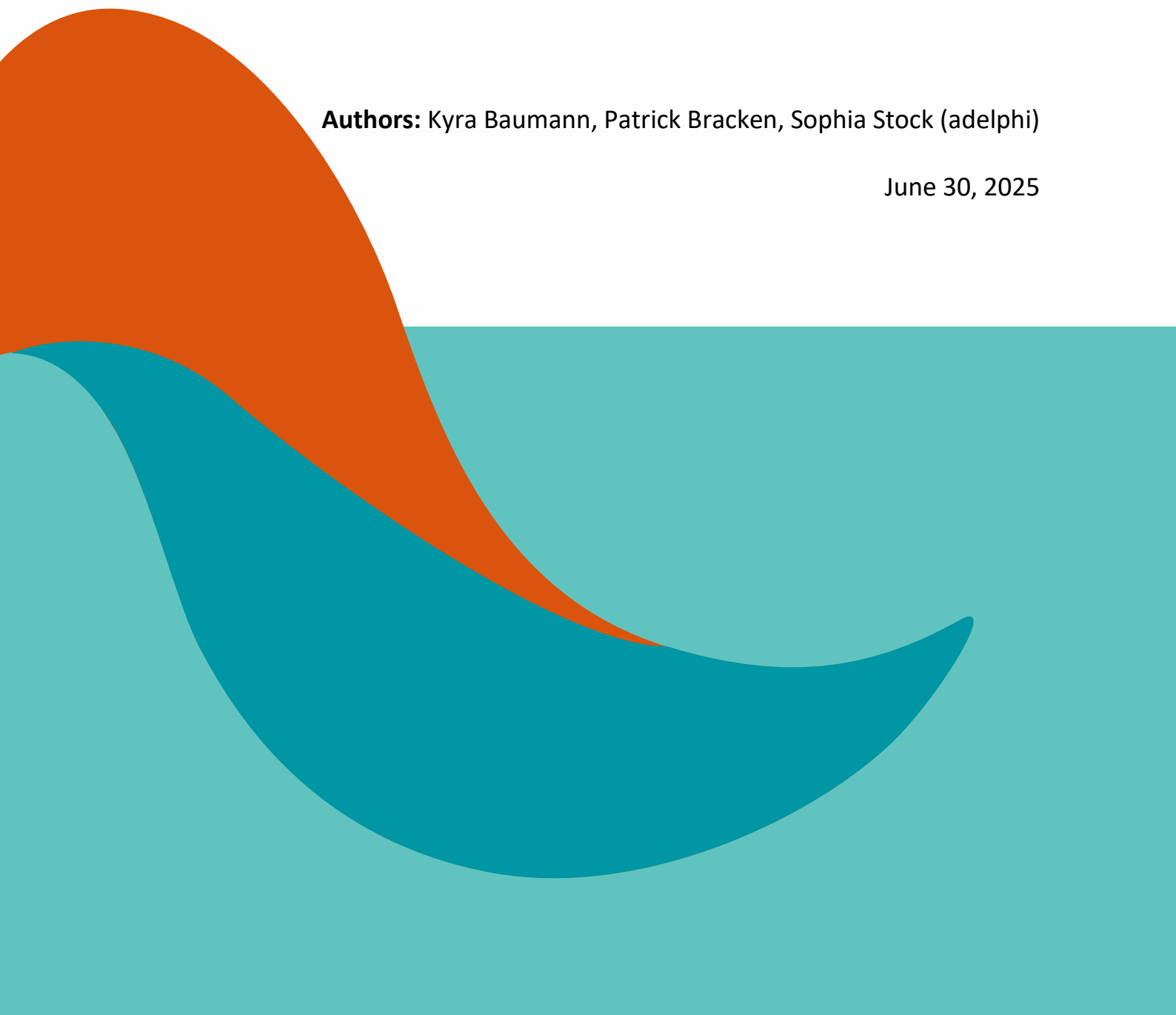


D2.1 Stakeholder Engagement Strategy and plan including CoP's architecture and stakeholder mapping for each case study region

Authors: Kyra Baumann, Patrick Bracken, Sophia Stock (adelphi)

June 30, 2025

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Introductory Table

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Executive Summary

The “Stakeholder Engagement Strategy and Plan” provides a comprehensive framework for fostering collaboration and engagement among stakeholders in the RECREATE project. Funded under the European Union’s Horizon Europe program, the project addresses water scarcity challenges by implementing Alternative Water Resources (AWR) strategies in four water-stressed regions: North-Holland (Netherlands), Kalundborg (Denmark), Syros (Greece), and Costa Brava (Spain).

The strategy introduces the concept of Communities of Practice (CoPs), which serves as a key mechanism for stakeholder engagement activities in the RECREATE project, including knowledge sharing, capacity building, and co-development of solutions. By fostering mutual relationships, shared practices and a common domain of interest, CoPs foster collaboration and innovation. Additionally, this document outlines a structured four-step approach to stakeholder engagement: setting specific objectives, identifying stakeholders, analysing and prioritizing them, and developing tailored engagement strategies.

Besides practical guidelines, the document also presents the results of the stakeholder mappings in all four RECREATE case study regions. In close collaboration with the project’s case study leads, the authors identified key, primary and secondary stakeholders and clustered the various stakeholders according to their influence and interest. While the original mapping was conducted in Excel sheets, the results are here shown as visualisations in diagrams.

This deliverable highlights the important role of stakeholder engagement in achieving sustainable water management solutions through AWR. By engaging a diverse range of stakeholders – from local governments and industries to communities and NGOs – the RECREATE project bridges the gap between innovation research and practical implementation, contributing to enhanced water security and climate resilience across Europe.

Table of Contents

1.	Introduction	9
1.1	Project context.....	9
1.2	Purpose and scope of this deliverable	9
2.	Communities of Practices in RECREATE	10
2.1	Definition and Characteristics of Communities of Practice	10
2.2	Communities of practice in research and innovation projects	12
3.	Developing a stakeholder engagement strategy: a four-step approach	14
3.1	Step 1 Set specific objectives for stakeholder engagement.....	15
3.2	Step 2 Identify and categorise relevant stakeholders	16
3.3	Step 3 Analyse and prioritise stakeholders	16
3.4	Step 4 Develop an engagement strategy and plan.....	17
4.	RECREATE Stakeholder Maps.....	19
4.1	North Holland (The Netherlands)	21
4.2	Kalundborg (Denmark)	23
4.3	Syros (Greece).....	25
4.4	Costa Brava (Spain)	27
5.	Establishment of a CoP for each RECREATE case study region.....	30
6.	Ethical issues	32
	List of References	33
	Annex I: Guidance for the development of a stakeholder engagement strategy.....	34
	Annex II: Templates for stakeholder mapping.....	37
	Annex III: Template for CoP Activity Planning	39
	Annex IV: Template for CoP Activity Documentation	40
	Annex V: Template for participants list, e.g. for CoP meetings	41

List of Abbreviations

<i>AI</i>	<i>Artificial Intelligence</i>
<i>AWR</i>	<i>Alternative Water Resources</i>
<i>CoP</i>	<i>Community of Practice</i>
<i>CS</i>	<i>Case Study/Studies</i>
<i>DoA</i>	<i>Description of the Action</i>
<i>EHS</i>	<i>Environment Health and Safety</i>
<i>ESR</i>	<i>Ethics Summary Report</i>
<i>GA</i>	<i>Grant Agreement</i>
<i>WG</i>	<i>Working Group</i>
<i>WP</i>	<i>Work Package</i>

List of Figures

<i>Figure 1. Building blocks of Communities of Practice; own visualisation, based on Wenger et al. (2002).</i>	11
<i>Figure 2. Key activities of the RECREATE Communities of Practice</i>	13
<i>Figure 3. Four-step Approach towards Stakeholder Engagement</i>	14
<i>Figure 4. Interest / Influence Matrix for Stakeholders</i>	17
<i>Figure 5. Four Levels of Engagement Assigned According the Level of Interest and Influence</i>	18
<i>Figure 6. Stakeholder Mapping Onion</i>	20
<i>Figure 7. Stakeholder Onion North Holland (The Netherlands)</i>	22
<i>Figure 8. Interest / Influence Matrix for Stakeholders in North Holland (The Netherlands)</i>	23
<i>Figure 9. Stakeholder Onion Kalundborg (Denmark)</i>	24
<i>Figure 10. Interest / Influence Matrix for Stakeholders in Kalundborg (Denmark)</i>	25
<i>Figure 11. Stakeholder Onion Syros (Greece)</i>	26
<i>Figure 12. Interest / Influence Matrix for Stakeholders in Syros (Greece)</i>	27
<i>Figure 13. Stakeholder Onion Costa Brava (Spain)</i>	28
<i>Figure 14. Interest / Influence Matrix for Stakeholders in Costa Brava (Spain)</i>	29
<i>Figure 15. Timeline for CoP Activities in the Kalundborg Case Study</i>	31
<i>Figure 16. Onion Diagram for Mapping Key, Primary and Secondary Stakeholders</i>	37
<i>Figure 17. Matrix Template to Map Stakeholders According to their Levels of Influence and Interest</i>	38

List of Tables

Table 1. Case Study Overview 21

Table 2. RECREATE CoP Meetings (completed and planned), as of June 2025 31

1. Introduction

1.1 Project context

Across Europe, water scarcity is becoming more frequent and severe, affecting people, ecosystems and economies. The RECREATE project therefore operates within the context of growing needs for **resilient water management systems** and supports the integration of **Alternative Water Resources (AWR)**, such as treated wastewater, desalinated water, rainwater and aquifer recharge, into regional and local water management strategies. These alternatives can complement conventional sources, helping to secure safe, reliable and sustainable water supplies. The project aims to enhance the reliability and effectiveness of integrated AWR management as a key adaptation strategy for water stressed regions.

To showcase how AWR strategies can work in practice, RECREATE works in **four case study regions** across Europe, all located in particularly water-stressed regions. In North Holland (NL), Kalundborg (DK), Syros (GR) and Costa Brava (ES) the project teams work to demonstrate strategies such as rainwater harvesting, water desalination, water reclamation, and aquifer storage – all of which can be a vital part of addressing water scarcity.

However, the actual **uptake of AWR strategies** is often challenged by **barriers** such as a lack of awareness of AWR methods and benefits, data gaps, seasonal shifts in water demand and supply, etc. Therefore, the RECREATE project also focusses on addressing **governance issues**, such as the inclusion of AWR in water management planning for water scarce regions, awareness raising and capacity building. Through comprehensive **stakeholder engagement** in all four case study regions, the project team strengthens the uptake of AWR strategies in the local communities.

The RECREATE project is funded under the European Union's Horizon Europe research and innovation programme and implemented by eleven project partners from Greece, Spain, The Netherlands, Denmark, and Germany. Project implementation began in January 2024 and is expected to last until December 2027.

1.2 Purpose and scope of this deliverable

The overall **purpose** of the RECREATE stakeholder engagement strategy and plan is to present a comprehensive framework for all stakeholder activities foreseen in the project. For each of the case study regions, a **Community of Practice (CoP)** is currently emerging, bringing relevant stakeholders to the table and ensuring their participation in the promotion of AWR. Since the effective involvement of these CoP is a major success factor for the RECREATE project and its subsequent sustainability, the present strategy for stakeholder engagement will **provide guidance on setting up and managing CoPs** in all four case study regions.

Therefore, **the deliverable features the following content:**

- Setting the scene: Introduction to „**Communities of Practice**“ as a **concept**, including their general role in research and innovation projects, as well as a brief description of their main characteristics (chapter 2);
- Outline of a **four-step approach to developing a stakeholder engagement strategy**, as a prerequisite for the establishment of CoP (chapter 3);

- Brief introduction to **stakeholder mapping** and display of the results from stakeholder mapping exercises for all four case study regions (chapter 4);
- An overview of the operationalisation of RECREATE's stakeholder engagement activities through the establishment of a RECREATE CoP for each case study region. (chapter 5).

