise that identifies key stakeholders, including opponents, based on their varying motivation, level of engagement, influence, background and legitimacy (Gomes et al., 2021). It is important to identify anyone who has a stake in the outcome or will be affected by the project with a special emphasis on under-represented groups such as women, youth, the rural or urban poor or indigenous communities to make it inclusive (Gomes et al., 2021; OECD, 2015; WIN, 2023). OECD defines inclusiveness as the “extent to which engagement processes involve stakeholders from diverse backgrounds and take into account their needs, assets and perspectives into the design and implementation of water policies and projects” (OECD, 2015, p. 35). Inclusiveness is integral to proper water governance (OECD, 2015) and inclusive decision-making strengthens institutions and political will to support the engagement of stakeholders and has the potential to develop innovative and flexible approaches to water management (OECD, 2015). Literature supports that inclusive approaches can identify water related conflicts early in the project cycle and can contribute to more effective decision making and implementation processes (OECD, 2015).



### 1.3. Stakeholder analysis

The stakeholder identification and mapping are followed by a stakeholder analysis, which is a process of identifying, analysing, and engaging with individuals, groups, and organizations that have an interest or stake, in this case, in the WEF Nexus. There can be overlaps between stakeholder mapping and analysis. An analysis provides the opportunity to explore the relationships and intricacies within stakeholder processes in greater depth. For instance, learning from local stakeholders on their relationships and preferences to their water supply can often be more effective than applying a one-size-fits-all approach since there are site-specific conditions that are often difficult to understand from the outside. Having this understanding and cooperation can lead to better impact on water resources management (Megdal et al., 2017).

Stakeholder analysis should be an iterative process because stakeholder attributes and dynamics change over time. The process should start at the beginning of the project and be revisited through the lifecycle of the project in order to guide the planning and implementation of the project (Gomes et al., 2021). The analysis needs to identify existing weaknesses, gaps and listen to the collective voice of the stakeholders involved to understand the priority issues that needs to be tackled.

### 1.4. Stakeholder engagement plan and process

Once the status quo is determined via stakeholder mapping and analysis, including the identification of gaps and requirements of various stakeholders, the next steps involve outlining how stakeholders will be engaged throughout the lifecycle of the project. A stakeholder engagement plan outlines the strategies and approaches that the project will use to engage with its stakeholders. This involves establishing new approaches within a plan and can include objectives, methods, frequency of engagement, funding, resources required, as well as the roles and responsibilities of project team members and stakeholders. While developing an engagement plan, all stakeholders need to be included from the earliest stages of the project to ensure effective inclusion, especially of women and minority groups. According to OECD, a bottom-up approach, which is place-based, helps with inclusive policy making that encourages the active participation of organized groups, communities, and citizens at a local level (OECD, 2015). For effective stakeholder engagement, it is important to determine which engagement mechanisms, formal or informal, are relevant for the specific project based on place, time and objectives (OECD, 2015).

Due to the complexity of water management, especially in the context of WEF Nexus, stakeholder engagement can often involve conflict with differences in interest. Therefore, techniques reducing conflict must be included within engagement plan and processes (Megdal et al., 2017). There is a need to build a “Shared Vision Planning” approach, where common concerns are prioritized, and this creates a belief that something can be gained from collaboration between stakeholders, rather than lost (Megdal et al., 2017). To address the barrier of languages, and diverse understanding of issues, visual thinking can create more inclusion, participation and communication between multiple stakeholders with varying backgrounds (Senabre Hidalgo et al., 2021).



It is also important to note that Information and Communication Technologies (ICT) have the potential to facilitate public participation in water governance to a wider and more inclusive population (Mukhtarov et al., 2018). However, it is important to be aware of a potential for a digital divide between stakeholder groups and this has to be considered while designing ICT support in projects.

The stakeholder engagement plan once implemented can include a series of activities with stakeholder groups in different formats. These include organizing consultations, trainings, public participation, multi-stakeholder partnerships, capacity building, information and knowledge sharing, conflict resolution and negotiations.

Some methods for stakeholder engagement that are in practice, and some that can be adapted and lead to innovations include the following:

Figure 1: Approaches and tools for stakeholder engagement: blue for formal mechanisms, green for informational mechanisms based on OECD (2015)



A stakeholder engagement process needs to be iterative and to include monitoring and evaluation embedded within the planning that incorporates stakeholder feedback into decision-making processes (OECD, 2015). Feedback from stakeholders is crucial for continuous improvement of engagement process. Evaluation should include evidence-based assessment, costs, benefits analysis to gauge how effective different engagement processes are (OECD, 2015).

### 1.5. Method and structure

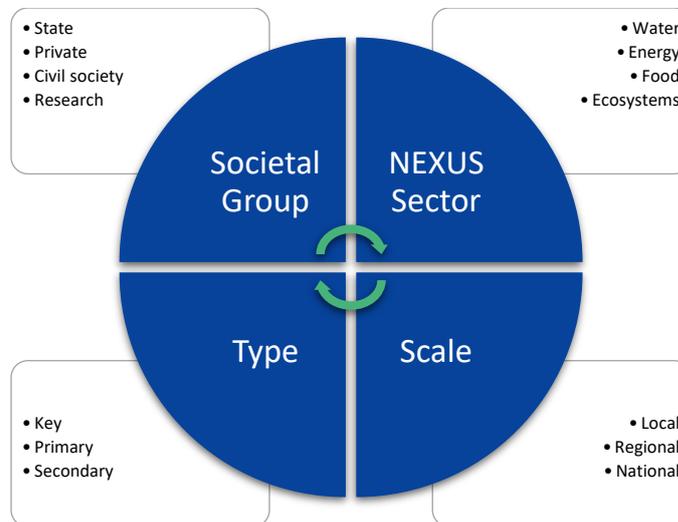
One of the cornerstones of the RETOUCH NEXUS project is the development and application of robust governance practices, where one of the specific project results is on empowering ecosystem of participation (PR4). This implies inclusive engagement of stakeholders, which is reflected in Objective 4. One of the main tasks of WP 2 is the mapping of stakeholders and engagement mechanisms in RETOUCH NEXUS case studies and at European level (T2.1). This report covers T2.1 and fulfils deliverable D2.1.

For mapping of stakeholders, the Stakeholder Matrix and Stakeholder Onion (see Annex) are applied (Alexander, 2005; Milani, 2019) to represent all stakeholders in each case study, where all case studies used the template to fill in the required information. The Stakeholder Matrix is a tool to systematically list stakeholders and understand their interests and relationships to explore responsibilities, interests,



perceptions and roles. The Stakeholder Onion and the Matrix allowed to group stakeholders in four different categories (see Figure 2).

Figure 2: Categorization of stakeholders in Case Studies according to the Stakeholder Onion and Matrix



For the purpose of RETOUCH NEXUS, the Stakeholder Onion has four categories (see Figure 2) that point towards the multiple layers and complexities that exist around stakeholders. This is further intricate in the WEFE context as there are other sectors involved. Further description of the stakeholder is provided in Chapter 3.

In addition, T2.1 also includes the review and analysis of stakeholder engagement and public participation at European level. This task has been completed by reviewing and analysing key policy and strategic documents at the EU level relevant for WEFE Nexus, and complemented by case study examples. In addition, this analysis kept a focus on public participation, transparency, gender and social inclusion (GESI), as mandated under the RETOUCH NEXUS project.



## Chapter 2: Stakeholder Engagement Mechanisms in EU Projects, Policies and Strategies

Many EU strategies require the implementation of engagement mechanisms with stakeholders. The EU has executed several projects, policies, and strategies aimed at improving stakeholder engagement in various sectors including water. These initiatives recognize the importance of involving various stakeholders in a participatory manner for decision-making processes that foster cooperation and ensure sustainable water management. As mentioned in Chapter 1, stakeholder engagement mechanisms are critical for effectively achieving results in WEFE Nexus processes. Stakeholder engagement is considered a core component of the EU's largest research and innovation program, [Horizon Europe](#), which supports numerous WEFE Nexus projects, like the RETOUCH NEXUS. The [EU Taxonomy regulation](#) is another recent initiative aimed at environmentally sustainable economic transition and also encourages regular dialogue with stakeholders, including market participants, industry representatives, and civil society organizations.

The EU encourages involving stakeholders throughout the planning, implementation, and evaluation stages of various initiatives, which are reflected across EU strategies and policies. It is important to note that even for the formulation and issuance of strategies, policies and directives, the EU engaged with numerous stakeholders in various formats. In addition, the EU highlights the importance of public participation in a transparent manner. For instance, the [EU Environmental Governance Assessment](#) is an important framework that promotes better environmental governance across the EU. This framework emphasizes transparency, access to justice and improved sustainable public participation.

Also, the EU acknowledges the importance of addressing gender issues and has several documents and policies focusing on gender balance in stakeholder participation, particularly in the water, environment, and climate sectors. Youth are another group that are often excluded or underrepresented in stakeholder processes. Their role is paramount, as they will be as the future generation that will to address water governance challenges (OECD, 2015).

This chapter outlines stakeholder engagement and public participation in key EU strategies and policies that are relevant for the water, energy, food and environmental sectors. These EU strategies are key to the governance and management of water resources and water service provision within the Nexus framework. Experience shows that stakeholder involvement is still not a matter of course, although it is crucial to addressing sustainable development, climate and environmental challenges.

### 2.1. Water Framework Directive (2000)

The EU legislation [Water Framework Directive](#) (WFD) from 2000 promotes the sustainable management of water resources throughout the EU. In order to involve stakeholders throughout river basin management plan development process, they need to be informed about proposed actions and the progress of their implementation. Involvement of stakeholders assures engagement of the public in the decision-making process before the measures are implemented.



More precisely, the WFD states the responsibility of EU Member States (MS) to apply the engagement related Directives (for e.g. [Drinking Water](#), [Floods](#), [Groundwater](#), [Urban Wastewater Treatment](#)) with special focus on efficiency, information exchange and establishment of synergies and equal benefits for all stakeholders with the implementation of the WFD objectives.

One example can be found around engagement mechanisms for the development of flood hazard and flood risks maps. The WFD mentions the responsibility of MS to make preliminary flood risk assessments, flood hazard and risks maps as well as flood risk management plans available to the public. WFD declares that MS should encourage stakeholders and other interested parties during the whole process of developing flood risk management plans. The [Report from the Commission to the European Parliament and the Council](#) on the implementation of the WFD (2000/60/EC) and the Floods Directive (2007/60/EC) from 2019 states that some MS carried out joint stakeholder engagement activities for the River Basin Management Plans and the Flood Risk Management Plans (European Commission, 2019). For instance, Estonia carries out consultations within the Commission for River Basin Management, which include government bodies, national experts and water service companies to discuss both plans in detail (European Commission, 2019).

Similarly, Article 10 of the Urban Wastewater Directive states that MS shall ensure regular dialogue between relevant stakeholders in the implementation of “extended producer responsibility, including producers and distributors, producer responsibility organisations, private or public operators of urban wastewater treatment plants local authorities and civil society organisations”.

## 2.2. OECD Water Governance Principles (2015)

Stakeholder participation plays a vital role in the implementation of the [OECD Water Governance Principles](#). Among the three complementary dimensions in these principles, “Trust and Engagement” specifically refers to “building public confidence and ensuring inclusiveness of stakeholders through democratic legitimacy and fairness for society at large”. These principles recognize the significance of engaging diverse stakeholders in water governance processes to ensure effective decision-making, transparency, and accountability. The principles highlight the need for early and continuous engagement of stakeholders, including water users, local communities, indigenous groups, civil society organizations, and the private sector. They emphasize the importance of providing accessible and timely information, fostering dialogue, and involving stakeholders in the design, implementation, and evaluation of water policies and projects. By promoting stakeholder participation, the OECD Water Governance Principles seek to enhance trust, cooperation, and ownership among all actors involved in water governance.

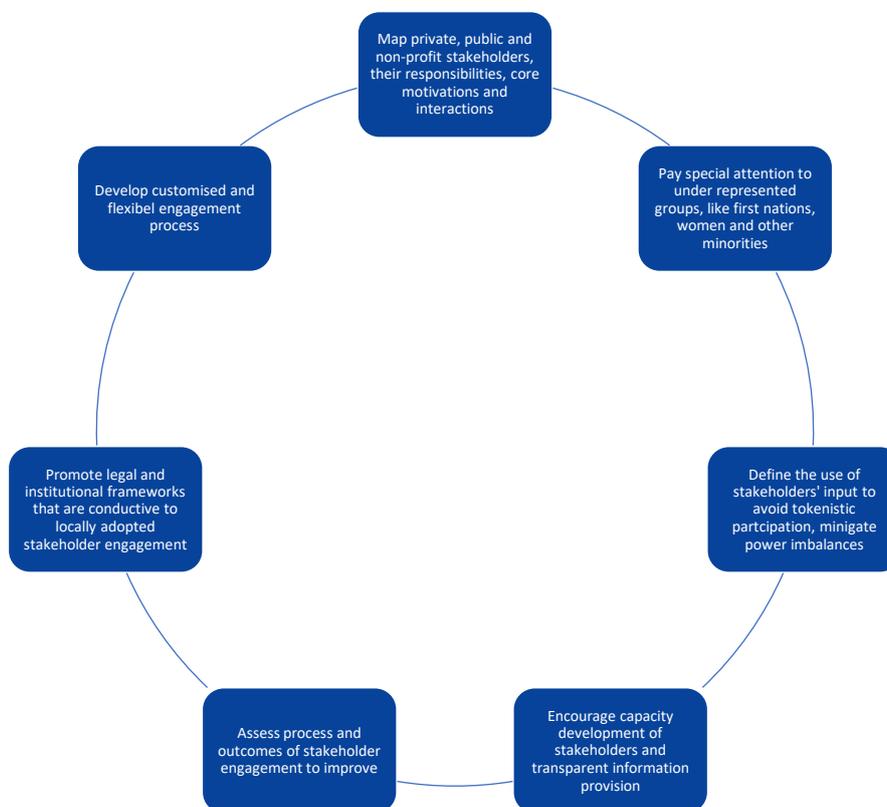
Among the 12 Water Governance Principles, Principle 10 is titled “Stakeholder Engagement” and recommends promoting stakeholder engagement for informed and outcome-oriented contributions to water policy design and implementation. There are seven approaches proposed under Principle 10 for stakeholder engagement including one specifically targeting the inclusion of underrepresented groups such as youth, the impoverished, women, indigenous people and domestic users of water. Principle 8 focuses on innovative governance emphasising the need to promote adoption and implementation of innovative water governance practices across all relevant stakeholder groups. This



also includes promoting social learning, facilitating dialogue and building collaborations among stakeholders.