2. Communities of Practices in RECREATE

2.1 Definition and Characteristics of Communities of Practice

From a scientific perspective, the concept of Communities of Practice (CoPs) is built on the basis of peer-to-peer learning. Therefore, CoPs can be described as **social learning systems**, formed by people who (voluntarily) share the same interest, interact on a regular basis and thus exchange knowledge and experience. (Wenger, 2010)



“Communities of Practice” (CoP) are defined as social learning systems that bring together people who share a concern or a passion for something they do and learn how to do it better as they interact regularly.” (Wenger-Trayner & Wenger-Trayner, 2015, in Fulgenzi et al., 2020)

CoPs are a unique organisational structure and are neither the same as teams nor as networks – although similarities do exist. They are groups of people „who engage in a process of **collective learning** in a shared domain of human endeavor“ (Wenger, 2010). They act as „containers of social learning“ (Wenger, 2010) and are marked by three structural elements:

- ✓ **Domain:** All CoP members share a common domain of interest. CoP membership involves a commitment to the domain and a shared competence within the domain.
- ✓ **Community:** The community describes the group of people who are involved, their mutual relations, and how these relations evolve over time. CoP members share information, help each other and engage in joint activities and discussions. Through these forms of interactions, CoP members build relationships and trust, leading to mutual learning and support.
- ✓ **Practice:** Based on their shared interests, CoP members are engaged in common practice. Through an iterative social process (e.g. regular meetings), CoP members develop a shared repertoire of knowledge, experiences, stories, tools, and more. Developing this kind of shared practice takes time and continuous interaction.

These three elements should be taken into account when cultivating CoPs. The figure below shows guiding questions to better understand these elements.



Figure 1. Building blocks of Communities of Practice; own visualisation, based on Wenger et al. (2002).

Communities of practice are marked by the following **key characteristics** (Cox, 2005):

- Sustained mutual relationships – harmonious or conflictual
- Shared ways of engaging in doing things together
- The rapid flow of information and propagation of innovation
- Very quick setup of a problem to be discussed
- Substantial overlap in participants’ descriptions of who belongs
- Knowing what others know, what they can do, and how they can contribute to an enterprise
- The ability to assess the appropriateness of actions and products
- A shared discourse reflecting a certain perspective on the world

In practice, it is important to remember that any CoP is made up of people, namely the practitioners. Motivating practitioners to join a CoP and to engage, contribute, share and learn within the CoP framework therefore requires thoughtful engagement strategies. It is recommended to follow a bottom-up approach that enables each stakeholder to take part in the design of the CoP as their safe space for knowledge sharing, learning, and exchange. The focus of CoPs should always be on their practical benefits and the associated question: what goal are we pursuing? In addition to overarching objectives, a CoP can also aim for specific sub-objectives, which are determined by the participants themselves, for example through a topic vote.

Respecting practitioners’ boundaries and needs

Since CoP claim to put the actual practitioners at the heart of all activities, it is essential to respect the practitioners’ boundaries and needs at all times. This includes for instance to highlight the added value of the CoP towards the target group and to be alert regarding questions such as:

- What capacities and resources do practitioners have to contribute to CoP activities?

- What challenges do practitioners face?
- What are their needs and how can a CoP support these needs?

On a more practical level, evidence from similar research projects including CoP activities has shown that adhering to the following **principles** is beneficial to all CoP members:

- (1) Flexibility in stakeholder identification: As a CoP develops, some initially identified stakeholders may become irrelevant, while others may emerge. It is therefore not necessary to strictly stick to the stakeholders that were identified early-on in the process.
- (2) Flexibility in CoP roadmap: Throughout the project, new trends, tasks or technologies may emerge. A change of plan should therefore be feasible at any time, to benefit the project in the long run.
- (3) Allow time for organic conversations: for any CoP meeting, the organisers/moderators should provide sufficient time for questions and discussions to unfold naturally (instead of rushing through presentations).
- (4) It is the organisers' and/or moderator's responsibility to ensure that the purpose of any given CoP meeting or activity is clear to all members. This includes a clear meeting structure, illustration of next steps, as well as the integration of feedback loops.

Find out more about other existing Communities of Practice in the water sector here:



- ✓ **RETOUCH Nexus** project (D2.3) > <https://retouch-nexus.eu/results/#deliverables>
- ✓ **RESIST** project > <https://resist-project.eu/>
- ✓ **WEFE4MED** Mediterranean Water, Energy, Food, Ecosystem Nexus Community of Practice > <https://wefe4med.eu/wefe/home>
- ✓ **Dresden Nexus Conference** > <http://dresden-nexus-conference.org/>

2.2 Communities of practice in research and innovation projects

Brief introduction on the relevance of CoP in research and innovation projects

Research and innovation projects such as RECREATE benefit greatly from effective collaboration, communication and knowledge exchange of stakeholders from various fields. Bringing people from different backgrounds together can **increase the potential of innovations and their application** at local level. Therefore, CoPs are a vital element in many EU research projects, such as RECREATE. The engagement of a CoP can ensure the long-term success of technologies that are developed and tested in case studies and furthermore contribute to their upscaling.

The actual layout of CoPs in research and innovation projects can differ from project to project. While on the one hand, CoPs can be perceived as social learning systems that evolve organically over time.

On the other hand, CoPs can be “used” as project-driven engagement mechanisms to direct stakeholder engagement. In RECREATE, the latter interpretation is more prominent.

Within RECREATE, four CoPs emerge, one in each of the four case study regions. The process is supported by the case study leads and ICLEI, who jointly take leadership in setting up, accompanying and supporting the CoPs in their activities.

Key activities of the RECREATE Communities of Practice

In RECREATE, stakeholder engagement will be implemented primarily through CoP activities under the leadership of the four case study leads, supported by ICLEI. As shown in figure 2, these activities include:

- **Annual Assemblies:** Regular gatherings to discuss progress, challenges, and opportunities for collaboration across Case Studies.
- **Virtual Working Group Discussions:** Targeted exchanges focusing on specific themes, barriers, or knowledge gaps, ensuring cross-sectoral insights are integrated into stakeholder engagement.
- **Site Visits:** Topic-focused visits to case study locations to deepen engagement, share knowledge, and co-develop solutions.
- **Work Sprints:** Dedicated sessions within the CoP framework to tackle specific challenges and foster intensive collaboration among stakeholders.

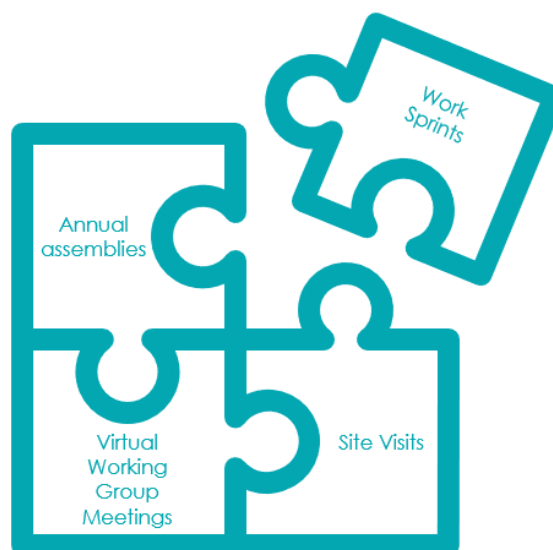


Figure 2. Key activities of the RECREATE Communities of Practice

It becomes clear that **in the RECREATE project CoPs are used as overarching framework** that guides the case study specific roadmaps and defines further forms of stakeholder engagement and activities.

As practice shows, the understanding of CoPs is constantly growing, as are the various forms of its interpretation. For example, CoPs can also be used as targeted and, above all, subordinate element of stakeholder engagement. Alternatively, they can also be designed as expert forums in which feedback is obtained in regular loops on topics for which the (public) data situation is limited.

3. Developing a stakeholder engagement strategy: a four-step approach

To develop an appropriate stakeholder engagement strategy within the RECREATE project, a structured four-step approach will be implemented in close collaboration with the case study coordinators (see Figure 3). Based on the project objectives, this approach supports the identification and selection of relevant stakeholders while considering tailored engagement formats. The primary goal is to define who should and can be involved in each of the four case studies, how, when and on which topic, to maximize the achievements of project objectives and ensure the long-term adoption of the overall project outcomes.

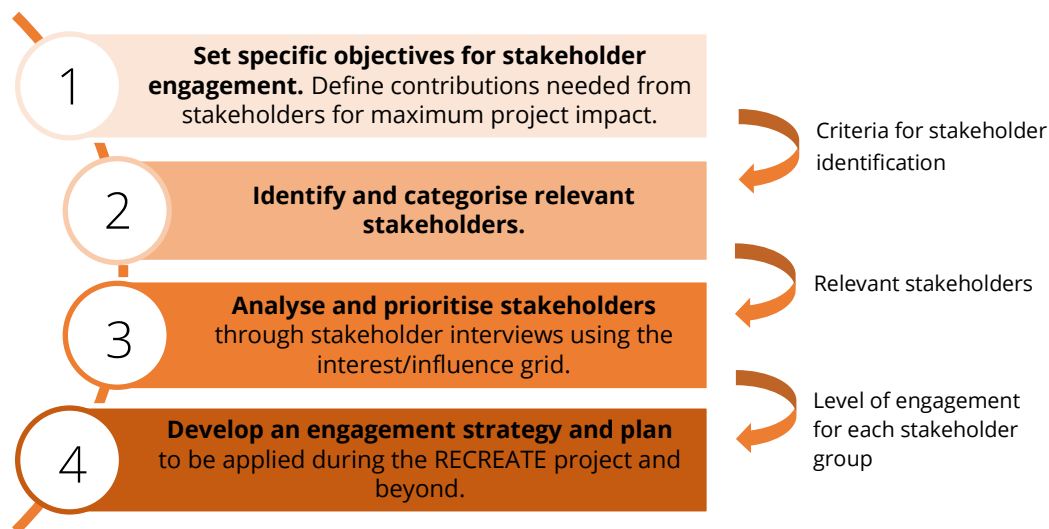


Figure 3. Four-step Approach towards Stakeholder Engagement

Stakeholders are individuals, groups, or organisations that have an **interest in or will be affected by** the outcomes of RECREATE, whether through specific project measures, decisions or policy impact. They will **influence** or be influenced by the project and may include (local) government agencies, local communities, private sector actors, NGOs, and research institutions, all of whom play a role in shaping, implementing, or benefiting from sustainable water management solutions.

The appropriate **engagement of stakeholders** is critical to ensure the effective and equitable development of AWR strategies, and to bring diverse perspectives, expertise, and resources to address real-world needs and align the project with local case study contexts. Their involvement will foster a sense of ownership, increasing acceptance and adoption of the innovations developed. Collaboration

will also increase the chances that the systems developed are inclusive and sustainable, helping to identify risks or inequities early on, such as marginalising vulnerable groups or over-exploiting resources. Additionally, stakeholders can provide technical knowledge, financial support, or regulatory backing that enhances project outcomes.

By engaging stakeholders effectively, RECREATE can **bridge the gap between innovative ideas and practical implementation**, creating equitable and lasting solutions for water security and resilience.

3.1 Step 1 | Set specific objectives for stakeholder engagement

The first step in effective stakeholder engagement is to establish clear and specific objectives that align with the project goals. These objectives provide a framework for meaningful interactions with stakeholders and ensure that engagement activities are impactful and well-targeted. General objectives and benefits of stakeholder engagement are to (1) inform, (2) consult, (3) involve, and (4) collaborate.