The [OECD Water Governance Indicator Framework](#) published in 2018 serves as a valuable tool to facilitate the implementation and monitoring of the OECD Principles on Water Governance, 2015. Designed as a self-assessment tool, it enables stakeholders to evaluate the status of water governance policy frameworks, institutions, and instruments. By providing a transparent and inclusive platform for dialogue, the framework encourages stakeholders to identify effective practices, areas for improvement, and the necessary actions to be taken. Through this approach, the OECD indicators support the implementation of the principles by making it easier to monitor progress, identify gaps, and adapt water governance as required iteratively.

Figure 3: Seven approaches proposed under Principle 10 for stakeholder engagement of OECD Water Governance Principles (2015)



### 2.3. European Green Deal (2019)

The EU aims to decrease its environmental footprint while ensuring food security in times of climate change and biodiversity loss. Therefore, strategies to ensure food chains and production have to be climate neutral or positive. Food production, for instance, impacts water quality and quantity. It is



therefore important that food chains and food production restore soil and land, freshwater and sea-based resources.

The [European Green Deal](#) is a policy initiative by the European Commission (EC) that aims to achieve climate neutrality and sustainable development by 2050. The strategy emphasizes public participation and stakeholder engagement in its implementation. As part of the European Green Deal, several citizen science projects have been launched, including the [REGILIENCE project](#)<sup>1</sup>, which aims to map stakeholder perception and opinion on climate adaptation and resilience through citizen surveys and the development of a [Citizen Resilience Scan Tool](#). The [ARSINOE project](#)<sup>2</sup> engages citizens in analysing challenges and designing solutions to complex societal and economic issues. The [IMPETUS project](#)<sup>3</sup> is working on designing and developing a stakeholder engagement strategy, while the [TransformAr](#)<sup>4</sup> project is holding stakeholder workshops and surveys to understand public acceptance of climate change adaptation measures in different regions of the European Union (EU).

The European Green Deal is closely linked to water as it focuses on sustainability, climate change mitigation and adaptation, biodiversity protection, circular economy, clean water, sustainable agriculture, and infrastructure development. Water management plays a crucial role in achieving these goals by improving water efficiency, preserving ecosystems, reducing pollution, promoting resource efficiency, and ensuring clean water for various sectors. The Green Deal recognizes the significance of sustainable water practices in creating a resilient and environmentally friendly Europe.

One main strategy of the European Green Deal is the [Farm to Fork strategy](#), focusing on the sustainability, health and fairness of food systems. In relation to water, the agricultural sector is one of the biggest users of freshwater and therefore water governance in the food sector is important. A key issue that the Farm to Fork strategy refers to is the protection of water sources, both freshwater and groundwater from pesticide pollution. The strategy requires MS to engage with stakeholders, like farmers in the development of their national food systems.

#### 2.4. Aarhus Convention on Access to Information, Public Participation in Decision-Making, and Access to Justice in Environmental Matters (1998)

The [Aarhus Convention on Access to Information, Public Participation in Decision-Making, and Access to Justice in Environmental Matters](#) (1998), signed in Aarhus, Denmark is very relevant for MS of the EU and WEF related projects as this treaty aims to promote transparency, public participation, and access to justice in environmental decision-making processes. This international convention

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<sup>1</sup> Regional Pathways to Climate Resilience (REGILIENCE) is a European project that aims to share the most promising cross-sectoral adaptation solutions and help cities and regions across Europe become more resilient to climate change.

<sup>2</sup> The ARSINOE project will shape the pathways to resilience by bringing together SIA (Systems Innovation Approach) and CIW (Climate Innovation Window) with the purpose to build an ecosystem for climate change adaptation solutions.

<sup>3</sup> Intelligent Management of Processes, Ethics and Technology for Urban Safety (IMPETUS).

<sup>4</sup> TransformAr aims to demonstrate solutions and pathways, deemed essential for climate and social resilience to achieve rapid and far-reaching transformational adaptation.



specifically emphasizes the importance of stakeholder participation in environmental matters and in decisions that may affect the environment and their communities. It asserts that sustainable development can be achieved only through the involvement of all stakeholders. The convention encourages public consultations, hearings, and involvement in the planning, implementation, and monitoring of environmental projects and policies.

Further, the Aarhus Convention recognizes the rights of individuals and organizations to access environmental information held by public authorities. The Convention ensures that stakeholders have the right to challenge environmental decisions and seek redressal through administrative or judicial procedures. For ensuring that stakeholders can make use of the Convention, it promotes awareness-raising initiatives, education programs, and training activities to empower individuals and organizations.

## 2.5. National Energy and Climate Plans

The [Regulation on the governance of the energy union and climate action](#) (EU)2018/1999 introduced the [National Energy and Climate Plans](#) (NECPs) as part of the [Clean energy for all Europeans package](#), adopted in 2019. Following article 10 of the governance regulation, MS states were obligated to include the public proactively and early on in the preparation of the NECPs. Information had to be made available early enough for the public to inform themselves about the NECPs, to participate and raise their concerns. This engagement process is also regulated by the Aarhus Convention (see chapter 2.6). The Aarhus Compliance Committee issues recommendations to MS to develop their NECPs in a transparent and fair manner.

## 2.6. Energy Stakeholder Dialogues

The [Directorate-General for Energy](#) organizes with the Commission Representations in selected EU countries [dialogues](#) that offer national stakeholders the opportunity to exchange on key energy-related topics with Commission representatives. The first dialogue took place in 2021 in the context of the new legislative package aiming to reduce emissions by at least 55% by 2030. The package covers a wide range of policy areas, including energy efficiency, renewables, energy performance of buildings and more.

The Directorate-General for Energy partners with the Commission Representations in selected EU countries to plan and conduct dialogues. Here, national stakeholders and Commission Representative discuss and share perspectives on energy topics. While the first dialogue in 2021 was held in the context of a new legislative package to reduce emissions by 2030, the dialogues in 2022 focused on the REPowerEU. The latest Dialogue was organized in Denmark with the topic of European Green Transition and Hydrogen.



## 2.7. Biodiversity Strategy for 2030 (2020)

Biodiversity is a key contributor to ecosystem protection, water regulation, filtration and soil health. It is crucial for disaster prevention and protection. The aim of the [2030 Biodiversity Strategy](#) is to safeguard and recover biodiversity, and MS are required to engage with stakeholders to develop their national biodiversity strategies.

Under the theme of "[Enabling Transformative Change](#)," the EU currently lacks a comprehensive governance framework to steer the implementation of biodiversity commitments. To address this gap, the Commission plans to establish a new European biodiversity governance framework that includes indicators, monitoring and review mechanisms, and corrective actions if necessary. This framework will foster co-responsibility and co-ownership among relevant stakeholders and support administrative capacity building, transparency, stakeholder dialogue, and participatory governance at different levels.

The Biodiversity Strategy stresses that environmental resources, also resulting from biodiversity, shall be shared among stakeholders. Further, the strategy states that participation of women, youth, indigenous peoples, and local communities are especially crucial to managing the resources.

## 2.8. New Circular Economy Action Plan (2020)

The European Union's [Circular Economy Action Plan](#) aims to promote sustainable resource management. The circular economy approach promotes water conservation, reuse, and the reduction of water pollution to achieve a more sustainable and resilient water system. Stakeholder engagement is essential in the implementation of the EU Circular Economy Action Plan, particularly regarding water management.

For example, the EU-funded project "[Water2REturn](#)" aims to demonstrate the technical and economic feasibility of recovering nutrients from wastewater streams generated by the food industry. The project involves stakeholders from across the food value chain and aims to create a circular economy model for water management in the food industry.



*Box 2: Strategies and Policies for Gender and Inclusion*

### Strategies and Policies for Gender and Inclusion of Vulnerable Groups and Youth

Since environmental and sustainable development issues are multi-layered and complex, solutions need to follow a holistic approach. Solutions should mirror and include all parts of society with their needs, perspectives and knowledge. Hence, water governance and WEF Nexus approaches need to include diverse groups and individuals based on principles of equality and inclusion. It does not only mean the fair and equitable access to resources for all, including vulnerable groups, women and youth but also their right to co-create decision making in water governance. Promoting, supporting and even financing participation and leadership of women, youth and minorities in sustainable management of natural resources can encourage gender inclusive responses (EC 2020).

Gender inequality and exclusion have been identified as major issues within stakeholder engagement across numerous EU strategies and policies. Harmful gender norms, legal frameworks, restricted access to education and ownership protection are some of the reasons why women are prevented from active participation in governance processes and not considered legitimate stakeholders (EC 2020).

Apart from sections addressing gender in various EU strategies and policies, there are two key documents linked to gender: The Gender Equality Strategy 2020-2025 and EU Gender Action Plan II. Both of these documents aim to ensure that gender equality is fully integrated into all EU policies and actions (also those related to the environment and climate change), including stakeholder participation.

Engaging young individuals allows for their valuable input, innovative ideas, and fresh approaches to be incorporated into decision-making and policy formulation. By actively involving young people in water governance, their diverse knowledge, digital literacy, and ability to adapt to rapidly evolving technologies can be beneficial. It is documented that involving youth has led to an increased number of events involving youth in various water and sustainable development related conferences both globally and in Europe. One initiative, the Youth in Action for Sustainable Development Goals (YiA4SDG) project under the ERASMUS+, resulted in 17 pilot initiatives in various European countries on SDGs (Wehn et al., 2018).

In terms of inclusion of minority and vulnerable groups, the EU has several documents and policies that focus on the inclusion of marginalized groups, such as refugees, and other minorities, in stakeholder participation, particularly in the water, environment, and climate sectors. For instance, the [EU Strategy on Adaptation to Climate Change](#) recognizes the importance of involving vulnerable and marginalized communities in adaptation planning and implementation, including refugees, and other. Most of the documents described in this chapter also refer to the need for inclusion in various environment and climate related processes within the EU.



## 2.9. Findings on engagement mechanisms in EU Member States

A comprehensive report published in 2019 as part of the [EC's Environmental Implementation Review \(EIR\) process](#) on implementation of EU environmental law and policy provides information on the current status and progress made in terms of environmental governance in MS of the EU. The report found particular shortcomings around public participation, access to justice and on information available to public. In 2022, a new EIR report identified shortcomings and improvements made by MS in environmental governance. The report highlights some of the best practices for stakeholder engagement mechanisms (See Table 2). It should be noted that competences and strategies of public engagement regarding water and the environment are different in every MS.

*Table 2: Best practice engagement mechanisms in EU MS (best practice) in 2019. Nesbit et al. (2019), Development of an assessment framework on environmental governance in the EU MS<sup>5</sup>.*

Engagement Mechanisms	EU Member States
Web-based tools and platforms: Portals for policies, strategies and legislation consultation	Belgium, Bulgaria, Denmark, Estonia, Italy, Cyprus, Latvia, Netherlands, Portugal, Slovakia, Greece
Web-based tools and platforms: E-consultations and social networks	Bulgaria, Denmark, Estonia, France, Croatia, Italy, Spain, Netherlands, Greece
Citizen Committee, Consensus conferences, Expert Panel: Consultation bodies (councils/ commissions/ committees/ panels)	Belgium, Bulgaria, Denmark, Spain, Croatia, Lithuania, Greece
Decentralised assemblies/ Stakeholder democracies, Citizen Committee, Meeting, workshops, fora: Citizen dialogues, public brainstorming meetings, partnering events, citizen panels, stakeholder forums	Denmark, Germany, Estonia, Ireland, France
Application of Common Tools: Guidance and brochures, standards for participation	Belgium, France, Croatia, Slovenia, Austria, Greece
Joint Trainings and Workshops: Training and workshops to promote and ensure participation	Belgium, Denmark, Poland, Finland, Greece, Cyprus
Environmental Review Bodies and Courts	Sweden, Finland, Denmark, Malta, Ireland, Belgium
Transparency Provision of information	Italy, Denmark, Latvia, Malta, Netherlands (2019) Estonia, Germany, Lithuania, Luxembourg, Malta, Slovenia, Spain (newly added in 2022)
Transparency Information commissioner	Croatia, Slovenia, Ireland, UK

<sup>5</sup> It is not a complete list of MS having engagement mechanism in place but a list of best practice examples.



The *Development of an Assessment Framework on Environmental Governance in the EU MS* report states that public access to information of government responsibilities, environmental data and rights of the public are a crucial foundation for engagement (Nesbit et al., 2019). However, the report finds that many MS do not make environmental information easily accessible, despite the fact that most of the MS are signatories to the Aarhus Convention. Different MS adopt diverse approaches when it comes to the provision of qualitative and quantitative environmental data. For example, Italy, Latvia and Denmark have high standards for providing qualitative data, while Cyprus is more reluctant to share data. The study found that data was unavailable for Austria and Greece, while it was limited in nine MS (Germany, France, Lithuania, Luxembourg, Malta, Netherlands, Poland, Romania, and Sweden) (European Commission, 2022; Nesbit et al., 2019).

The public in MS is guaranteed access to information by law. In some countries, an information commissioner controls the implementation of these laws or access to information in general. Spatial datasets are also available under the [INSPIRE Geoportals](#). While, Malta and Netherlands are front-runners in uploading their data, Italy and Romania contributed very little to the database (Nesbit et al., 2019).

Transparency is another vital aspect to implementing true engagement. Each MS has its own strengths in terms of communicating information. For instance, in Malta, Slovakia and Estonia the design of public websites is standardized allowing easy navigation. Croatia, Slovenia, Ireland and the UK have an information commissioner whose tasks include controlling access to information, as well as monitoring and observing transparency in governance processes. This includes informing the public on their rights and implementing capacity-building activities to improve information flow and ensure transparent procedures. Germany uses the Environmental Key Indicator System tracking current activities in environmental policy. Croatia focuses on social media to communicate with citizens, while Luxembourg has developed an app to provide information for the public (Nesbit et al., 2019). In 2022, Latvia made significant progress in providing access to information. The website of Latvia's Ministry of Environmental Protection and Regional Development gives detailed information on environmental impact assessment processes, including links to the proposal profiles and other necessary documents. It also informs readers about future public hearings for different projects. Finalized Environmental Impact Assessments can also be accessed easily (European Commission, 2022).

MS apply different strategies to organize and transpose stakeholder engagement. Croatia and Belgium established an Environmental Council that makes statements on environmental issues. Denmark consults the Special Committee for the Environment before any EU negotiations to organize Danish statements and positions. Various MS implement citizen dialogues to increase and improve participatory performance. For example, for the Climate Action Plan 2050 and the Resource Efficiency Programme II Germany conducted citizen dialogues. Regarding communication and provision of information, there is no data from MS about the participation rate of citizens for decision-making in their country (Nesbit et al., 2019).

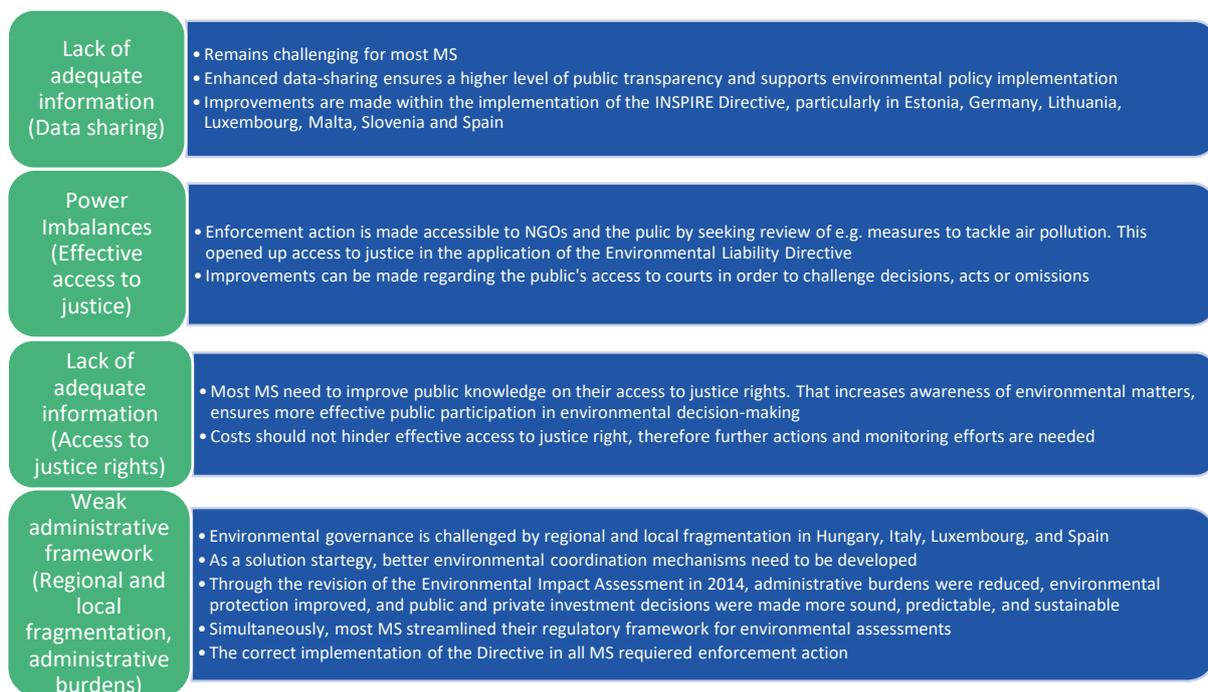
In order to ensure the application of environmental rules within the MS, the EIR for 2022 specifically requests stakeholders to implement actions in a consistent manner. Currently, there are [20 active](#)



[cases of infringements](#)<sup>6</sup> from various MS in the EU about non-communication to the public on water related laws and policies (European Commission, 2022).

The 2022 EIR report states that several MS have established environmental review bodies or courts. Examples are the Swedish Land and Environment Court, the Maltese Environment and Planning Review Tribunal and the Irish Planning Board (European Commission, 2022). MS have made progress over the last reporting period (2019-2022) but also point out the gaps that leave room for improvement in public engagement. Both, progress and gaps on environmental governance are illustrated below (European Commission, 2022).

Figure 4: Improvement and gaps in public engagement in MS based on European Commission (2022)



The EU MS have focused on two major points to address gender inclusion. First, the representation of women and minorities in environmental decision-making institutions and second, the effort of ministries in the EU to make their information accessible to everyone.<sup>7</sup>

According to the “[2017 Gender Statistics Database](#)” of the European Institute for Gender Equality, the number of women working at high-level positions in environmental, climate change, transport and energy ministries/ departments differs between the different Member States. For example, only 15.4% of employees in senior decision-making positions are female. In Bulgaria, the share is 71.4%. Overall, the study suggests that women in the EU are systematically underrepresented in senior positions (Nesbit et al., 2019).

<sup>6</sup> Infringement under EU law refers to a violation or breach of the legal provisions and obligations set out in the treaties, regulations, directives, and decisions of the EU.

<sup>7</sup> Information based on the study Nesbit. et al. 2019 for the EU reporting period 2016-2019.



All MS, besides Ireland and Romania, provide information on their environmental ministry websites in different text sizes but only Denmark, Estonia and Sweden provide the option of the text being read out loud with descriptions of images as a form of accessibility. Even though 17 EU MS ratified the European Charter for Regional or Minority Languages, only the Netherlands, Slovakia and the UK give environmental information on official websites in other languages for the minority populations who are present in significant numbers in those MS. In some cases, the information may be partially translated as needed. For instance, Slovakia translates some of the main parts into English and German. Spain and Sweden have language options in regions where the languages are mostly spoken, and the other 11 MS give information only in their official language. These data are not beneficial in terms of inclusiveness for approaching environmental problems in the EU. (Nesbit et al. 2019)



## Chapter 3: Stakeholder mapping and engagement mechanisms in RETOUCH NEXUS case studies

Each case study had the following categories for the stakeholder mapping exercise:

- WEFE Nexus Sectors - Water, Energy, Food and Ecosystem;
- Societal Sectors - State, Private, Civil Society and Research entities;
- Stakeholder Type - key, primary or secondary stakeholder; and
- Scale - Local, regional and national

Societal Sectors identify whether stakeholders are from the government, private sector, civil society or research institutions. The WEFE Nexus Sectors categorize stakeholders into Water, Energy, Food or Ecosystem groups, and the Scale category organizes the stakeholders into local, regional or national levels.

Key Stakeholders are defined as those who can use their skills, knowledge or position of power to significantly influence the decisions at the RETOUCH NEXUS case studies and without whose support and participation the targeted results of the project cannot be achieved. Primary Stakeholders are directly affected by or have direct impact on the RETOUCH NEXUS challenges in the case study and are the main beneficiaries of the project. Secondary Stakeholders are only indirectly affected by Nexus related challenges and interventions. Other types of stakeholders identified are associations or collectives of different stakeholders who are in many instances established as multi-stakeholder platforms. The Stakeholder Onion graphically locates the different stakeholders into categories and shows their relationships to one another through joint interest, cooperation or potential conflict links.<sup>8</sup>

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<sup>8</sup> More information given in Chapter 1.5 Method and Structure



### 3.1. Belgium

Table 3: Case Study WaterProof, Belgium

WaterProof Belgium	
General information	<ul style="list-style-type: none"> <li>- Two business parks, one in Tielt (focus of RETOUCH NEXUS case study under WaterProof) and one in Keiberg, where the interaction of water and climate is researched. One residential area in Agnetenpark where sustainable living is the main goal</li> <li>- RETOUCH NEXUS project is led by Vlaamse Instelling voor Technologisch Onderzoek (VITO) and De Watergroep</li> </ul>
Key issue	- Development of water pricing mechanisms for reuse of rainwater
Engagement trends	<ul style="list-style-type: none"> <li>- VITO provides scientific advice and organizes co-creative workshops</li> <li>- Information and engagement through newsletters, websites, site visits, and events organized by VITO</li> </ul>
Engagement gaps	<ul style="list-style-type: none"> <li>- Information available only in Dutch</li> <li>- Limited information on the inclusion of women, youth, and vulnerable groups</li> <li>- Lack of motivation</li> </ul>
Next steps for inclusive engagement	<ul style="list-style-type: none"> <li>- Addressing the language barrier</li> <li>- Enhancing inclusivity</li> <li>- Adapting engagement strategies to the local context</li> <li>- Enhancing awareness and knowledge about water usage, project benefits, and individual contributions</li> </ul>

#### Case Study Overview – WaterProof

The Belgian case study consists of different demonstration sites that focus on making industrial and residential areas more water and climate resilient. The case study is associated with two business parks, in Tielt and Keiberg, where the interaction of water and climate is researched, and one residential area in Agnetenpark focused on sustainable living. The RETOUCH NEXUS project is led by Vlaamse Instelling voor Technologisch Onderzoek (VITO) and De Watergroep. While the focus in RETOUCH NEXUS is on the Tielt, the stakeholder mapping was completed for all three projects.

The key issue that needs to be addressed in the case study is the development of water pricing mechanisms for reusing rainwater. The case study wants to establish pricing mechanisms that promote the sustainable management and support of ongoing investments in the Waterproof project.



## Stakeholder Mapping – WaterProof Belgium

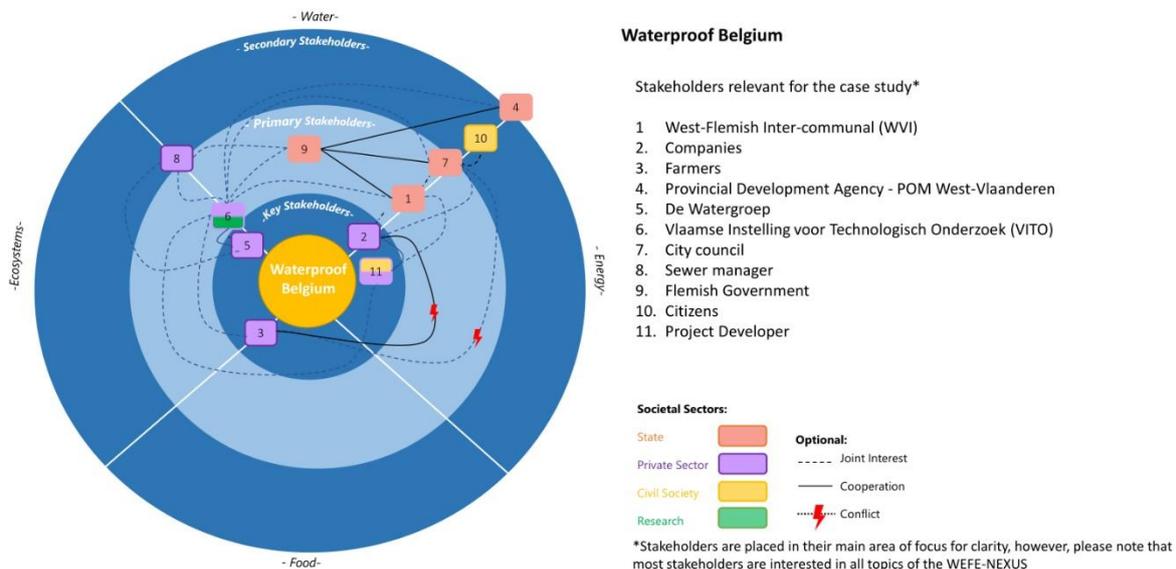


Figure 5: Stakeholder Onion WaterProof, Belgium

## Stakeholder Relevance

Farmers play a key role in the Tielt Business Park as observed in the figure above and they are considered private actors. They have synergies with other stakeholders regarding water use, such as utilizing water discharged by other stakeholders for irrigation and agricultural production. Farmers from Flanders are affected by climate change, with increasing wet winters and drier summers. The farmers are aware of the impending water scarcity that will affect them. The use of water for irrigation by farmers affects the quality of ecosystems due to wastewater discharge, and energy prices due to the use of farm machinery, making their interests and responsibilities cross-sectoral. Conflicts may arise with companies and the City Council due to potential competition for water allocation and use.