(1) Inform

Informing stakeholders is a critical objective that involves communicating and disseminating information about the project itself and its results. This aims to increase awareness and understanding of key topics, such as climate change adaptation and sustainable AWR management, among diverse stakeholders. It also focuses on building capacities and empowering them to actively participate in the project. Effective communication ensures that stakeholders are equipped with the necessary skills and openness to adopt innovative tools, such as the RECREATE_WT tool, through tailored training and support. Additionally, promoting user-friendly and accessible technologies enhances participation, making it easier for stakeholders to engage with the project. Informing stakeholders also plays a vital role in fostering trust and acceptance of AWR, building strong relationships, and maximizing the project's impact by increasing its visibility and ensuring that its results reach a broad and relevant audience.

(2) Consult

Consulting stakeholders focuses on gathering their input and collecting feedback to refine and improve research outcomes. By actively listening to stakeholders' priorities, needs, concerns and expectations, the project team can adapt its results to better align with the context and requirements of the target audience. This process not only fosters a sense of ownership among stakeholders but also contributes to the long-term sustainability of the project, ensuring its relevance and impact extend beyond its duration.

(3) Involve

Finally, involving stakeholders goes beyond consultation to actively engaging them in co-creating research outcomes. This approach leverages stakeholders' expertise, resources and creativity to drive innovation and improve the quality of project outputs.

(4) Collaborate

Collaboration also facilitates the transfer, integration and upscaling of solutions, ensuring that the results are not only effective but also widely adopted and sustainable over the long term.

3.2 Step 2 | Identify and categorise relevant stakeholders

This step should be carefully executed to 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 is important to identify anyone who has a stake in the outcome or will be affected by the project, including opponents and under-represented groups such as women, youth, the rural or urban poor, or indigenous communities, to **ensure inclusivity**.

The OECD defines inclusiveness as the “extent to which engagement processes involve stakeholders from diverse backgrounds and take into account their needs, assets, and perspectives in the design and implementation of water policies and projects” (OECD, 2015).

For the categorisation of stakeholders, they can generally be divided into three relevant groups as follows:

Key stakeholders are defined as those stakeholders who can use their skills, knowledge or position of power to significantly influence project decisions, and without whose support and participation the desired results cannot be achieved. These stakeholders are critical to the success or failure of the Case Studies (Gomes et al., 2021).

Primary stakeholders are directly affected by decisions, either as direct beneficiaries or because they stand to gain or lose power or privilege as a result. They have a vested interest in the outcomes of the CS and are often directly involved in decision-making processes (GIZ GmbH, 2015).

Secondary stakeholders are not directly involved in or immediately affected by decisions made in the CS but have an interest or possibly some small degree of influence on the outcomes (GIZ GmbH, 2015).

When identifying and categorising stakeholders, it is important to note that not all stakeholders can be included in decision making processes. Therefore, it often makes sense to nominate representatives, e.g. of larger stakeholder institutions or stakeholder groups. Adopting a solid and diverse base for CoP development adds value by strengthening networking opportunities for members, as well as actively contributing to innovative and effective solutions.

3.3 Step 3 | Analyse and prioritise stakeholders

This step helps prioritize stakeholders based on their level of influence and interest, which will be useful in determining communication strategies and developing effective engagement plans.

The most commonly used approach for prioritising stakeholders for tailored engagement is to assess their levels of **interest** (depending on needs or how they are affected by the project results) and **influence** (depending on the mandate, status (political, social or economic), degree of organisation, capacities, control over water resources, informal influence (personal connections etc.)) (Durham et al. 2014).

However, the mere division into influence and interest is often criticised as insufficient (Durham et al. 2014), which is why the following additional aspects are included in the assessment: relations among stakeholders, prior collaboration experiences, and expected / desired role in RECREATE

activities, technical affinity, and previous experience with relevant tools for more effective participation in WG/CoP discussions.

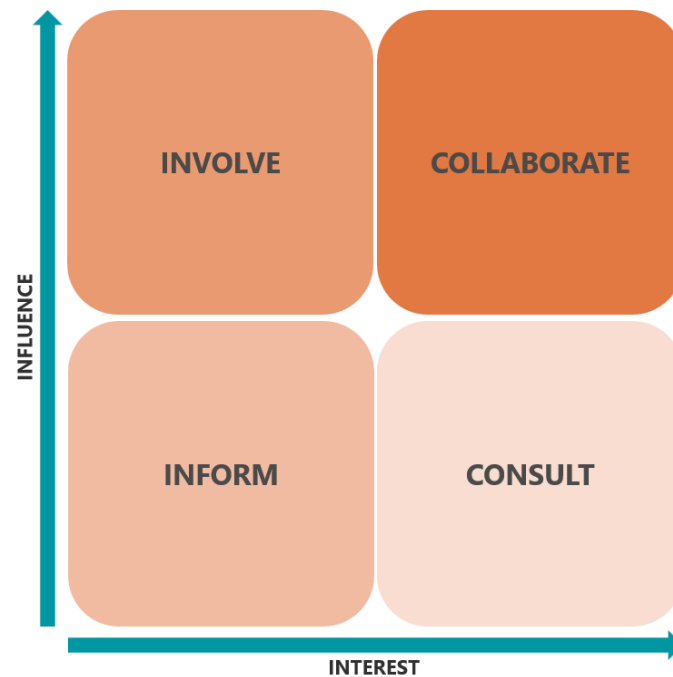


Figure 4. Interest / Influence Matrix for Stakeholders

3.4 Step 4 | Develop an engagement strategy and plan

Whenever possible, it is beneficial to verify the results of this analysis in discussions with stakeholders and to collaboratively evaluate their capacities for potential engagement formats.

Level of engagement

The final decision on how to engage which stakeholder depends on the stakeholders' level of interest in and influence on the project outcomes, as well as their interest and capacity to engage. To this end, the four boxes of the Influence-Interest grid each represent a "level" of engagement (**Error! Reference source not found.**):

- **Low influence and low interest:** These stakeholders are seen as '**neutral**'; however, it is advisable to monitor them to ensure that no reasons arise that could lead them to becoming opponents. → **inform**
- **High interest, but low influence:** These stakeholders are the '**defenders**'. They are important as they can seek additional ways to influence the project progress and success. It is advisable to maintain a fluid dialogue with them through different channels, in such a way that their eventual doubts can be identified and resolved. → **consult**
- **High influence, but low interest:** These stakeholders are seen as '**potential opponents**'. It is necessary to pay constant attention to them and communicate progress because if they are not satisfied, they could become active opponents. → **involve**

- **High influence and high interest:** These stakeholders are seen as ‘promoters’. It is advisable to actively involve them to keep their level of commitment high. → **collaborate**

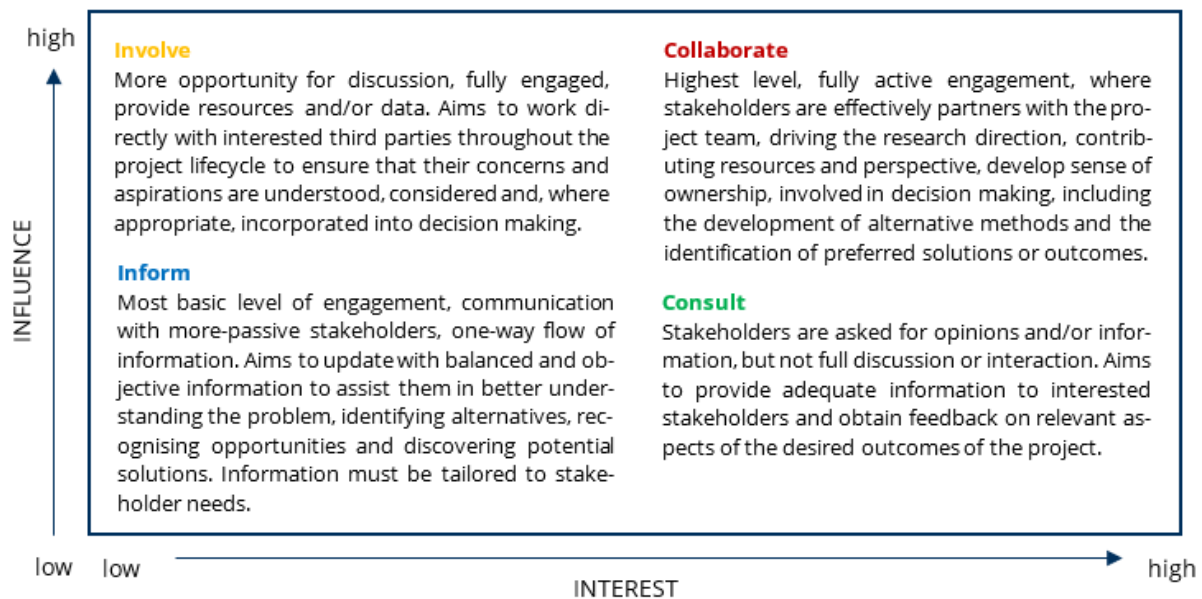


Figure 5. Four Levels of Engagement Assigned According the Level of Interest and Influence

Engagement formats for each engagement level

Inform – provide stakeholders with balanced and objective information to assist them in understanding issues, opportunities, solutions or decisions:

- **Website:** project overview, announcement and news
- **Newsletter:** regular updates on project progress and outcomes
- **Email blasts:** mass email informing stakeholders of key milestones or changes
- **Press releases:** public communication of significant developments
- **Flyers or brochures:** simple informational materials to distribute at public events or meetings
- **Social media:** posts to inform the public on progress or changes in real-time

Consult – obtain stakeholder feedback on analysis, alternatives or decisions:

- **Surveys:** online or paper-based surveys to gather opinions and feedback
- **Public comment periods:** formal opportunities for stakeholders to submit feedback
- **Focus groups:** small, moderated sessions to gather insights on specific issues
- **Interviews:** one-on-one or group interviews with key stakeholders to gain a deeper understanding of the topic
- **Town hall meetings:** open forums where stakeholders can voice their opinions and concerns
- **Online feedback portals:** websites or apps designed for receiving structured feedback

Involve – work directly with stakeholders throughout the process to ensure that their concerns and aspirations are consistently understood and considered:

- **Workshops:** interactive sessions where stakeholders participate in discussions and decision-making processes

- **Community advisory panels:** ongoing groups that provide input throughout the lifecycle of the project
- **Charrettes:** intensive multi-day design sessions involving stakeholders to develop solutions
- **Roundtables:** regularly scheduled discussions with key stakeholders to explore and address specific issues
- **Participatory planning meetings:** sessions where stakeholders contribute to shaping policies or design collaboratively
- **Online forums/discussion boards:** virtual spaces for continuous dialogue between stakeholders and the project team

Collaborate – partner with stakeholders in every aspect of the decision-making process, including developing alternatives and choosing the preferred solutions:

- **Joint committees:** formal committees made up of project team members and stakeholders, sharing decision-making authority
- **Co-design of co-creation sessions:** stakeholders and the project team work together to design solutions
- **Stakeholder-project teams:** integrated teams where stakeholders are fully embedded in project's working groups
- **Public-Private-Partnerships (PPPs):** collaborative ventures between stakeholders, including government, business, and community members
- **Collaborative platforms:** digital or in-person platforms for collective problem-solving and decision-making
- **Memoranda of Understanding (MoU):** formal agreements between organizations and stakeholders outlining their roles in the project or initiative

CoP meetings can cover all four engagement levels.

The remainder of this deliverable will focus exclusively on the engagement format of Communities of Practice (CoPs) meetings. For more information on specific engagement formats planned in RECREATE and their associated timelines, please refer to the RECREATE deliverable “D6.1 Dissemination, Communication, and Exploitation Strategy”.

4. RECREATE Stakeholder Maps

To address the complexities of the entire stakeholder landscape, mapping and visualizing serves as a critical tool to both identify relevant stakeholders and clarify their roles. Stakeholder mapping is a comprehensive process that categorizes key, primary and secondary stakeholders based on their level of involvement, interest, influence, background and legitimacy (Gomes et al. 2021). Their characteristics, such as relative importance and level of engagement, are effectively visualised using an onion diagram.