VITO, the case study leader, is a private research entity responsible for coordinating and implementing the RETOUCH NEXUS project in Tielt. VITO is considered a primary stakeholder that interacts with all stakeholders and shares common interests. VITO provides scientific advice and organizes participatory events to support proposed solutions.

Private companies in the Business Park are identified as key stakeholders due to their high-water demand. Their willingness to collaborate is crucial for the success of the project. Energy related issues are an important concern for the companies since water prices are closely tied to energy prices and any revision of prices will have to be in consultation with them. Sustainable practices in water, energy, and the environment align with companies' marketing strategies, providing incentives for their engagement.

Cities and municipalities are primary stakeholders with a strong interest in sustainable and climate-resilient solutions for their residents and economic players within their jurisdictions. The Flemish Government, through the [Blue Deal](#) and Climate and Energy strategies, supports projects that serve



as climate resilient examples for Flanders by subsidizing initiatives that address environmental challenges resulting from climate change.

#### *Opportunities for stakeholder collaboration*

The key issues to consider include water scarcity and quality. Addressing water scarcity and protecting the water sources are crucial concerns, particularly for farmers facing climate change impacts and stricter European legislation. Developing sustainable water management practices and infrastructure is necessary to meet these challenges. The interdependence between water and energy prices should be recognized in the energy-water Nexus. Developing pricing mechanisms that account for this Nexus can promote efficient water use and incentivize sustainable practices.

Promoting collaboration between various stakeholders, such as farmers, companies, and municipalities, is crucial for attaining the objectives of the project. By addressing potential conflicts and nurturing cooperation, the implementation and expansion of sustainable water and climate-resilient solutions can be facilitated. Encouraging stakeholders to work together plays a vital role in achieving the desired outcomes and advancing the adoption of environmentally sustainable practices in the face of water and climate challenges.

The opportunity to successfully scale the outcomes of the case study is significant for wider adoption and impact. Engaging key stakeholders, especially companies, and promoting the benefits of sustainability in marketing strategies can encourage the broader application of climate-resilient practices beyond the Business Park.

The involvement of the Flemish Government through subsidies and strategies demonstrates the importance of their support for achieving environmental goals. Continued government backing and coordination can provide necessary resources and guidance for sustainable initiatives.

#### *Engagement mechanisms in the WEF Nexus and gaps*

Currently, stakeholders in the Tielt case study are informed and engaged through various channels, including newsletters, websites, site visits, and events organized by VITO, who act as the intermediary between stakeholders. Two significant stakeholder events have been held to provide information about the project and foster collaboration. The project partners, De Watergroep, and Aquafin have played important roles during these events and actively present the Tielt case study in conferences.

VITO's communication team regularly publishes newsletters to update companies, citizens, and farmers on the project's latest developments. They also maintain a website where stakeholders and interested parties can access information about the project. Furthermore, VITO has organized stakeholder events with co-creation workshops, creating a platform for stakeholders to voice their concerns and facilitate interaction among them. Efforts are being made to develop an improved communication approach for the Tielt case study, aiming to provide information on the case study itself and inspire other business parks to take similar actions.

There are several aspects of the stakeholder engagement that can be improved. Firstly, addressing the language barrier is crucial to ensuring inclusivity. Currently, all communication is in Dutch, limiting access to information for stakeholders who do not speak Dutch. Providing information in multiple languages would enhance participation and broaden the engagement process.



Secondly, it is important to assess the needs of women, youth, and other vulnerable groups and identify steps to engage them as needed. Special attention can be given to accommodate people with disabilities to participatory activities.

Thirdly, lack of motivation is another significant challenge encountered by stakeholders and organizers. Overcoming this hurdle requires enhancing awareness and knowledge regarding water usage, the advantages of the project, and individual contributions. By quantifying and effectively communicating the project's benefits in a clear and accessible manner, stakeholders can be more motivated and actively engaged. This approach ensures that stakeholders understand the value of their involvement and encourages their continued participation in achieving the project's objectives.

In addition, it is important to recognize that the requirements for integrating different groups may vary in the case study compared to other water governance examples. Tailoring engagement approaches to the specific needs and context of the Tielt case study will ensure relevance and effectiveness.

Overall, by addressing the language barrier, enhancing inclusivity, improving motivation, and adapting engagement strategies to the local context, stakeholders can bring about positive change and foster meaningful stakeholder engagement.



### 3.2. Germany

Table 4: Case Study Upper Main, Germany

Upper Main	
General information	- The Upper Main case study centres around transitioning from a traditional top-down approach to water management and to establish a digitally-driven governance structure
Key issue	- Improved communication, coordination, and cooperation among governing institutions and water users
Engagement trends	- Collaboration among diverse stakeholders from the district of Upper Franconia and other organizations - Environmental education - Availability of online data for general public
Engagement gaps	- Stakeholder communication is project-based and lacks a long-term communication strategy and platform - Limited WEFE Nexus cooperation - Limited information around the need to involve women, youth, and vulnerable groups
Next steps for inclusive engagement	- Need for improved communication, coordination, and cooperation among governing institutions and water users

#### Case Study Overview – Upper Main

The Upper Main case study in Bavaria, Germany, centres around transitioning from a traditional top-down approach to water management to a digitally-driven governance structure. The aim is to modernize water governance in the Upper Main river catchment, which is a tributary of the Rhine. This modernization involves the utilization of online engagement tools, citizen science initiatives, and improved cross-sectoral communication and coordination. The objective is to foster a more inclusive and participatory approach to water management, leveraging digital solutions and collaborative efforts to enhance the overall effectiveness and sustainability of the region's water governance.

The key stakeholder issues in the Upper Main case study are improved communication, coordination, and cooperation among governing institutions and water users. Currently, stakeholder communication is project-based and lacks a long-term communication strategy and platform, which hinders effective collaboration and knowledge sharing. This fragmented communication landscape poses a significant challenge in the face of hydrological extremes such as floods and droughts, which are expected to increase tensions among stakeholders. Additionally, the interconnected nature of the WEFE Nexus in the study area highlights the importance of considering different water demands and environmental sustainability aspects. The urgency lies in overcoming these tensions and fostering sectoral cooperation to ensure the long-term viability of water resources and the well-being of both human and ecological systems. The potential for upscaling exists by expanding the analysis to the entire Main catchment, involving additional water authorities and federal states in the collaborative efforts.



Stakeholder Mapping of Case Study – Upper Main, Germany

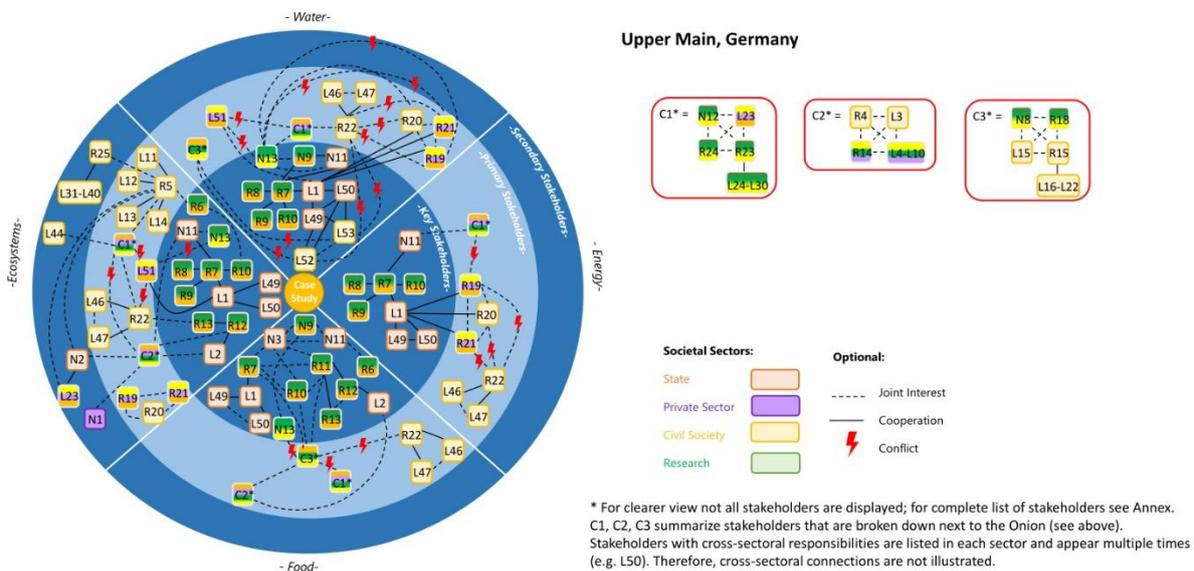


Figure 6: Stakeholder Onion Upper Main, Germany

Stakeholder Relevance

Hybrid forms of two or more societal sectors are common, with a majority representing the research and public sectors. The number of stakeholders for Main case study is significantly higher compared to the other case studies as numerous associations and organizations from different counties are included. However, there is a lack of private and solely research-related stakeholders in the study, often represented in hybrid forms. Most stakeholders operate at the local and regional scales, considering all sectors of the WEFN Nexus, with a higher concentration of actors in the ecosystems sector and a lower presence in the energy sector.

The key stakeholders, analysed based on their characteristics, relations, and interests, largely represent hybrid forms of the research and public sectors, with only a small representation from civil society. While there is a joint interest among most key stakeholders, conflicts arise, particularly within the water sector between key and primary stakeholders.

The key stakeholder groups consist of Bavarian governmental institutions, state offices, and ministries, which play a significant role in the case study. They operate at the regional scale across all WEFN sectors and fulfil functions such as research, monitoring, evaluation, and information services to advise the federal government. Since this group consists of executive institutions, there are no conflicts observed here between the key and other stakeholders. Another group of key stakeholders, comprising solely of state actors, strive for sectoral balance at national and local scales and provide support, coordination, and implementation of WEFN-related projects. However, the representation of civil society is limited.



### *Opportunities for stakeholder collaboration*

It is important to note that a significant number of stakeholders in Upper Main include associations that bring together research organizations, the private sector, and civil society. These hybrid stakeholders are not individually identified, suggesting the presence of established multi-stakeholder platforms or networks that play a crucial role in the case study and can be considered as examples of engagement mechanisms. These platforms serve as collective voices, representing the shared interests of various stakeholders and facilitating collaboration among them.

Existing stakeholder engagement mechanisms include research, monitoring, evaluation, and information services provided by governmental institutions, state offices, and ministries. Coordination and support are also offered by state actors. However, there are gaps that need to be addressed. These include the limited representation of private and solely research-related stakeholders, as well as the relatively small presence of civil society stakeholders. Furthermore, there is a need for stronger cooperation and coordination among stakeholders, particularly in addressing conflicts within the water sector. Enhancing the involvement of private stakeholders, fostering collaboration between key and primary stakeholders, and promoting broader civil society participation would contribute to more comprehensive and effective stakeholder engagement in the Upper Main case study.

With regards to enhanced representation and inclusiveness, paying particular attention to the involvement of women, youth and other vulnerable social groups, there is a need to consult and gather more information, as the current mapping and exploring engagement mechanisms could not find more information. This may require addressing barriers such as financial constraints, lack of expertise, or limited access to information, and implementing measures to ensure a more diverse and inclusive range of participants. It is important to identify and address barriers to motivation that hinder successful engagement. This involves understanding the reasons behind low motivation among both organizers and participants and developing strategies to overcome these challenges, such as increasing awareness, highlighting the relevance of participation, and addressing competing priorities.

### *Engagement mechanisms in the WEFE Nexus and gaps*

Stakeholder engagement in the case study is facilitated by associations and government entities such as ministries and municipalities. These initiators and organizers involve diverse groups representing all WEFE sectors, including citizens, association groups, companies, and self-employed individuals like farmers. Three notable examples of stakeholder involvement within the case study are the River Paradise Upper Franconia, the Ecological Education Centre Upper Franconia - Nature Conservation Centre moated castle Mitwitz, and the Round Table Upper Franconia.

The River Paradise Upper Franconia focuses primarily on the water and ecosystem sectors, aiming to harness the potential of the Main and Regnitz valleys for local recreation and sustainable tourism. The association is supported by cities, municipalities, districts, and private sponsors. Its role is to mediate between environmental education, tourism, and local recreation, with a focus on the development and preservation of the river landscapes.

However, it should be noted that the organization Ecological Education Centre Upper Franconia - Nature Conservation Centre moated castle Mitwitz and Round Table Upper Franconia is primarily concerned with environmental education, not actual planning. Compared to this, River Paradise Upper Franconia does actual planning.



The Ecological Education Centre Upper Franconia - Nature Conservation Centre moated castle Mitwitz operates as a model alliance supported by various associations, federations, and municipalities. Its objective is to develop and communicate knowledge about the natural environment, raise awareness of ecological relationships, visualize these concepts, and promote environmentally friendly behaviour. The initiative is politically neutral and involves collaboration among diverse stakeholders from the district of Upper Franconia and other organizations related to nature conservation and education.

The Round Table Upper Franconia serves as a network for institutions and actors involved in education for sustainable development in Upper Franconia. Regular meetings and joint actions are organized at both the regional and Bavaria-wide levels. Participants include educational institutions, municipalities, and representatives from the government of Upper Franconia. The Round Table aims to enhance communication, interdisciplinary networking, experience exchange, and the overall strengthening of environmental education in Upper Franconia.

Associations, which are multi-stakeholder in nature demonstrate effective models for communication and collaboration among stakeholders within the case study. Additionally, the Bavarian State Ministry of the Environment and Consumer Protection (STMUV) plays a significant role as the superior authority for nature conservation, collecting data from specialized state authorities and providing it to the public through online portals or upon request.

Specific stakeholder mechanisms such as public hearings, consultations, or surveys, are not mentioned in the collected information due to the lack of interviews with stakeholders.



### 3.3. Spain

Table 5: Case Study Jucar River Basin, Spain

Spanish Jucar River Basin	
General information	<ul style="list-style-type: none"> <li>- Jucar River Basin faces significant challenges in ensuring sustainable water supply for Valencia and its metropolitan area.</li> <li>- Droughts, hydrological irregularities, and overexploitation of groundwater have led to severe environmental, social, and economic impacts.</li> <li>- Traditional approaches of increasing water resources are no longer viable in the Jucar River basin.</li> </ul>
Key issue	<ul style="list-style-type: none"> <li>- Improving water governance schemes and implementing effective economic instruments</li> </ul>
Engagement trends	<ul style="list-style-type: none"> <li>- Organisation of public consultation events, webinars, workshops, information for events available online</li> </ul>
Engagement gaps	<ul style="list-style-type: none"> <li>- Limited mechanisms to engage women</li> </ul>
Next steps for inclusive engagement	<ul style="list-style-type: none"> <li>- Strengthen the representation of all stakeholders</li> <li>- Ensure that diverse voices, including those of women, youth and vulnerable groups, are adequately represented</li> </ul>

#### Case Study Overview - Jucar River Basin

The Jucar River basin in eastern Spain faces significant challenges in ensuring sustainable water supply for Valencia and its metropolitan area. Droughts, hydrological irregularities, and overexploitation of groundwater have led to severe environmental, social, and economic impacts. With climate change exacerbating these issues, the basin is in a precarious state. Traditional approaches of increasing water resources are no longer viable due to the near depletion of the Jucar River basin. Therefore, the utilization of non-conventional water sources may be necessary. However, the high costs associated with using these sources poses a significant affordability challenge, especially considering the rising energy prices. To achieve sustainable water use, it is crucial to establish improved water governance schemes and implement effective economic instruments. This requires building consensus among the diverse range of users, stakeholders, and institutions involved in the basin. Addressing stakeholder concerns and fostering collaboration will be essential for successful implementation.



## Stakeholder Mapping of Case Study –Jucar River Basin, Spain

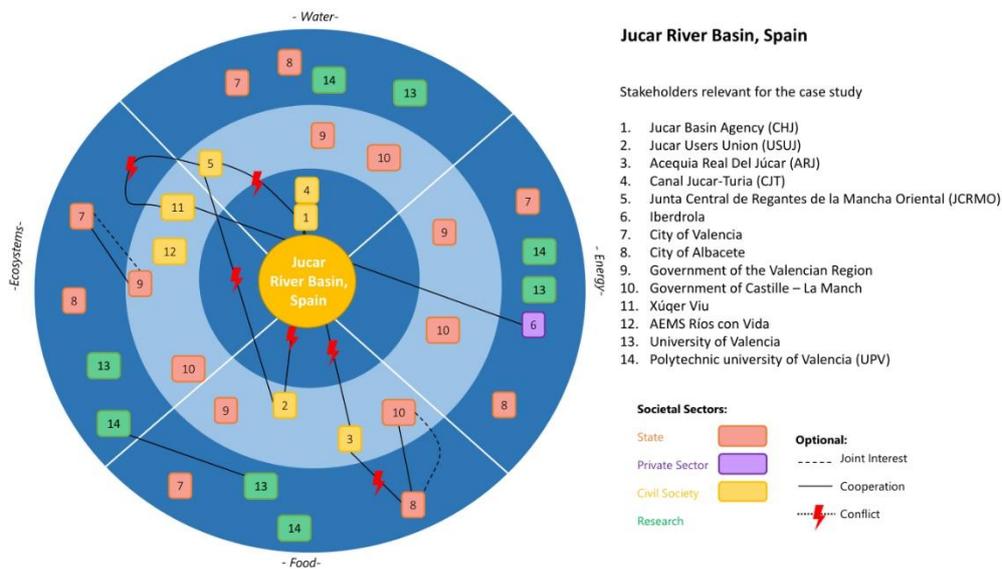


Figure 7: Stakeholder Onion Jucar River Basin, Spain

*Stakeholder Relevance*

The Jucar River basin in eastern Spain involves a range of stakeholders operating at different scales and with diverse interests. The Jucar Basin Agency (CHJ), Confederación Hidrográfica del Júcar in Spanish has its own legal status and attached as an autonomous institution with full functional autonomy managing large-scale water users, such as agriculture, industry or power generation, plan and build water infrastructure, and assists the municipalities in implementing water-related projects. The other key stakeholder for basin management is the Canal Jucar-Turía (CJT). The CHJ focuses on achieving sustainable water use, fulfilling the EU WFD, and reconciling the interests of water users. They act as referees in user conflicts and may face potential conflicts during drought periods. The CJT regulates the operation of the Jucar-Turía Canal and aims to support farmers without elder rights from the lower Jucar. “Elder rights” refer to the longstanding water rights held by certain farmers or entities based on historical use or seniority. They seek a more equitable share of surface water and express concerns about rising energy prices. While they maintain good relationships with other stakeholders, they desire changes in the water sharing system to ensure fairer access to surface water.

The Jucar Users Union (USUJ) represents downstream farmers with elder rights and the entity Iberdrola. They safeguard their members' interests and the current water share and right system, particularly protected by the Alarcon Agreement. They may oppose any changes that threaten their current position and have previously sued the CHJ and other Jucar users for breaking the agreement. The Acequia Real Del Júcar (ARJ), an important farmer association within the USUJ, ensures compliance with water use regulations and aims to preserve elder rights. They are open to irrigation modernization and temporary surface curtailment during droughts, as long as compensation is provided as per the Alarcon Agreement. Any alterations to the water sharing system that jeopardize their elder rights would be opposed.



The Junta Central de Regantes de la Mancha Oriental (JCRMO) manages groundwater and surface water use for irrigation, prioritizing sustainability and environmental preservation. They represent farmers without elder rights from the middle Jucar and are being pushed to reduce groundwater pumping due to overexploitation. They seek to ensure the sustainability of their farming activities, increase their share of surface water, and oppose any further reduction in their groundwater pumping cap. Their relationship with the CHJ and the USUJ has improved, but they remain vigilant about maintaining their water allocation.

The Government of the Valencian Region is concerned with the economic activity of farming districts and the ecological status of protected areas. Their relationship with other stakeholders varies based on the government of Castille-La Mancha and the government of Spain. Currently, as they belong to the same party, significant conflicts are not expected, but if any political change happens, the potential for conflicts can increase. The Government of Castille-La Mancha, also a regional stakeholder, aims to increase the share of surface water in the Jucar to replace groundwater from the Mancha Oriental aquifer, which is costlier and less clean.

#### *Opportunities for change*

Collaborative water management presents a significant opportunity. Stakeholders such as CHJ, CJT, and USUJ can engage in joint planning and decision-making processes. This collaboration can lead to the development of comprehensive water allocation strategies, including more equitable sharing of surface water resources and sustainable groundwater use. By working together, stakeholders can optimize water management practices and ensure the long-term health of the Jucar River basin.

The Government of the Valencian Region and the Government of Castille-La Mancha, among others, can work together to strengthen water governance mechanisms. Transparent and participatory frameworks for decision-making should be established, allowing all stakeholders to have a voice in shaping water policies and regulations. This inclusive approach will promote trust, cooperation, and collective ownership of water management processes.

Stakeholders across sectors can adopt an integrated Nexus approach. By recognizing the interdependencies between water, energy, and food, stakeholders can explore innovative solutions that optimize resource use and promote sustainable development. This approach requires collaboration between agriculture, environment, and urban water supply stakeholders. By sharing knowledge, implementing sustainable farming practices, and exploring economic instruments, stakeholders can achieve a more balanced and resilient water management system.

#### *Engagement mechanisms in the WEF Nexus and gaps*

Resource management in Spain follows a participatory approach, as mandated by the Water Act. Various governing bodies, such as basin organizations, management bodies, the Demarcation Water Council, and the Committee of Competent Authorities, facilitate this participatory management process. The Water Act emphasizes the importance of public participation in hydrological planning, and a dedicated webpage has been created to provide technical information and facilitate public involvement.

The Jucar River Basin Authority extends public participation to the design phase of certain projects. The water planning process is open to all citizens, as well as administrations, users, and economic,



social, and environmental organizations. Public consultation periods, which typically last around six months, include webinars, workshops, and participatory events to gather opinions and contributions. The River Basin Organizations organize these events to engage citizens and stakeholders, aiming to bridge the gap between the plans' content and public understanding. Information regarding these events can be found on the websites of the River Basin Confederations.

The participation model is based on three levels: public information, public consultation, and active participation. Basin organizations strive to disseminate water planning content and promote dialogue among interested parties. Although no evidence of targeted participatory processes for vulnerable groups or women was found, there is recognition of the need for greater representation of women. The purpose of participatory processes, such as public consultations, is well explained on the river basin websites, ensuring transparency about the scope and purpose of engagement.

While the existing mechanisms provide opportunities for engagement and knowledge inclusion, there are gaps and challenges to address. Environmental actors may feel unheard, leading to decreased motivation to actively participate. This lack of motivation can be exacerbated when participants perceive a lack of tangible outcomes or representation of their opinions. There is a need to ensure that diverse voices, including those of women and vulnerable groups, are adequately represented in the participatory processes. Additionally, conflicts may arise when prioritizing stakeholder suggestions due to limited human resources. Efforts should be made to address these gaps, enhance motivation, and strengthen the representation of all stakeholders, particularly those currently underrepresented.



### 3.4. Malta

Table 6: Case Study Maltese River Basin District, Malta

Maltese River Basin District	
General Information	<ul style="list-style-type: none"> <li>- There is an increasing reliance on non-conventional water resources, such as sea-water desalination and water reclamation</li> <li>- High population density</li> </ul>
Key issue	<ul style="list-style-type: none"> <li>- Water scarcity leading to seeking alternative water sources</li> </ul>
Engagement trends	<ul style="list-style-type: none"> <li>- <a href="#">National Consultation Platform</a> and National Stakeholder Water Table</li> <li>- Public meetings, consultations (both in person and online), stakeholder meetings targeting specific groups, surveys, and focus group discussions</li> <li>- Availability of online data</li> </ul>
Engagement gaps	<ul style="list-style-type: none"> <li>- Limited number of tools for engaging women, youth and other vulnerable groups</li> </ul>
Next steps for inclusive engagement	<ul style="list-style-type: none"> <li>- Simplifying and streamlining engagement processes, particularly for small institutions</li> <li>- Raising awareness about the importance of engagement and provide clear explanations of the data and information shared during the consultation process</li> <li>- Improving communication and cooperation between ministries and Farmers Associations</li> </ul>

#### Case Study Overview- Maltese River Basin District

The main issue in relation to stakeholder engagement in Malta is the increasing reliance on non-conventional water resources, such as sea-water desalination and water reclamation, for both municipal and agricultural sectors. The scarcity of freshwater, combined with high population density, has led to the need for alternative water sources. However, these unconventional resources are closely tied to energy requirements for treatment and distribution, creating a direct link between water supply, food production, and energy consumption. This requires engaging stakeholders to understand their perspectives and develop economic tools that consider the social welfare within the basin district.