The stakeholder mapping intends to reflect the project team's perception of the CS environment in relation to their research questions, and to provide the project team with information on how to best involve different stakeholders in order to achieve the project goals. It provides a snapshot of where the project team sees the stakeholders in the cooperation system with respect to the desired results and should serve as a tool to help design stakeholder engagement mechanisms, rather than reflecting some kind of a “true” picture.

A standardized template for this visualization (see Figure 4) will be consistently applied across all four coastal case study regions: North Holland (The Netherlands), Kalundborg (Denmark), Costa Brava (Spain), and Syros (Greece).

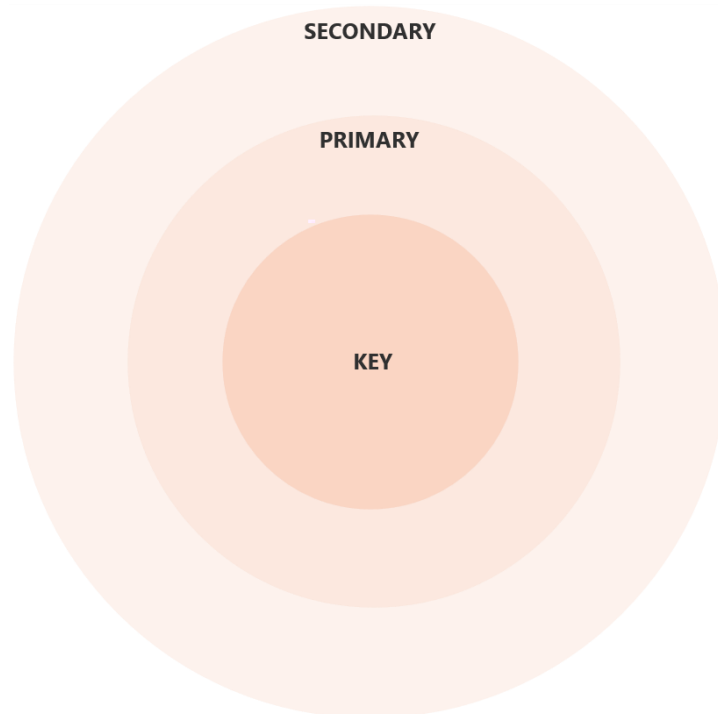


Figure 6. Stakeholder Mapping Onion

Each of these regions faces growing water stress and showcases first experiences in applying Alternative Water Resources (AWR). Table 1 below provides an overview of all four RECREATE case study regions.

	Case study region	Case study lead	Key activities
Case study #1	North Holland	PWN	- Building a system dynamics model to simulate and assess AWR strategies - Developing climate and water demand scenarios for 2030-2050 and beyond - Creating a Serious Game tailored to North Holland to explore possible futures - Co-developing adaptation strategies with regional stakeholders

Case study #2	Kalundborg	Kalundborg Utility (KCR)	• Evaluating how different AWR sources can serve industries with varying water quality requirements • Modelling the water-energy nexus of using different water sources and treatment levels • Stress testing current water infrastructure to assess resilience under future scenarios • Developing adaptation strategies for integrating new AWR connections
Case study #3	Syros, South Aegean	National Centre for Scientific Research (NCSR) "Demokritos"	• Planning and guiding the development of a secondary network for reclaimed water • Monitoring and analysing desalination processes • Conducting stress testing of the island's water infrastructure • Developing a simulation model of Syros' water supply system
Case study #4	Costa Brava	Catalan Institute for Water Research (ICRA)	• Monitoring and digitising existing water reclamation plants to assess risks linked to different uses • Evaluating a novel low-energy desalination process at pilot scale • Digitally modelling the quantity and quality of AWR in the region • Consolidating and stress testing existing AWR infrastructure under climate change scenarios

Table 1. Case Study Overview

The following sub-chapters present the results of the stakeholder mapping exercises that were conducted for all four RECRATE case studies.

4.1 North Holland (The Netherlands)

The North Holland case study focuses on enhancing the resilience of the drinking water supply and the regional surface water system by integrating AWR into long-term planning. This includes developing tools and strategies to support adaptive, forward-looking water management in a region increasingly challenged by climate change, sea level rise and population growth. Within the case study, partners are developing a system dynamics model of the regional water system to evaluate various AWR management scenarios. This includes incorporating future climate and water demand projections, the co-creating adaptation pathways and designing a custom Serious Game to facilitate learning, decision making and stakeholder engagement.

The stakeholder onion for the North Holland case study shows three different regional public water authorities as key and primary stakeholders.

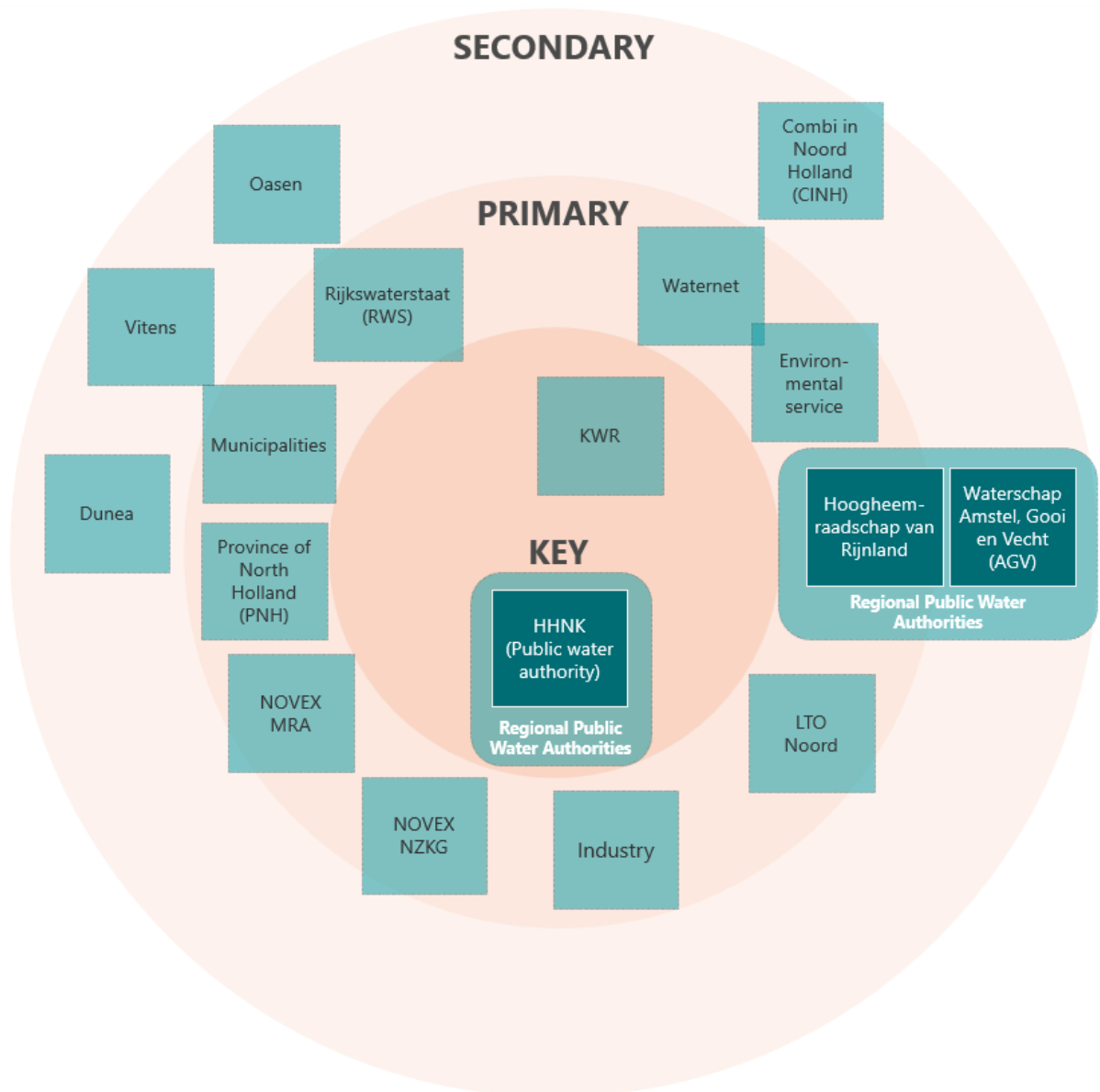


Figure 7. Stakeholder Onion North Holland (The Netherlands)

For the North Holland case study, collaboration with all key and primary stakeholders is essential, while most of the secondary stakeholders remain at a lower engagement level (“inform”).

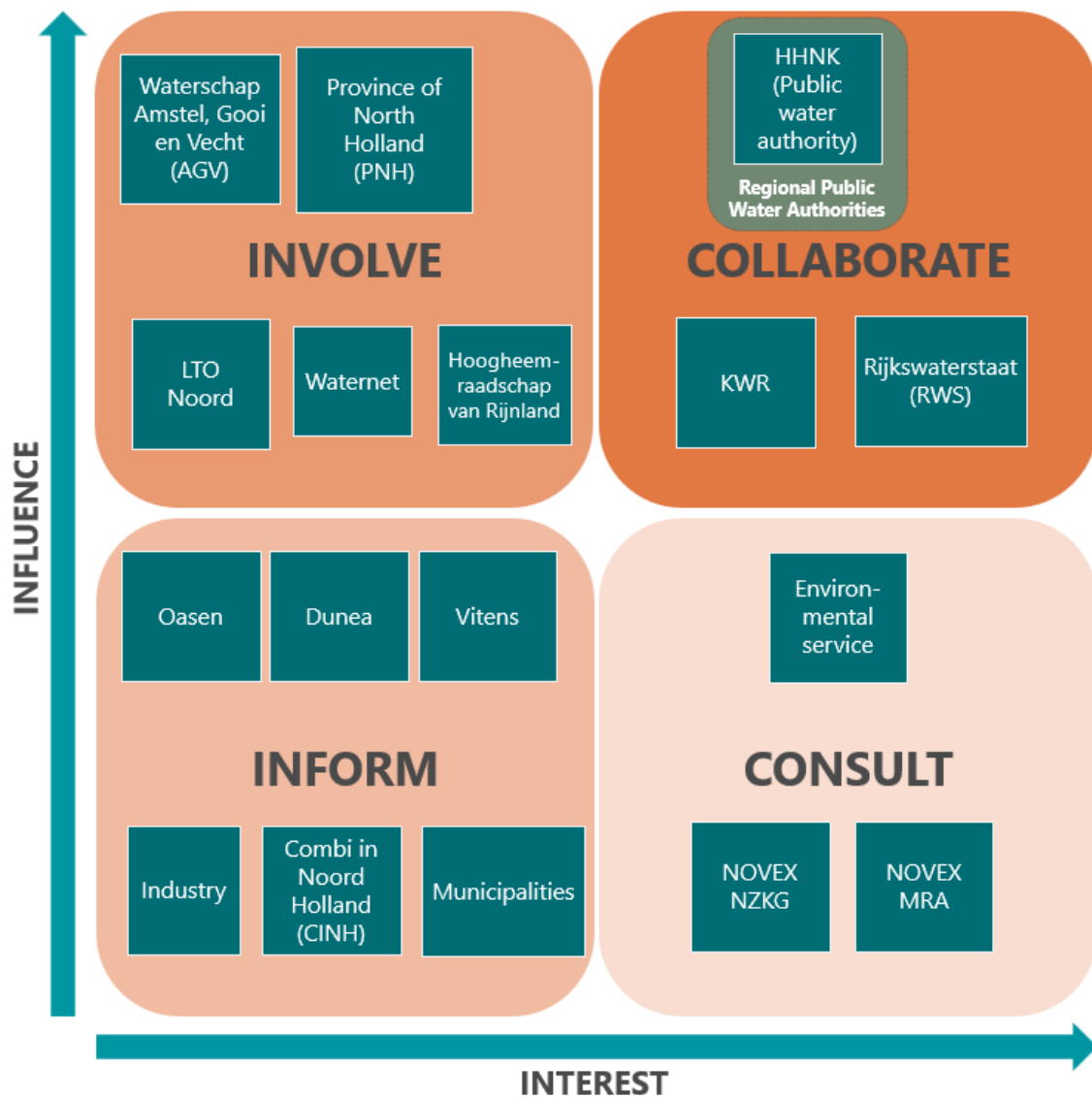


Figure 8. Interest / Influence Matrix for Stakeholders in North Holland (The Netherlands)