## Stakeholder Mapping of Case Study – Maltese River Basin District

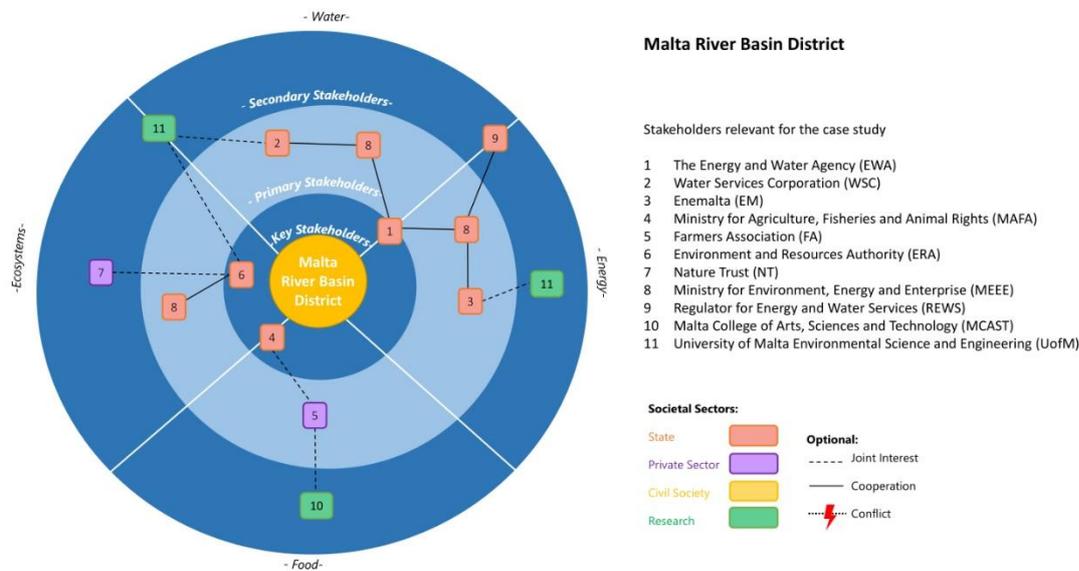


Figure 8: Stakeholder Onion Maltese River Basin District, Malta

### Stakeholder Relevance

Stakeholder relationships in the Maltese River Basin District primarily involves the national government. The key stakeholders identified are the Energy and Water Agency (EWA), responsible for water and energy sectors, and the Environment and Resources Authority (ERA), focused on ecosystems. The responsible agency handles both water and energy. The EWA plays a cross-ministerial role in supporting policy development through participatory initiatives and feasibility studies, aiming to integrate the WEF E Nexus into national planning policies. The ERA manages environmental flows, water resource use, and allocation, with a national-scale perspective on ecosystem links. The Ministry for Environment, Energy, and Enterprise (MEEE) collaborates with ERA, Regulator for Energy and Water Services (REWS), EWA, and Water Services Corporation (WSC) to for planning future common approaches for the water, ecosystems, and energy sectors.

In terms of private sector stakeholders, the Farmers Associations (FA) and Nature Trust Malta (NT) play crucial roles at regional and national scales, respectively. Given the significant water consumption in agriculture, understanding the status and challenges of the agricultural sector in relation to water, energy, and ecosystems is of utmost importance. NT focuses on the water needs and allocations of ecosystems, while the FA represent the interests of farmers. Additionally, the Ministry for Agriculture, Fisheries, and Animal Rights (MAFA) is a key stakeholder operating at a national scale, providing information on the agricultural sector, policies, and linkages, with a particular focus on water resources for agriculture and efficient irrigation.

### Opportunities for stakeholder collaboration

Opportunities for improving stakeholder collaboration lie in fostering stronger relationships and communication among the state and private sector stakeholders. Enhancing cooperation between the MEEE and stakeholders such as ERA, REWS, EWA, and WSC can facilitate more integrated and holistic



planning approaches. Similarly, strengthening ties between the private sector stakeholders, such as the FA and NT, can foster better understanding and collaboration on water, energy, and ecosystem-related issues. Regular dialogues, joint projects, and inclusive decision-making processes can contribute to more effective stakeholder engagement and the development of sustainable solutions for the Maltese River Basin District.

#### Engagement mechanisms in the WEFE Nexus and gaps

In Malta, ongoing engagement mechanisms involve three levels of participation. Firstly, public agencies engage through inter-ministerial committees. Secondly, private sector, and civil-society participates in stakeholder-tables, facilitated by the Malta Council for Economic and Social Development (MCESD). Lastly, the general public is involved through information and consultation events. Two main official mechanisms are employed: the [National Consultation Platform](#) and the National Stakeholder Water Table led by the EWA. These mechanisms utilize tools such as public meetings, consultations (both in person and online), stakeholder meetings targeting specific groups, surveys, and focus group discussions. Relevant data and information are made available through consultation documents published online and background reports on the responsible entity's web portal.

While guidelines exist to ensure transparency and credible information, there are gaps to be addressed in terms of public participation, gender, and inclusion. Specific tools for engaging women youth, and other vulnerable groups are lacking, although the Commission for the Rights of Persons with Disability serves as a consultee to safeguard against gender discrimination and protect vulnerable individuals in public engagement practices. Lengthy engagement processes that require significant resources can lead to a lack of motivation, particularly impacting small institutions prevalent in Malta. Participants tend to be more motivated when the issue directly affects their interests. Engagement formats vary to encourage broad participation.

To bridge the existing gaps, it is of utmost importance to prioritize public participation, gender inclusivity, and the involvement of youth and vulnerable groups. One crucial step is to establish dedicated mechanisms and tools that actively engage women and other marginalized populations, ensuring their voices are not only heard but also considered in decision-making processes. Simplifying and streamlining engagement procedures, especially for smaller institutions, can help alleviate resource limitations and promote broader participation. It is vital to raise awareness about the significance of engagement and provide clear explanations of the data and information shared during consultations. Regular reviews and reports on how consultation feedback has influenced policy and administrative procedures will enhance transparency and accountability. By addressing these gaps, the existing engagement mechanisms in Malta can become more inclusive and effective, benefiting all stakeholders involved.



### 3.5. The Netherlands

Table 7: Case Study Dutch HHNK, The Netherlands

Dutch HHNK Case Study	
General information	<ul style="list-style-type: none"> <li>- Challenges related to flood risk management, water quality preservation, and protection of vulnerable habitats.</li> <li>- As population increases, housing issues are emerging.</li> <li>- Large-scale industrial expansion.</li> <li>- Longer periods of drought contribute to a significant decline in the fresh water supply</li> </ul>
Key issue	<ul style="list-style-type: none"> <li>- Developing sustainable ways to manage and reuse waste water as fresh water in an island</li> </ul>
Engagement trends	<ul style="list-style-type: none"> <li>- Stakeholder meetings and water authority board → outcomes available online, open access</li> </ul>
Engagement gaps	<ul style="list-style-type: none"> <li>- Information not available</li> </ul>
Next steps for inclusive engagement	<ul style="list-style-type: none"> <li>- Information not available</li> </ul>

#### Case Study Overview - Dutch HHNK

In the province of North-Holland, excluding Amsterdam and Haarlem, the regional water authority (Hoogheemraadschap Hollands Noorderkwartier (HHNK)) is responsible for managing water resources in a low-lying area inhabited by 1.2 million people. The authority faces challenges related to flood risk management, water quality preservation, and protection of vulnerable habitats. With a particular focus on the fresh water supply and quality, stakeholders including local communities, industries, environmental organizations, and agriculture sectors play a vital role. As population numbers rise, housing issues emerge, and large-scale industries expand, longer drought periods contribute to a significant decline in the fresh water supply. To address these challenges, the water authority, known as HHNK, is actively seeking sustainable approaches to manage, utilize, and allocate the fresh water supply, aiming for a transition to a sustainable circular water system.

The central theme of this case study revolves around water reuse in a secluded geographical area, namely, an island. The case study investigates opportunities to use purified waste water as a fresh water resource in the area. The water might be used for environmental purposes such as nature conservation or food production such as irrigation for agricultural purposes. Thereby the case study revolves on the intersection between water, food and environment. Additionally, energy is a topic present in the broader consideration on the reuse of waste water via aquathermic possibilities.



Stakeholder Mapping of Case Study – HHNK The Netherlands

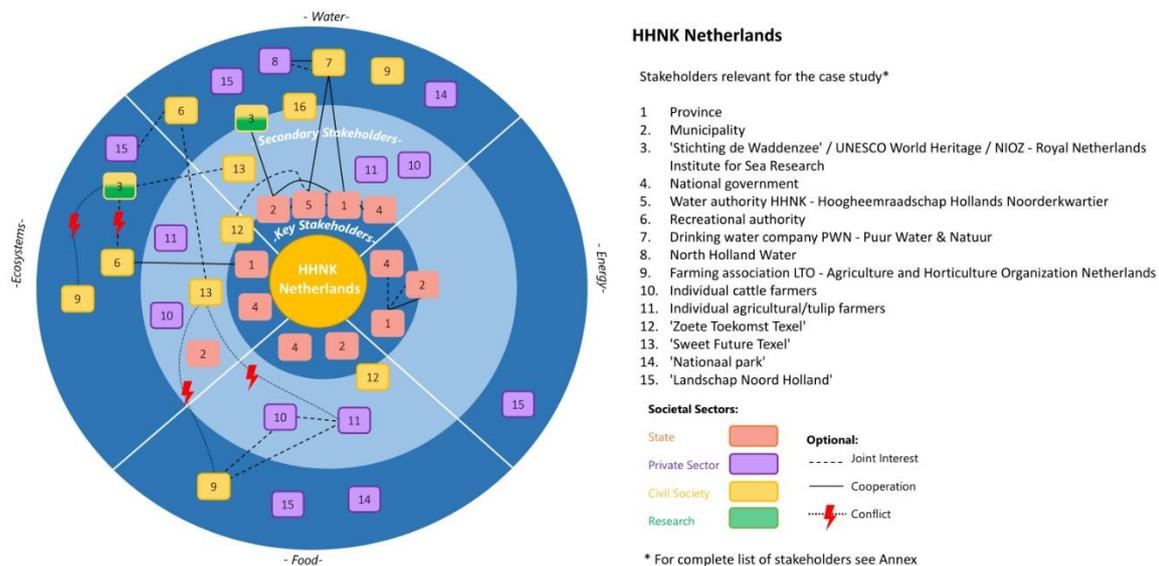


Figure 9: Stakeholder Onion HHNK, The Netherlands

Stakeholder Relevance

In this case study, the water authority HHNK takes the lead in managing the RETOUCH NEXUS project, collaborating closely with various stakeholders. Key stakeholders include the province, municipality, individual agricultural and tulip farmers, nature conservation organizations, and farmer associations. HHNK, as a regional stakeholder, focuses on water safety, quality, quantity, and wastewater treatment. Their main objective is to ensure fair tax allocation for securing fresh water both presently and in the future.

The province, acting as a regional stakeholder, contributes to policy and spatial development, while the municipality, as a local stakeholder, focuses on local legislation and socio-economic development. Both entities support sustainable fresh water infrastructure and strive for stable economic development, assisting farmers in their transition towards a sustainable future.

Individual agricultural and tulip farmers, operating at the local level, consume fresh water and can impact the water system through nutrient and pesticide runoff from their lands. Their main concerns revolve around having sufficient fresh water for cattle and irrigation. Zoete Toekomst Texel ('Sweet Future Texel'), local farmer associations, aim to secure an agricultural future on the island and are particularly interested in developing aquifers with fresh water for irrigation during drier periods.

Nature conservation organizations, including the 'Nationaal park de Waddenzee', Landschap Noord Holland, Natuurmonumenten, and Staatsbosbeheer, act as key stakeholders at both local and regional levels. They are responsible for conserving nature areas and natural resources. Their primary goal is to ensure adequate fresh water availability, maintain appropriate water levels and quality that support biodiversity and the ecosystem. They advocate for reduced pollution, less brackish water intrusion in fresh water areas, and minimizing nutrient-rich water input from agricultural lands and wastewater treatment plants into the water system.



### *Opportunities for Collaboration*

The major challenge currently faced by HHNK revolves around the fresh water supply and water quality in the region. This challenge is exacerbated by the rising population numbers, housing issues, and the growth of large-scale industries. Furthermore, longer periods of drought have resulted in a significant decline in the fresh water supply. In addressing this challenge, there are opportunities for stakeholder collaboration.

HHNK, along with key stakeholders can collaborate to develop sustainable solutions. By working together, they can explore innovative approaches to manage, utilize, and allocate the fresh water supply. This collaboration could involve initiatives such as implementing water-saving measures, promoting water reuse and recycling, and adopting sustainable farming practices. Additionally, stakeholder collaboration can focus on ensuring equitable access to fresh water resources and addressing the competing demands of various sectors. By engaging in meaningful discussions and finding common ground, stakeholders can develop strategies that balance the needs of the growing population, industries, and the natural environment. This collaboration can also involve raising awareness about the importance of water conservation and fostering a sense of responsibility among all stakeholders.

### *Engagement mechanisms in the WEF Nexus and gaps*

HHNK strives for an open consultation process regarding the circular use of waste water in the region. By law, governmental documents can be requested by the public without constraints thereby creating transparency and openness on both content and process. Moreover, HHNK aims to organise stakeholder meetings where they will both proactively invite specific stakeholders and also open the meetings to other interested parties.

The decision-making process regarding the outcome of the consultation process is one that has to be made by the democratically chosen water authority board. Due to the political position this democratic body holds, it is obligatory to be transparent in discussion, content and consideration assumptions. Both the boards assembly, as well as the minutes and policy advise documents are open and accessible to the public.

HHNK has internal policies regarding diversity and inclusion, both in the internal organisation and in external processes and projects. Therefore, they are obligated to take those values into account when designing the participatory process on the case study.