4.2 Kalundborg (Denmark)

Kalundborg hosts one of the most renowned **industrial symbiosis networks**, where seventeen companies from diverse sectors collaborate to share water, material and/or energy resources. At the center of this partnership is the multi-utility **Kalundborg Forsyning**, which is the main supplier of water in different qualities to the industrial symbiosis in Kalundborg and supplying potable water to most of the Kalundborg citizens. In addition Kalundborg Forsyning also has the responsibility of wastewater and rainwater transmission systems plus wastewater treatment in the entire Kalundborg Municipality. With water demand expected to rise significantly – driven by two major biotech firms increasing production during the next years and onwards to doubling and maybe tripling the need for water the necessity to explore AWR has become evident. Currently reliant on groundwater and treated surface water, Kalundborg is taking proactive steps to possibly diversify its water supply through AWR

solutions such as wastewater reuse, seawater desalination and rainwater harvesting. This case study demonstrates how collaborative, cross-sectoral planning enables industrial regions to lead the way in sustainable and adaptive water resources management.

The **RECREATE stakeholder map for the Kalundborg case study** shows the public and private companies of the Kalundborg Symbiosis Network as key stakeholders, along with the municipal administrations. From the national level, both the Ministry of Environment/the Environmental Protection Agency are also considered as key stakeholders. The primary stakeholders that complement the stakeholder map include further utilities and companies from the water sector, their respective associations, as well as local educational institutions. As secondary stakeholders, the case study lead targets operators from wastewater treatment and future possible water reclamation plants, media representatives, as well as the Danish public.

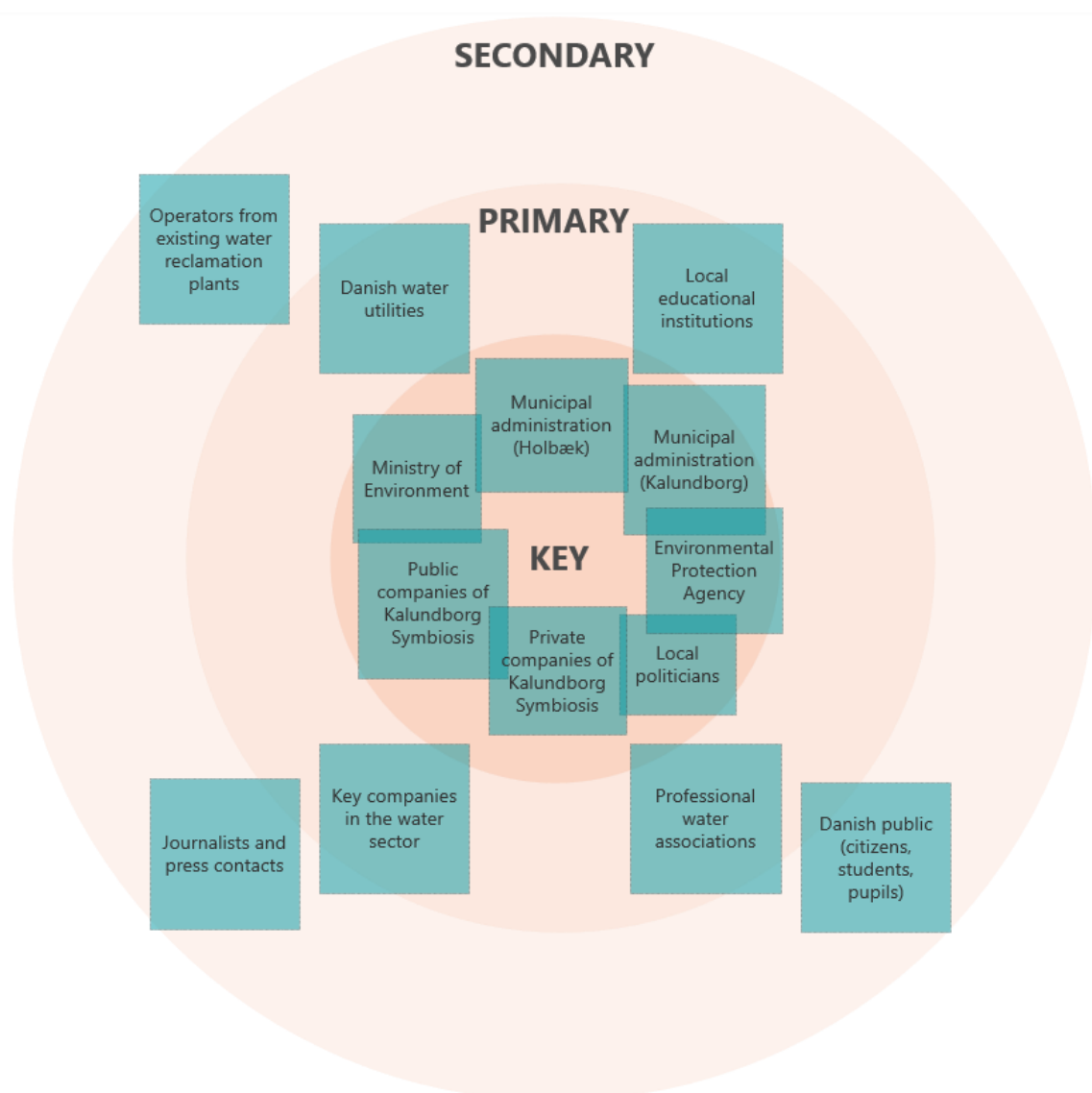


Figure 9. Stakeholder Onion Kalundborg (Denmark)

According to the **influence and interest matrix for the Kalundborg case study region**, all key and most primary stakeholders are marked for close collaboration with the project team. Operators of water reclamation plants and fellow scientists will be consulted on the development of AWR solutions for the area, while media representatives will be informed on the project's progress.

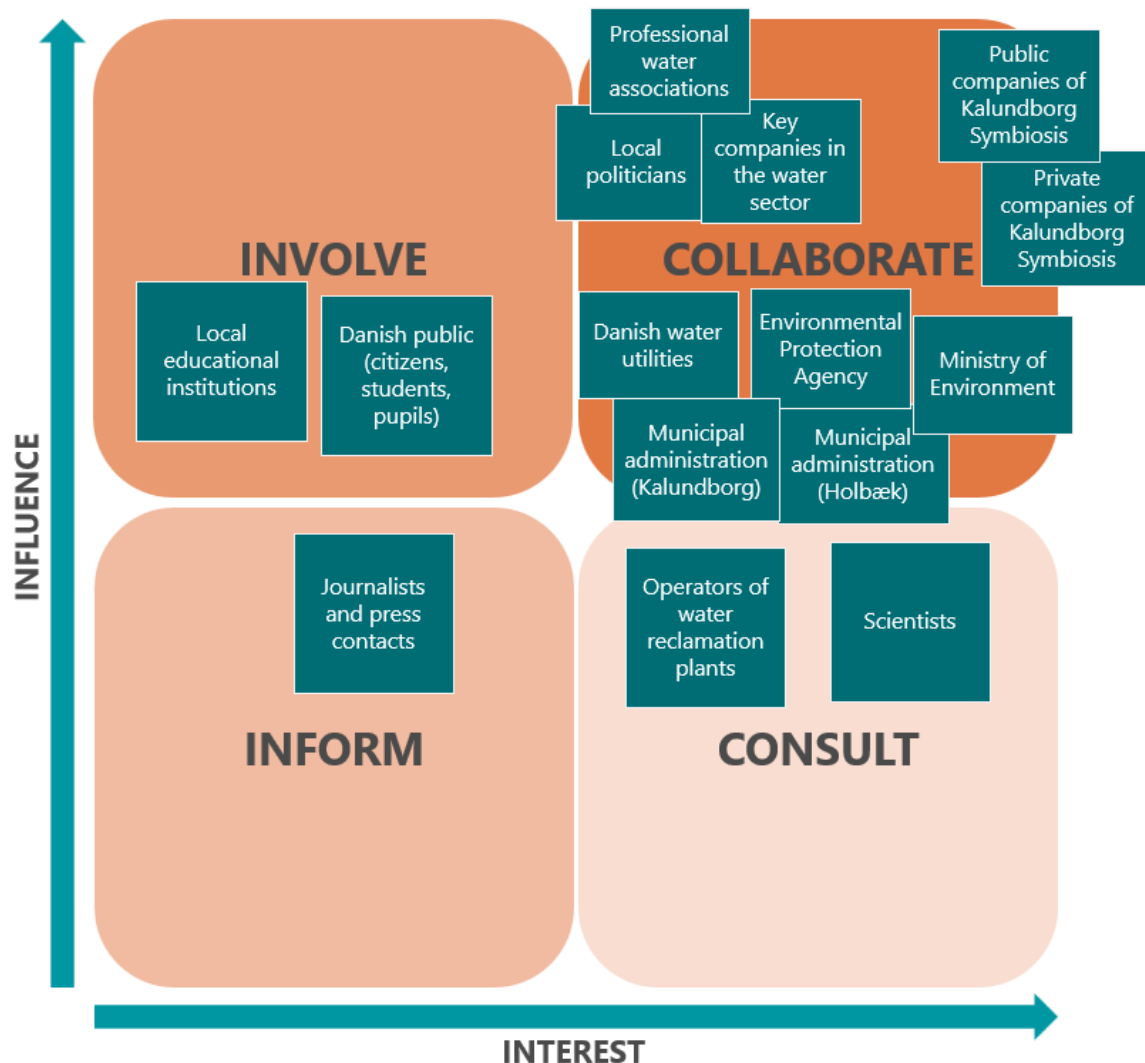


Figure 10. Interest / Influence Matrix for Stakeholders in Kalundborg (Denmark)

4.3 Syros (Greece)

The Greek island of Syros, located in the South Aegean, experiences significant seasonal water stress due to limited freshwater resources, surges in tourism-driven demand, and a heavy reliance on energy-intensive desalination. This case study examines how AWR can enhance water security in **small, isolated, and climate-vulnerable communities**. It also focuses on designing and implementing a secondary piping network to distribute **reclaimed wastewater for non-potable uses**, thereby reducing pressure on drinking water supplies. Additionally, it emphasises monitoring to assess water reuse performance and improve the cost-efficiency of **desalination** processes. Overall, the case study

illustrates how AWR and smart planning can help a small island overcome water scarcity, build resilience and adapt to a changing climate.

The **stakeholder map for Syros** shows four key stakeholders. Public entities, such as the local water utility (DEYA Syrou), the Municipality of Hermoupolis and the South Aegean Regional Authority, play a central role, along with organizations like farmers' associations. Primary stakeholders from the research and academic sector include the National Centre for Scientific Research (NCSR) "Demokritos" and the National Technical University of Athens. Other important primary stakeholders include the fire service and the local hotel association. Complementing these are secondary stakeholders, largely from the public sector, who provide additional support and influence.

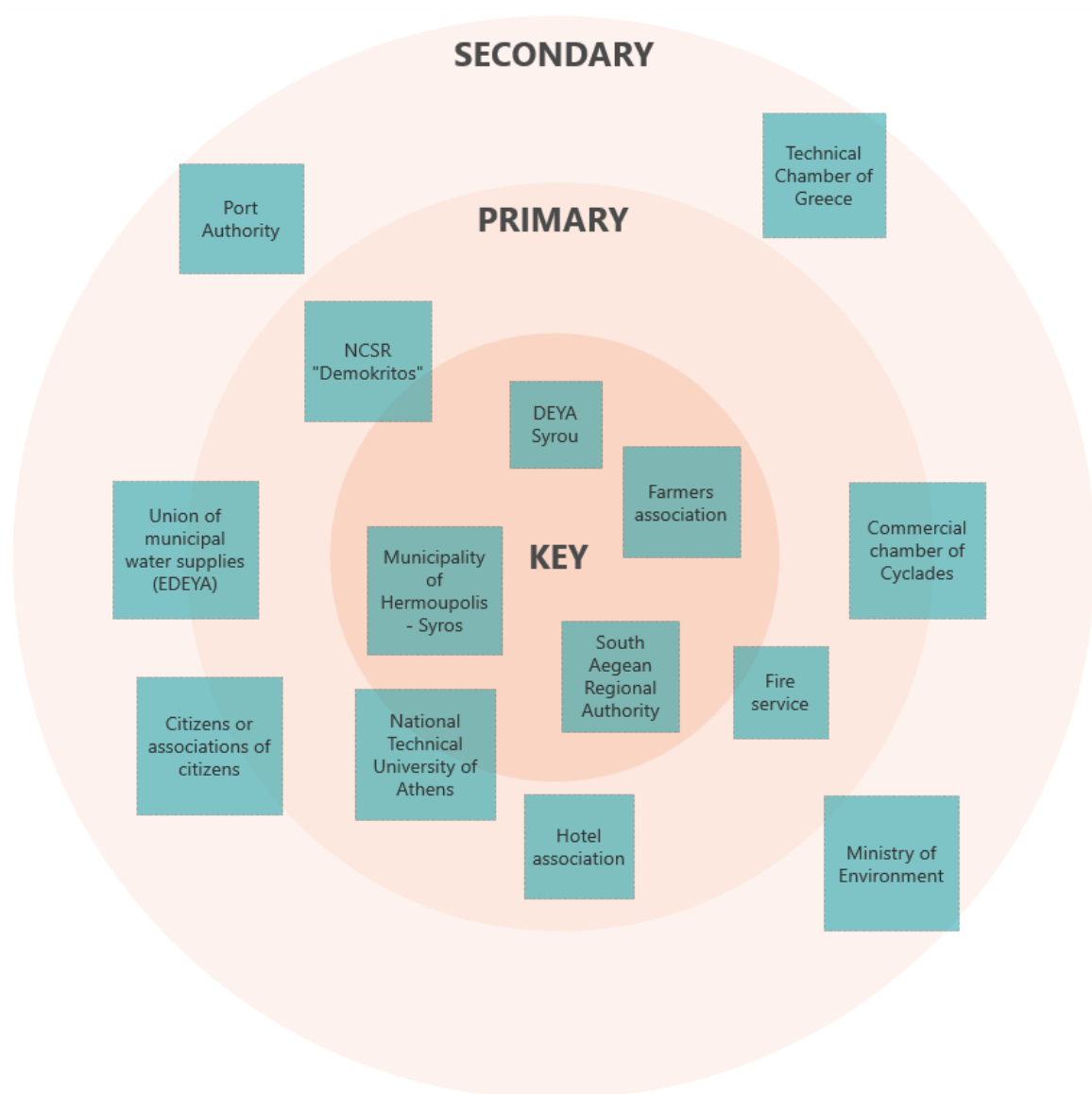


Figure 11. Stakeholder Onion Syros (Greece)

The **influence and interest matrix for Syros** indicates that **all key and primary stakeholders are interested in actively participating in the project**. Secondary stakeholders with lower levels of interest and influence will primarily be kept informed about the project's progress and outcomes.

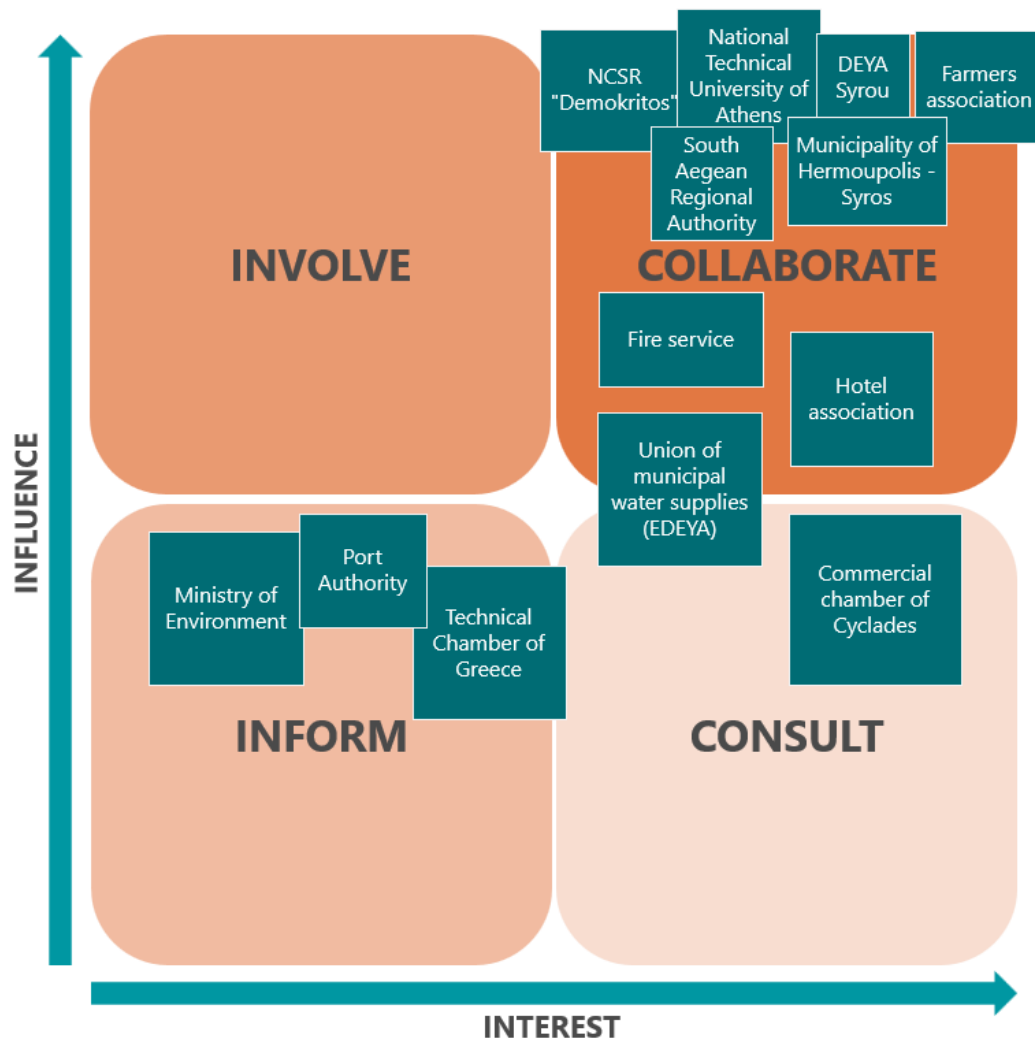


Figure 12. Interest / Influence Matrix for Stakeholders in Syros (Greece)

4.4 Costa Brava (Spain)

The Costa Brava region in Catalonia, Spain, provides water to more than 6.5 million residents across 634 municipalities, managed by the Consorci d'Aigües Costa Brava Girona (CACBGi). However, the region faces significant challenges from climate change, including prolonged **droughts**, **aquifer salinization** and **sharp seasonal population increases** driven by tourism. Since 1989, Costa Brava has been a pioneer in water reuse, utilizing reclaimed water for agriculture, urban services and environmental restoration. Today, the region is taking ambitious steps to expand reuse for more sensitive applications, such as **indirect potable reuse through aquifer recharge**. These efforts align with Catalonia's ambitious goal of tripling the volume of reclaimed water within the next four years. This case study serves as an innovative and forward-thinking example of how to scale and diversify water reuse in regions facing increasing environmental and social pressures.

The **stakeholder map for the Costa Brava region** identifies four key stakeholders from the public sector, including local government deputies and the public health agency. It also highlights two key stakeholders from the water sector: the Agencia Catalana de l'Aigua and the Consorci d'Aigües Costa Brava Girona. The remaining stakeholders, primarily from the public sector, are classified as secondary stakeholders.

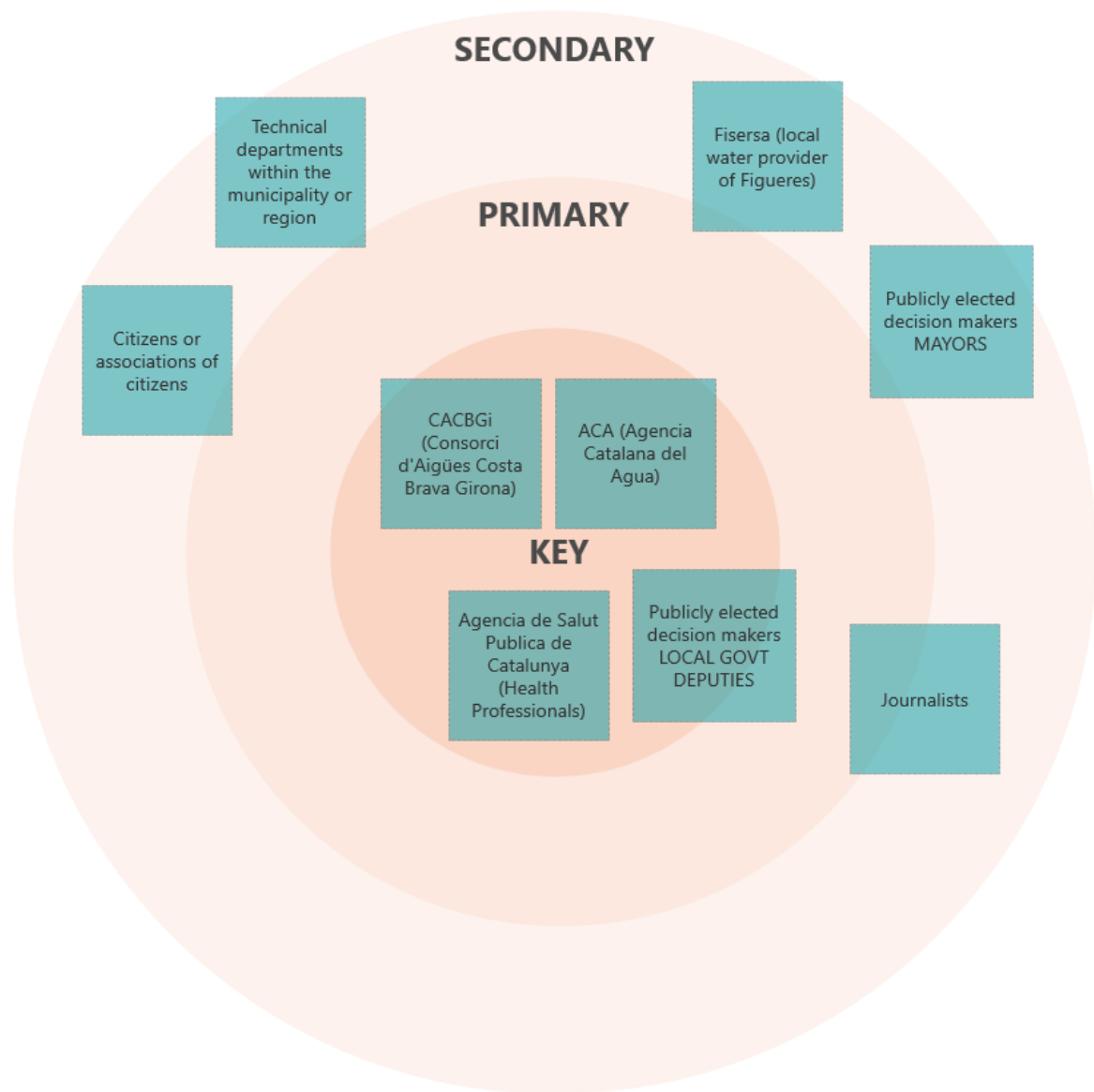


Figure 13. Stakeholder Onion Costa Brava (Spain)

The **interest and influence matrix for the Costa Brava region** shows that three of the four key stakeholders are actively interested in collaborating with the project, while the remaining key stakeholder will have a more limited role and will only be involved. Secondary stakeholders, as mapped, will primarily be informed or consulted as needed.