### 3.6. Slovakia

Table 8: Case Study Water Retention in South Western Slovakia

Water Retention in South Western Slovakia	
General information	<ul style="list-style-type: none"> <li>- South-Western Slovakian case study revolves around flooding, droughts, water insecurity, desertification, and biodiversity loss.</li> <li>- Implementation of water retention infrastructure is hindered by the problem of land fragmentation</li> </ul>
Key Issue	<ul style="list-style-type: none"> <li>- Addressing risks of flooding and tackling land fragmentation</li> </ul>
Engagement trends	<ul style="list-style-type: none"> <li>- Mandatory engagement events are carried out by state institutions to fulfil legal obligations, while voluntary events are primarily organized by civil society and research organizations</li> <li>- Workshops, meetings, conferences, public consultations, feedback and commenting, with conflict resolution mechanisms including mutual agreements, mediations, or decisions by higher authorities or courts</li> </ul>
Engagement gaps	<ul style="list-style-type: none"> <li>- Scope and purpose of engagement sometimes lack an integrated Nexus approach</li> <li>- Administrative framework is complex, high costs and resources causing problems for women and vulnerable groups to participate</li> </ul>
Next steps for inclusive engagement	<ul style="list-style-type: none"> <li>- Integrate Nexus approach</li> <li>- Simplify administration, reduce costs, gender related issues need attention, clear communication channels, better information</li> </ul>

#### Case Study Overview – Water Retention in South-Western Slovakia

The key issue in the South-Western Slovakian case study revolves around addressing the risks of floods, droughts, water insecurity, desertification, and biodiversity loss. Governmental and scientific documents have identified these threats, particularly in the south-west region of the country. Synergistic actions, such as increasing water retention capacity, improving irrigation systems, and enhancing landscape structure, are recognized as effective measures to mitigate these risks. However, the implementation of water retention infrastructure is hindered by the problem of land fragmentation in Slovakia. Land consolidation is crucial for overcoming this challenge and is already included in official policies. Without effective land consolidation, the construction of water retention facilities becomes prohibitively expensive. Stakeholder engagement is crucial in addressing the key issues identified in the South-Western Slovakian case study.



## Stakeholder Mapping of Case Study – South-Western Slovakia

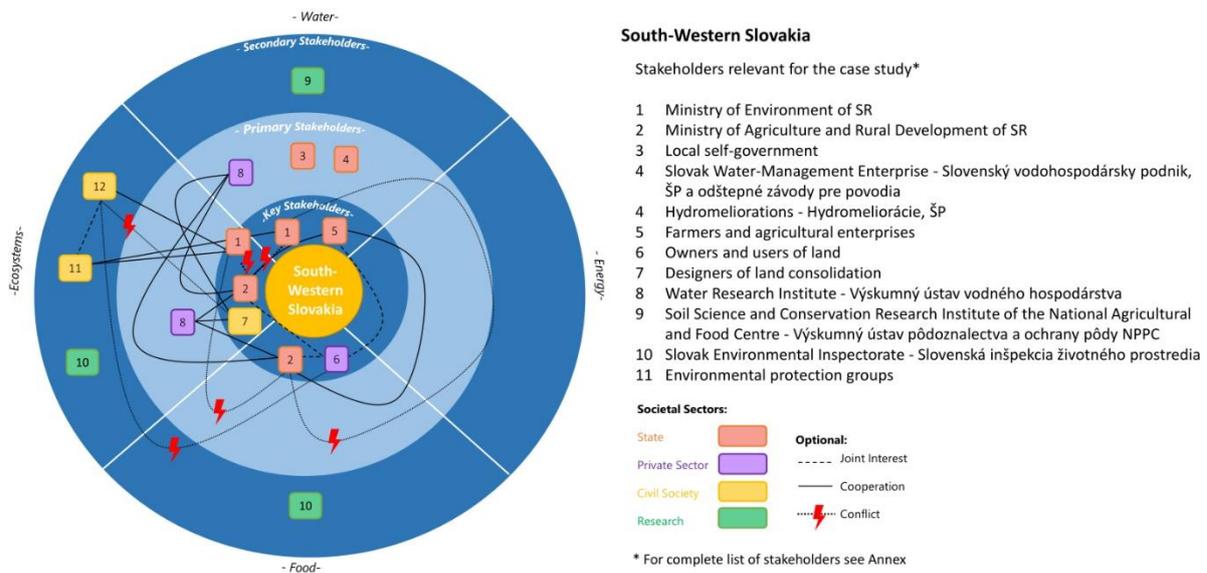


Figure 10: Stakeholder Onion South Western Slovakia

*Stakeholder Relevance*

Most key stakeholders belong to the public societal sector and operate primarily at the national and local scales. Their main responsibilities lie within the ecosystems sector, followed by water and food sectors. Given the scope of the case study, there is no key stakeholder directly related to the energy sector. While most key stakeholders maintain cooperative relations with primary and secondary stakeholders, conflicts and joint interests are prevalent among the key stakeholders themselves.

There are two major independent responsibilities distinguished among the key stakeholders. The Ministry of Environment aims to protect the environment, preserve natural resources, and biodiversity at the national level. The Ministry of Agriculture and Rural Development (MARD) focuses on supporting farmers, climate change adaptation strategies, and infrastructure development. As these ministries share administrative and operative responsibilities, tensions and conflicts arise in their relationship.

*Opportunities for collaboration*

Opportunities for collaboration exist within the stakeholder landscape. MARD engages in cooperative partnerships with Hydromeliorations, while State Enterprise is responsible for irrigation infrastructure maintenance, investments, monitoring, and pricing for farmers. Collaboration between these stakeholders focuses on developing climate resilient infrastructure for farmers and implementing measures to prevent floods and droughts.

Farmers and agricultural enterprises share similar interests with Hydromeliorations and MARD. Their interest is around the availability of affordable and abundant water for irrigation. Owners and users of land, representing a diverse civil society conglomerate identify themselves with the responsibilities,



concerns, and interests of farmers. Owners and users of land (including farmers) manage soil, plots, and they take decisions on vegetation cover and rainwater management.

Collaboration among stakeholders can revolve around preserving and maintaining sustainable agricultural and environmental conditions, including improving soil fertility that can contribute to higher property rates and better sustainable land management. By addressing common interests and concerns, such as water infrastructure, environmental preservation, and agricultural productivity, stakeholders can work together to develop integrated and sustainable solutions. As an example of such cooperation, the MARD is developing a concept of “Soil as Carbon and Water Bank of Landscapes” and implement a certification system of Carbon and Water Bank. In addition, a new legislation will support assessment and financing of the ecosystem services of land and landscapes as a new component of state soil policy.

#### Engagement mechanisms in the WEFE Nexus and gaps

In relation to WEFE stakeholders, engagement mechanisms within the Slovak case study are initiated and organized by various stakeholder groups, including state institutions, civil society organizations, research institutions, municipalities, and farmers. Mandatory engagement events are organized by state institutions to fulfil legal obligations, while voluntary events are primarily organized by civil society and research organizations. Participation in mandatory events is targeted at parties directly affected by the procedures, whereas voluntary events are open to everyone. Ministries, municipalities, land owners and water users, farmers, environmental protection groups, developers, Hydromeliorations, Slovak Water-Management Enterprise, and research institutes are among the diverse stakeholders involved in engagement activities related to land consolidation, blue and green infrastructure, and irrigation systems.

The forms of engagement encompass workshops, meetings, conferences, projects, public consultations, feedback and commenting, with conflict resolution mechanisms including mutual agreements, mediations, or decisions by higher authorities or courts. Information is disseminated through public announcements, online platforms, and notice boards, while direct invitations are sent to parties affected by mandatory engagement processes. Gender equality is integrated into engagement strategies led by governmental institutions, highlighting a commitment to promoting inclusivity and diversity. The openness of events to diverse opinions, values, and perspectives fosters a more comprehensive dialogue and mutual understanding.

In terms of gaps and limitations within the current engagement mechanisms, the scope and purpose of engagement often lack an integrated Nexus approach that considers synergies and cooperation among multiple stakeholders. Public institutions tend to operate within their own competences, overlooking potential collaborative opportunities with other institutions. This exclusionary approach may result in smaller stakeholders being left out of certain processes. While meaningful dialogue and mutual understanding generally prevail, there are disparities in the organization and provision of information to stakeholders, sometimes causing delays or inadequate understanding. Administrative complexities, high costs, limited staff, lengthy processes, participant unavailability, and low interest pose additional barriers and constraints. These obstacles can particularly hinder the participation of older individuals, those with limited educational background, and marginalized groups. Complicated WEFE Nexus procedures further contribute to difficulties and time constraints. Some stakeholders may lack motivation due to limited negotiation power, especially if they bear high costs with minimal



benefits, such as small landowners or non-permanent residents. Decision-makers often only partially consider the results of engagement processes, leading to a limited transfer of outcomes into policies and processes. Financial constraints, time costs, and resistance from stakeholders benefiting from the status quo are among the factors contributing to these challenges.

To address the gaps, it is essential to enhance the inclusivity and effectiveness of engagement mechanisms. Efforts should be made to adopt an integrated Nexus approach that encourages collaboration among diverse stakeholders. Slovakia needs to move from a sectoral approach mainly in terms of usage of water to a Nexus approach to keep the balance across water, land and ecosystem services. An essential part of the balance is a functioning water cycle, where land and soil play a role in effective use or rainwater, help to recharge underground water tables and together with soil humidity provide water for plants that grow and transpire water in water cycles. Therefore, engagement of stakeholders from all Nexus sectors needs to be boosted. Simplifying administrative procedures, reducing costs, and providing adequate support and resources can facilitate broader participation. Special attention should be given to addressing gender and youth related issues, ensuring equitable representation and participation of women and youth throughout the engagement processes. Additionally, timely and accessible information, along with clear communication channels, can improve stakeholders' understanding and ability to provide meaningful inputs. Decision-makers should proactively consider the results of engagement mechanisms and strive for their effective integration into policies and processes. Overcoming financial barriers, minimizing time constraints, and fostering an enabling environment for dialogue and negotiation can further enhance stakeholder motivation and engagement.



## Chapter 4 RETOUCH NEXUS Stakeholder Analysis

The case studies explored the diverse range of stakeholders involved, along with their respective roles and responsibilities across all sectors of the WEF Nexus. The case studies also shed light on the existing engagement mechanisms and identified opportunities for collaboration. Notably, the chapter on case studies placed a particular emphasis on understanding the barriers and gaps hindering active participation of women, gender-related aspects, and vulnerable segments of society. Additionally, it focused on addressing conflicts, promoting transparency, and facilitating information sharing with the public and stakeholders. In many instances, this exercise with case studies helped identifying gaps and challenges. As the RETOUCH NEXUS project progresses, new information will be available that might help in complementing the information gap around stakeholders and engagement mechanisms that exists now.

This chapter provides an overview of the stakeholder mapping within the case studies, existing mechanisms of engagement and potential innovations that can lead to the establishment of more robust stakeholder engagement mechanisms, building cooperation among stakeholders across sectors, and for making the public to be more engaged including women and vulnerable groups. The chapter presents the gaps that have been identified and suggests approaches to strengthen stakeholder engagement mechanisms. The chapter further maps the case studies against a set of questions on participatory governance that showcases what practices are existing and what is missing.

### 4.1. Case studies and Stakeholder Mapping: the relationship and observations

Stakeholders in the RETOUCH NEXUS case studies represent various spheres of influence and interests. In RETOUCH NEXUS, most case studies are focused on river basins or catchments, and the key stakeholders are primarily government or state agencies, although not exclusively from the water sector. In the Water Proof Industrial Area case study in Belgium, the private sector is key stakeholder reflecting the focus on a business park.

It is known that water governance is fragmented across different government agencies (OECD, 2015) and this is observed in most of the case studies where the key stakeholder is the state or public agencies belonging either to one sector or another. Not all stakeholders could be categorized into one specific societal sector but act in a hybrid space.

The primary stakeholders directly benefit from the case study but may not have the same level of power and influence as key stakeholders. While the key stakeholders hold responsibility for engaging other stakeholders, civil society plays an embedded role in many case studies, acting as primary stakeholders or operating on the periphery. This presents an opportunity for close collaboration between the state and civil society, strengthening public participation as emphasized in EU policies and the RETOUCH project. Proactive initiatives are needed to reach out to secondary stakeholders and increase public participation. Primary and secondary stakeholders encompass a mix of actors representing various societal and WEF sectors, varying from case study to case study. For example,



farmers can be considered as private stakeholders in some case studies and as part of civil society in others.

Research stakeholders, mostly represented as secondary stakeholders, contribute valuable scientific knowledge, evidence-based assessments, and expertise to inform decision-making and policy development.

The dominance of certain stakeholder types differs across the case studies, with the state dominating in Spain, Malta, and Slovakia, while the private sector takes precedence in the Netherlands and Belgium. Germany showcases a significant number of civil society and hybrid stakeholder groups, often forming multi-stakeholder platforms to collectively raise mutual interests. The identified stakeholders are predominantly local or regional, but in Malta and Germany, national agencies or ministries are involved.

The number of stakeholders varies among the case studies, influenced by factors such as geographical area, population size, past stakeholder mapping exercises and available information. Germany, in particular, listed 100 stakeholders due to the involvement of national, state, and local actors in governing the case study watershed. The second highest number of stakeholders listed was from Belgium with 28. It is important to further explore all case studies to address an observed anomaly in

*Box 3: Key considerations for stakeholder mapping and analysis based on case studies*

#### Key considerations for stakeholder mapping and analysis

1. Define system boundaries.
2. Consider the scale and population of the case study area when identifying stakeholders.
3. Tailor stakeholder involvement based on the nature and focus of the project.
4. Recognize the fragmented governance of water and involve relevant public agencies from different sectors.
5. Included relevant stakeholders in decision making processes and it is useful to have nominated representatives.
6. Utilize civil society as a bridge to reach out to stakeholders and enhance public participation.
7. Recognize the importance of primary stakeholders who are directly affected by the project.
8. Leverage the contribution of research stakeholders in providing scientific knowledge and evidence-based assessments.
9. Reflect the diversity of societal stakeholders, including state, private sector, civil society, and hybrid groups, in case studies.
10. Encourage multi-sectoral coordination, collaboration, and decision-making where power is not concentrated in the water sector.
11. Iteratively update the stakeholder database to ensure all relevant stakeholders are included and identify common interests, existing cooperation, and potential conflicts among stakeholders.



stakeholder mapping. Many of the case studies cover large river basins and watersheds with substantial population sizes, which necessitates comprehensive coverage to identify any potentially missing stakeholders. The example of Germany shows that there can other stakeholders are generally not considered.

Based on the stakeholder mapping and analysis exercise for all case studies, some of the key considerations for stakeholder mapping and analysis are listed below.

In summary, stakeholder engagement in the RETOUCH NEXUS case studies aligns with different spheres of influence and interests, with a range of stakeholders representing societal, government, private, and research sectors. Collaboration, coordination, and proactive outreach are essential to address common interests, potential conflicts, and foster effective engagement for sustainable water management.

#### 4.2. Existing mechanisms identified from the case studies

One of the activities of RETOUCH is to assess the existing mechanisms identified from the case studies using an indicator framework developed in T1.3. Based on the draft framework of T1.3 (as the final indicators list will be available later), a set of relevant questions focused on stakeholder engagement has been applied in a simplified format to understand if the information that came out from all the case study engagements capture the information needed for these indicators.

The response categories are classified below:

- The response is classified as **'Yes'** if the case study engagement mechanism is in place and functioning, which is determined based on the provided information.
- The response is classified as **'partial'** if the case study engagement mechanism is partially in place or functioning based, which is determined based on the provided information.
- The response is classified as **'No'** if the case study engagement mechanism is not in place or not functioning based, which is determined based on the provided information.
- The response is classified as **'unknown'** if the provided information could not determine if any of the above as responses.

Table 9: Indicators and relation to case study indicators (Global Nexus Secretariat, 2020; Melloni et al., 2022; OECD, 2018; WIN, 2023)

Nr.	Prerequisites for stakeholder engagement mechanisms	Belgium	Germany	Malta	Slovakia	Spain	The Netherlands
1.	Is there political will to support and advance initiatives related to the WEF Nexus?	Yes	Yes	Yes	Yes	Yes	Yes
2.	Are stakeholder mapping and	Yes	Yes	Yes	Yes	Yes	Yes



Nr.	Prerequisites for stakeholder engagement mechanisms	Belgium	Germany	Malta	Slovakia	Spain	The Netherlands
	analysis undertaken?						
3.	Have the power relations among stakeholders been analysed and understood?	Partial	Partial	Partial, doesn't include potential conflicts	Partial	Partial, doesn't include potential conflicts	Partial, doesn't include potential conflicts
4.	Are stakeholders from each sector of the WEF Nexus adequately represented and involved?	Partial	Yes	Partial, less in food	No, the energy sector is not involved	Yes	Partial, less in energy
5.	Are stakeholders from the national, regional, and local levels involved?	Yes	Yes	No	Yes	Yes	Yes, only one national
6.	Have the roles and responsibilities of stakeholders been clearly defined?	Yes	Unknown	Yes	Yes	Yes	Yes
7.	Are there coordination mechanisms existing among stakeholders?	Yes	Yes	Partial	Yes	Unknown	Unknown
8.	Are there mechanisms in place to resolve conflicts that may arise among stakeholders?	Unknown	Unknown	Unknown	Yes	Unknown	Unknown
9.	Are legal frameworks implemented to actively engage stakeholders?	Unknown	Yes	Yes	Unknown	Unknown	Unknown
10.	Are there institutions in place that encourage bottom-up initiatives, dialogue, social	Partial	Yes	Unknown	Yes	Yes	Unknown



Nr.	Prerequisites for stakeholder engagement mechanisms	Belgium	Germany	Malta	Slovakia	Spain	The Netherlands
	learning, and experimentation at different levels?						
11.	Are the legal and institutional frameworks on integrity and transparency implemented?	Unknown	Unknown	Yes	Unknown	Yes	Unknown
12.	Is there a mechanism in place to address and resolve grievances raised by stakeholders?	Partial	Unknown	Unknown	Unknown	Unknown	Unknown
13.	Are there formal and informal mechanisms to engage stakeholders?	Yes	Yes	Partial	Unknown	Yes	Unknown
14.	Are the processes involving multiple stakeholders inclusive and participatory?	Partial	Yes	Partial	Yes	Partial, participatory yes, inclusive unknown	Unknown
15.	Are women participating in processes?	Partial, this is a difficult topic to address in this case study	Unknown	Unknown	Yes	Unknown	Unknown
16.	Are vulnerable groups included?	Partial, this is a very difficult topic to address in this case study	Unknown	Unknown	Unknown	Unknown	Unknown
17.	Are there initiatives driven	Unknown	Yes	No	Yes	Yes	Yes



Nr.	Prerequisites for stakeholder engagement mechanisms	Belgium	Germany	Malta	Slovakia	Spain	The Netherlands
	by civil society organizations (CSOs) or citizens?						
18.	Are there any public awareness initiatives?	Yes	Yes	Unknown	Unknown	Yes	Unknown
19.	Are there mechanisms in place to bridge the gap between science, policy, and practice through knowledge and experience sharing?	Yes	Yes	Unknown	Unknown	Yes	Unknown
20.	Are mechanisms in place to facilitate the sharing of data among stakeholders?	Partial	Yes	Yes	Unknown	Yes	Unknown
21.	Is there equal access to information provided to all stakeholders?	Partial, only in Dutch	Yes	Yes	Yes	Yes	Unknown
22.	Are there capacity development initiatives to empower stakeholders?	Unknown	Unknown	Yes	Unknown	Unknown	Unknown

### 4.3. Trends and Gaps in Engagement Mechanisms

Based on the country cases, Figure 5 shows a comprehensive overview of trends, gaps and recommended actions to address the gaps. First, there are several common popular engagement mechanisms and trends observed across the cases.

*Figure 11: Identified trends and gaps in the case studies and recommended actions*



Trends	Gaps	Recommended actions
<ul style="list-style-type: none"> <li>• Web-based tools and platforms and Traditional Media</li> <li>• Meetings, workshops, fora/ Consensus conferences</li> <li>• Adaptation to Local Context</li> <li>• Transparency</li> </ul>	<ul style="list-style-type: none"> <li>• Communication barriers</li> <li>• Power imbalances</li> <li>• Poor awareness of issues</li> <li>• Lack of stakeholder or public concern</li> <li>• Lack of motivation</li> </ul>	<ul style="list-style-type: none"> <li>• Multilingual Communication</li> <li>• Targeted Outreach</li> <li>• Awareness and Education</li> <li>• Clear Communication of Benefits</li> <li>• Streamlined Processes</li> <li>• Feedback and Follow-up</li> </ul>

All case study involves the dissemination of information through various channels such as newsletters, websites, online portals, public announcements, and notice boards. These platforms provide stakeholders access to relevant data, project updates, consultation documents, and background reports. Stakeholder events include workshops, meetings, conferences, co-creation workshops, and public consultations. Many case studies provide engagement at multiple levels, involving different tiers of stakeholders. This includes engagement with government agencies, public entities, private sector organizations, civil society groups, research institutions, municipalities, and citizens. The aim is to ensure a comprehensive and inclusive engagement process.

Each case studies emphasizes the importance to tailor engagement approaches to the specific needs and context of the local area. Recognizing variations in stakeholder types, understanding local dynamics, and considering the specific requirements of different groups contribute to the acceptance and effectiveness of engagement mechanisms. Additionally, some case studies provide stakeholders with clear explanations of the data and information shared during the consultation process. Regular reviews and reports are conducted to demonstrate how consultation responses have influenced policy and administrative processes, reinforcing transparency and accountability.

There are several common gaps across all the case studies. Communication barriers limit access for stakeholders who do not speak the dominant language of the region. This hinders their participation and understanding of the engagement processes and project information. Further, there is a need for more inclusive mechanisms that actively involve women, youth, vulnerable groups, and individuals with disabilities. While some case studies actively employ locally tailored engagement strategies, others point out their shortcomings in this regard. To further encourage engagement, approaches should be tailored to the specific needs and context of the local area.

Stakeholder motivation can be a challenge. Some stakeholders may lack awareness or understanding of the project's benefits and their individual contributions resulting in reduced engagement. Motivating stakeholders and communicating the benefits of the project or engagement process are essential aspects. Furthermore, a lack of motivation can result from limited power to negotiate or time constraints of stakeholders, in particular when direct benefits are small (or not communicated). These power imbalances can manifest in several ways and can be a cause of concern. Enhancing awareness and disseminating knowledge about the project, quantifying and communicating the project's benefits in a transparent and accessible manner, and highlighting individual contributions can help



stakeholders become more engaged and invested. Targeting women, youth and other vulnerable groups is particularly important to pro-actively address power imbalances that can besides other impacts contribute to a lack of motivation.

One case study points out administrative complexities that hinder integrative engagement. When administrative frameworks do not encourage cross-sectoral collaboration for decision-making, this will have direct effects on the variety and number of stakeholders involved in a participatory process.

#### 4.4. Suggestions for improvements

Some of the suggestions that are recommended based on the case studies in this deliverable are discussed below.

Providing information in multiple languages can enhance inclusivity and accessibility for stakeholders who do not speak the dominant language. Translation services or interpreters can be utilized to ensure effective communication.

In terms of social inclusion, implementing targeted outreach strategies can help to actively involve women, youth, vulnerable groups, and individuals with disabilities. This can include creating dedicated mechanisms and tools for engaging these specific groups, ensuring their voices are heard and their perspectives are considered and additionally, increase stakeholders' motivation to participate.

To increase motivation, many strategies can foster positive results. Enhancing awareness and knowledge about the project's benefits and individual contributions is important. This can be achieved through awareness campaigns, educational programs, and communication efforts that clearly communicate the project's objectives, outcomes, and the role of stakeholders.

Moreover, quantifying and communicating the project's benefits in a clear and accessible manner is crucial. Demonstrating the positive impact of stakeholder engagement and providing tangible examples of how their input influences decision-making can help motivate stakeholders and encourage their active participation. Establishing feedback mechanisms and providing regular reports on how consultation responses have influenced policy and administrative processes can reinforce transparency, accountability, and stakeholder satisfaction. This helps stakeholders see the impact of their participation and builds trust in the engagement process.

Engagement approaches should be adapted to the local context, considering the specific needs, dynamics, and requirements of the stakeholders involved. This can involve conducting stakeholder assessments, understanding local cultural norms, and involving local representatives in the design and implementation of engagement mechanisms. A centrally located and easily reachable (with e.g. public transport) location for public workshops taking place in the late afternoon or the offer of day-care at an event are examples of how to make participation attractive for e.g. individuals with children and/or people with non-flexible working hours. Simplifying administrative procedures, reducing costs, and providing adequate support and resources can help overcome barriers to participation. Efforts should be made to streamline engagement processes, particularly for small institutions or stakeholders with limited resources, to encourage their active involvement.



Water scarcity, flooding and drought were common across all the cases, which is further aggravated due to the climate crisis. With this evolving scenario, it is important that stakeholders are informed, consulted and feedback incorporated as the cases adapt to the changing scenarios. RETOUCH NEXUS is building on the assumption that a participatory approach for developing governance mechanisms is crucial for their future acceptance. Public engagement is essential for sustainable political and societal changes that will occur due to an emerging scenario about water availability. In order to be meaningful, the participation of stakeholders and the public need to be based on their proper understanding of the issues at hand. RETOUCH NEXUS, therefore, proposes to implement stakeholder engagement and public participation activities, such as focus groups discussions and stakeholder workshops in all case studies. A special emphasis is needed to get women on board, which could not be captured sufficiently within the cases. Among the methods countries are using to bridge the gap and include women, youth and vulnerable groups are recognition, representation, the use of digital technologies, and promoting the participation and leadership of marginalized groups (Jalonen et al., 2022). Since certain cultural and societal norms can prevent women from participating in engagement processes, representation techniques should be considered in greater detail. For example, different literary levels may need different forms of communication to fully engage women in a meaningful way (Jalonen et al., 2022).

In the course of the RETOUCH NEXUS project, innovative engagement mechanisms that consider gender gaps and the integration of youth and vulnerable groups will be developed. There is an opportunity to trigger and test innovative approaches within the case studies. With new technology and digital infrastructure, ICT tools, machine learning and AI can be beneficial. ICT tools such as online pinboards, online surveys, virtual communities of practice and exchange rooms. AI tools can play a significant role going forward. Some of the areas where AI can play an important role include data analysis and visualization, decision support systems, natural language processing for analysing stakeholder feedback, as virtual assistants, chatbots, and in collaborative platforms. It is to be noted that AI related tools will need to be considered considering the issues of privacy, ethics, authenticity and available capacities. These tools can serve as information platforms and communication channels for stakeholders and public to raise awareness, increase motivation and mediums of engagement. While some tools already exist and are applied (OECD, 2015; Pellegrini et al., 2019), they need to be selected based on a needs assessment and tailored to the local context. This report is the foundation to design six national workshops following the design-thinking approach to investigate innovative Nexus-smart governance in the six case studies.

Moving forward in the RETOUCH NEXUS project, the upcoming activities in the project includes development and demonstration of 12 innovative engagement mechanisms (Objective 4) and for upscaling the engagement mechanisms (Objective 5) will derive from the learnings and recommendations from this deliverable and adapt as required. New activities and approaches will be proposed to be applied in the case studies for addressing the gaps identified in this deliverable. The next deliverable under WP2, will document existing practices of stakeholder engagement, which will also explore innovations and provide a roadmap for applying them in the case studies.



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