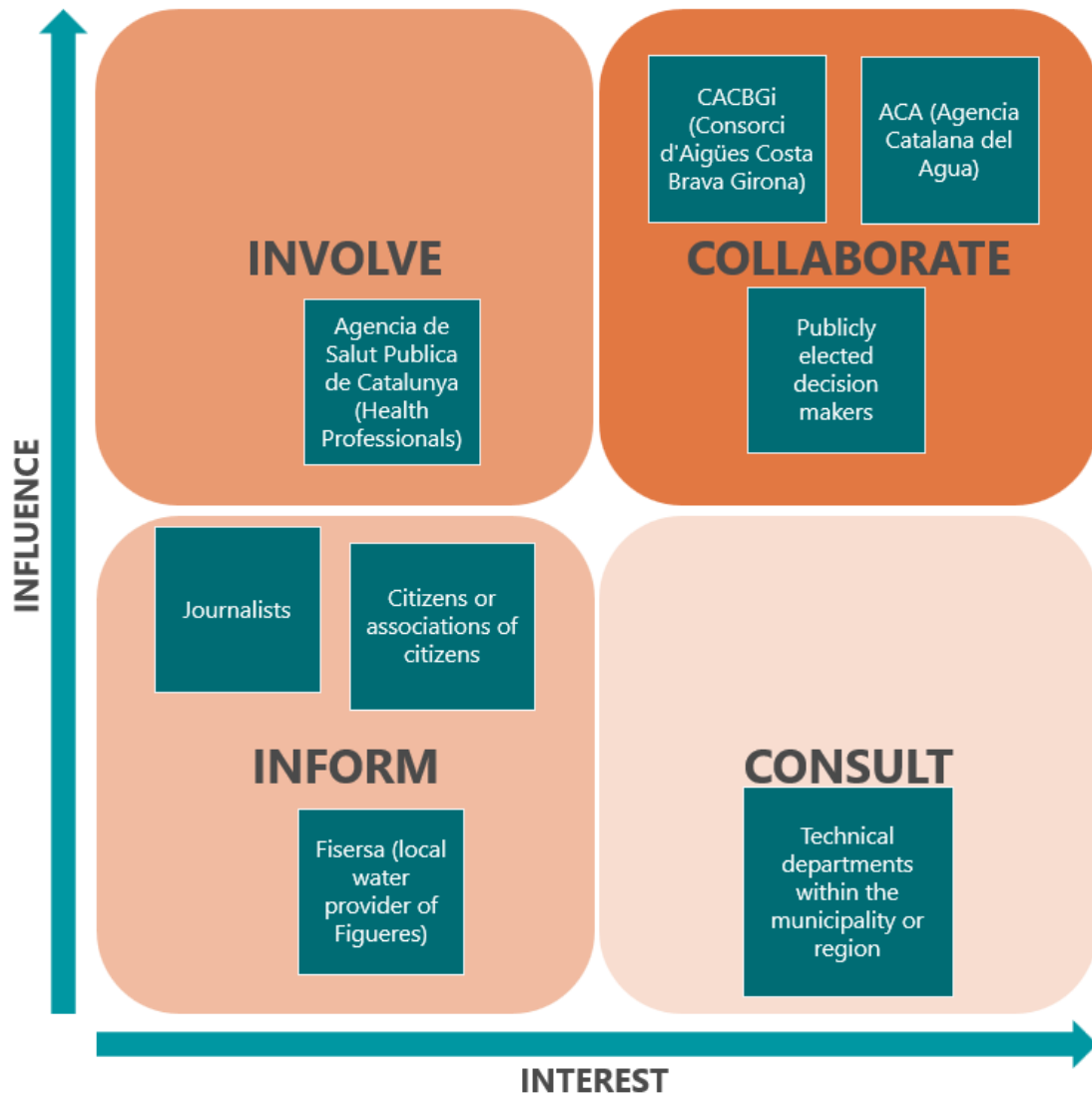


Figure 14. Interest / Influence Matrix for Stakeholders in Costa Brava (Spain)

5. Establishment of a CoP for each RECREATE case study region

As of June 2025, we see the creation of **Communities of Practice in all four RECRATE case study regions**. The coordination of all CoP activities is primarily organised by ICLEI and the respective case study leads (see chapter 4). The main tool to guide all CoP activities are country-specific roadmaps.

The RECREATE Community of Practice Roadmaps

The RECREATE project team has developed CoP Strategy Guidelines for the case studies to facilitate the development and maintenance of its four CoPs. The guidelines outline the framework and strategy for implementing RECREATE's CoP stakeholder engagement strategy, with a particular focus on case studies. By following the guidelines, case study leads can ensure structured stakeholder interaction throughout the project's lifecycle (2025 - 2028). The guidelines also contain detailed information on how to fill and use the roadmap templates (see Annex III, IV).

Each CoP roadmap outlines long- and short-term planning objectives, expected key performance indicators (as indicated in the Grant Agreement), information on roles and responsibilities among the project partners and stakeholders involved as well as a comprehensive overview of all CoP activities that are planned, as well as completed.

Status Quo: Overview of Community of Practice meetings in the RECREATE project

All four RECREATE case studies have already established a Community of Practice. CoP meetings have been taking place since 2024, further meetings are currently being planned (see table 2).

	CoP Meeting #1	CoP Meeting #2	CoP Meeting #3	CoP Meeting #4
North Holland	Completed in November 2024	Planned for 16th September 2025	Planned for spring 2026	Planned for 2027
Kalundborg	Completed in 2024	Planned for September 2025	Planned for 2026	Planned for 2027
Syros	Completed in January 2025	Completed in May 2025	Planned for autumn 2025	Planned for autumn 2027

Costa Brava	Completed in June 2025	Planned for September 2025	Planned for spring 2026	Planned for 2027
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Table 2. RECREATE CoP Meetings (completed and planned), as of June 2025

The specific details of these meetings are planned and documented in country-specific CoP roadmaps (see Annex III, Annex IV).

In order to maintain a good overview of past, ongoing and planned CoP activities, it can be helpful to visualise these activities in a timeline. Figure 14 shows an exemplary timeline for the CoP activities in the Kalundborg case study.

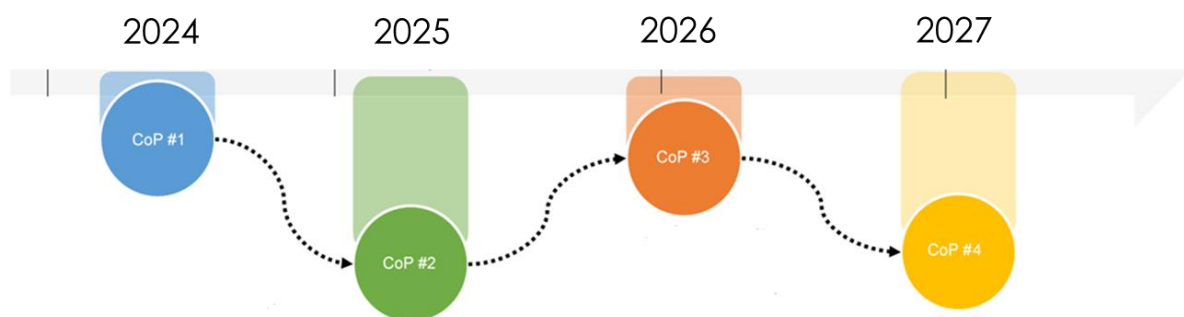


Figure 15. Timeline for CoP Activities in the Kalundborg Case Study

6. Ethical issues

The RECREATE project dedicates its **work package #8 to ethical issues** and has published a specific **deliverable on ethics requirements (D8.1)**. Any activity on stakeholder engagement, including the Communities of Practice, will at all times adhere to the guidelines produced in D8.1. All the relevant ethics guidelines followed during the first reporting period (M1-M18) for the stakeholder engagement activities have been reported in the deliverable **D8.2 OEI - Requirement No. 2** submitted in M18. Further updates will be included in the follow up deliverables D8.3 and D8.4 due in M36 and M48 respectively.

The relevant ethical issues from the **involvement of humans in research activities** and related **data protection**, in relation to the stakeholder engagement and co-creating activities planned in WP2 will be considered in the project. This is especially relevant with reference to the establishment and operation of the CoP and involvement of external participants in co-creation activities, capacity building and training activities organized during the project. The research methodologies involving human participants and personal data collection and/or processing will be applied according to accepted state-of-the-art standards in social sciences research, following the ethical guidelines established by the European Sociological Association and its national counterparts, as well as the recommendations in the document Ethics in Social Science and Humanities (European Commission (DG Research and Innovation), July 2021),¹ and in full compliance with the regulations and procedures outlined in the EU General Data Protection Rules (GDPR) (Regulation (EU) 2016/679).

Specific efforts will be directed towards **ensuring the privacy of participants** who take part in the project activities, regardless of the country they live in. We will ensure that data collection procedures will **comply with national and EU legislation**. Once the project has finished, all data will be completely anonymized, meaning links to lists of names and contact-information will be deleted. Anonymized data is no longer considered personal data. If there is a significant prospect of re-identification of persons whose data have been collected, the information will be treated as personal data (Ethics and Data Protection, European Commission (DG Research and Innovation), July 2021). No personal data will be stored after the end of the project period.

To ensure that all relevant ethics aspects are identified and managed properly during the project, a specific role of an **Ethics Manager (EM)** has been identified in the governance structure of RECREATE. This role has been identified and responsibilities defined in 'Section 6 – Governance Structure' of the Consortium Agreement signed by all partners. The EM shall report to and be accountable to the General Assembly to ensure efficient implementation and best possible results. The EM is responsible for the identification and management of identified ethics issues in the project and properly manage them as per Horizon Europe guidelines and requirements.

¹ https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ethics-in-social-science-and-humanities_he_en.pdf

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Annex I: Guidance for the development of a stakeholder engagement strategy

Step 1:

List your engagement objectives. These will assist you in identifying and categorising relevant stakeholders for your RECREATE case study in the next step. The following guiding questions may help:

- *What are the primary objectives and expected outcomes of engaging stakeholders in RECREATE?*
- *What project objectives, outcomes, activities, and decisions will benefit from stakeholder engagement?*
- *How will stakeholder engagement contribute to the overall goals of the research project?*

Step 2:

For a better overview of relevant stakeholders for your RECREATE case study, please fill in the stakeholder matrix below. This tool will help you systematically list stakeholders and understand their relevance to your case study.

In the first column, please add the key project outcomes and objectives identified in Step 1 that would benefit from stakeholder engagement. Brainstorm relevant stakeholders using the following guiding questions:

- *Who are the key stakeholder who can make decisions that might affect the research?*
- *Who are the primary stakeholders affected by or interested in the research?*
- *Who are the secondary stakeholders that might be indirectly impacted?*
- *Are there stakeholders that have been involved in similar projects on previous occasions?*
- *Which groups or individuals may be able to provide relevant information, equipment or resources?*
- *Who is likely to have a negative view of the research?*
- *Are there any marginalized or underrepresented groups that should be included?*

								
Template for stakeholder mapping								
Case study name:								
Step 2: Identify and categorise relevant stakeholders								
Stakeholder characteristics				Contact information				
Stakeholder	Stakeholder type 1. Central Government; 2. Regional Government; 3. Local Government; 4. Local private sector; 5. National private sector; 6. International NGOs; 7. National NGOs; 8. CBOs; 9.. Research or academic institution; 10. Other (specify)	Key functions, role, and responsibilities related to the project outcomes and objectives	Step 2: Identify and categorise relevant stakeholders	Contact person	Email	Phone		

Step 3:

Step 3: Analyse and prioritise stakeholders				
Analysis and prioritisation				
Primary outcomes and objectives benefiting from engaging this stakeholder <i>Note: list here all outcomes / objectives relevant to the specific stakeholder and conduct the stakeholder analysis for each outcome / objective</i>	Estimated Degree of influence on overall RECREATE objectives / outcome (5 (strong influence) – 1 (no influence))	Description of influence	Estimated Degree of interest in overall RECREATE objectives / outcome (5 (strong interest) – 1 (no interest))	Description of interest

Step 4:

Step 4: Develop an engagement strategy							
Impact, collaborations, engagement formats							
Estimated Degree of project impact on stakeholder (note: also consider negativ impact) (5 (strong impact) – 1 (no impact))	Description of impact	Interaction / Relation with other stakeholders (partnerships, associations, potential conflicts of interests, etc.)	Prior collaboration from / experience with from other projects	Estimated Expertise and awareness related to project outcomes and objectives (5 (very high) – 1 (very low))	Level of engagement (See Sheet 2 for guidance on levels of engagement)	Engagement formats (See Sheet 2 for guidance on possible engagement formats)	Expected /desired role in RECREATE activities (e.g., moderator/ facilitator of specific meetings)

Annex II: Templates for stakeholder mapping

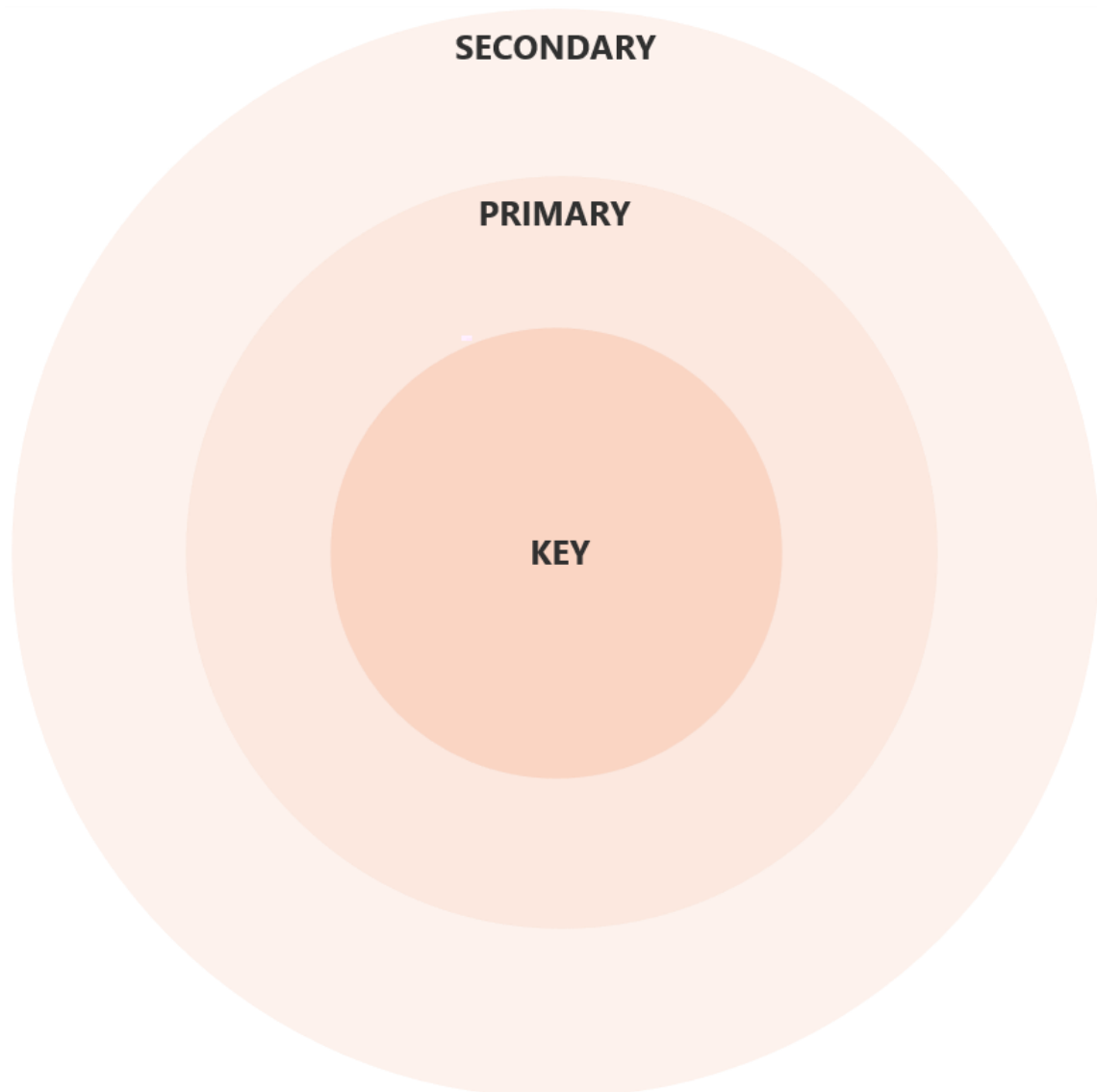


Figure 16. Onion Diagram for Mapping Key, Primary and Secondary Stakeholders

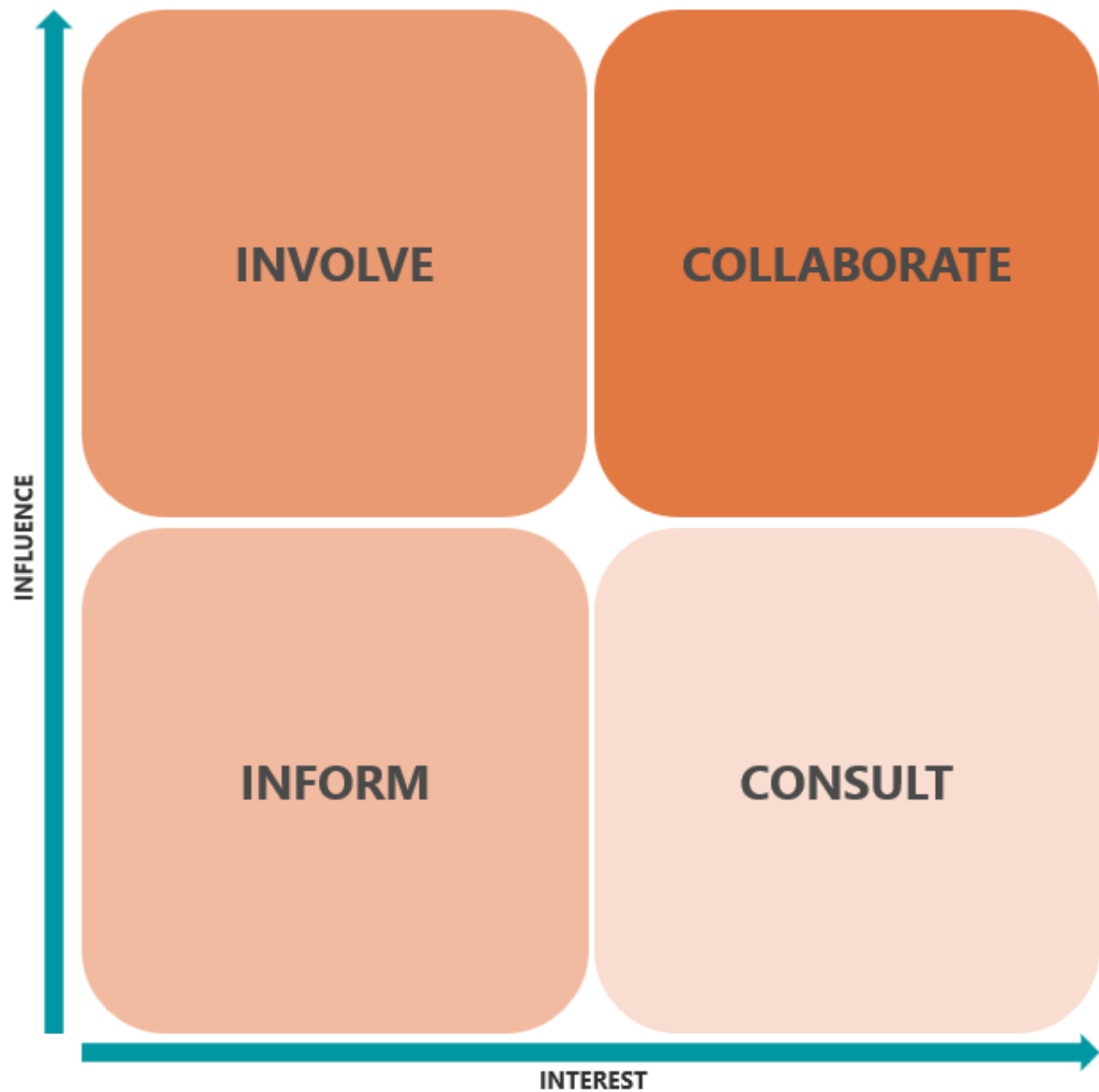


Figure 17. Matrix Template to Map Stakeholders According to their Levels of Influence and Interest

Annex III: Template for CoP Activity Planning

Focus of the engagement process	Title of the Event		
	Short description of event (max 60 words)		
Implementation of the engagement process' (Guidance Available here)	Purpose for stakeholder engagement (Please specify the purpose of the stakeholder engagement as appropriate in your context) e.g. Documentation of the lessons learned, Sharing of knowledge and experience, Integration of experts' views, Evaluation of outcomes and outputs, etc.		
	Group(s) of the stakeholders (Please consult the Stakeholder Engagement Process for your Case Study)		
	Method to engage (Please consult the list of methods to engage in this link, or add more)		
Timeline (See above the graph)	Period to engage with the stakeholders (Month)		
Logistics of the organisation	Leading organisation to develop the stakeholder engagement activity		
	Potential synergies with stakeholder engagement activities led by other partners		
	Support requested from ICLEI (Please select the level of support from ICLEI and specify it based on your context)		
	Basic: Inform ICLEI on the activity development	Intermediate: Consult ICLEI on the activity development	Advanced: Co-develop the activity with ICLEI (if applicable)
Local/ Regional/ International Event to organise the stakeholder engagement activity as part of it			

Source: RECREATE CoP Strategy Template

Annex IV: Template for CoP Activity Documentation

Date of the Activity	
Title of the event	CoP
Key Highlights from the Event (max 200 words)	
Key Outputs	
Challenges in Engaging with Stakeholders	
Lessons Learned from the Stakeholder Engagement Process	
Inspiration for Others to Engage with Stakeholders	
List of Good Ideas for Taking Action in Future Events	
Tools & Resources Used	

Source: RECREATE CoP Strategy Template

Annex V: Template for participants list, e.g. for CoP meetings

Participants List



Meeting Topic	XXXX
Date	XXXX
Hour	XXXX
Location	XXXX
Invited	Full Name
	Organization
	Attends



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In case of any questions, please contact:

Sophia Stock

Senior Manager | adelphi

stock@adelphi.de



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