

MODULE B2

Citizen engagement and co-design procedures

Training Manual

October, 2025

The training programme has been developed within the framework of the NATMed project “**Nature-based Solutions on existing infrastructures for resilient water management in the Mediterranean**” funded by the PRIMA programme.

This manual is a collection of notes for workshop participants and is intended to complement the presentation delivered by the workshop facilitator.

For more detailed information on each module, please refer to the "Further Information" section provided at the end of each module, as well as the project website: [**https://natmed-project.eu**](https://natmed-project.eu)

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FWC-NbS TRAINING PROGRAMME



MODULE A – Lessons learnt from NATMed case studies

A1: Knowledge Sharing from the Implementation of FWC-NbS

A2: IUCN Global standards for NbS (self-assessment tool)

A3: Replicability and Upscaling of FWC-NbS projects

MODULE B – NATMed tools

B1: Implementation Guidelines for FWC-NbS in the Mediterranean

B2: Citizen engagement and co-design procedures

B3: NATMed decision-making tool for the implementation of FWC-NbS

MODULE C – Market-based Mechanisms for NbS implementation

C1: Financial mechanisms, opportunities and business models for NbS

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Introduction

The module introduces the participatory processes used in NATMed, where knowledge creation is treated as a mutual learning journey rather than a one-way flow of information. It begins with **stakeholder mapping and analysis** to understand local perceptions, needs, and barriers, forming the foundation for effective engagement in the co-design of Full Water-Cycle Nature-based Solutions (FWC-NbS).

It then presents the **Participatory Governance Plan**, which structures how stakeholders are involved at different levels of participation, from informing to empowering, to support inclusive, transparent, and long-term decision-making. Central to this approach is the **Mediterranean Community of Practice (MedCoP)**, a collaborative tool where actors from local case studies exchange experiences, co-design solutions, and refine NbS through co-design workshops. The lessons learned from community involvement, citizen engagement, and shared co-design processes are used to upskill participants and strengthen local capacity.

What will you learn?



By the end of this module, you will be able to:

- ▶ Understand how to **identify, map, and analyse stakeholders** to support effective engagement in NbS projects.
- ▶ Learn the purpose and structure of a **Participatory Governance Plan**, including levels of participation and steps for collaborative decision-making.
- ▶ Explore how a **Mediterranean Community of Practice (MedCoP)** is formed and used to co-design, evaluate, and refine Nature-based Solutions through iterative engagement rounds.

Guiding questions

Who are the key stakeholders and what do they need?

How should participation be structured for fair and effective decision-making?

How does a Community of Practice support shared learning and co-design?

Who is this for?

Local authorities and municipalities,
Regional and national policy makers,
Water authorities and environmental agencies,
Researchers and technical experts,
Local communities.



Stakeholder Mapping and Analysis

A three-phase stakeholder engagement and analysis methodology designed to identify key actors, understand their perceptions, and inform engagement strategies was used in NATMed. It integrates Engagement activities with the Participatory Governance Plan, ensuring coordinated decision-making and inclusive participation.

Phase 1: Collect Existing Information

- Gather all available social and contextual data from the case study area.
- Identify:
 - Local perceptions;
 - Social risks;
 - Stakeholder categories.
- Establish an initial understanding of community context.

Phase 2: Semi-Structured Interviews

- Conduct interviews with key stakeholders and end-users to identify:
 - Perceptions and beliefs about water management and NbS;
 - Barriers and needs;
 - Levels of awareness.
- Collect diverse viewpoints to refine engagement and training approaches.

Phase 3: Data Analysis & Strategy Development

- Analyse all collected data to:
 - Identify synergies with project tasks;
 - Support engagement, training, and governance planning;
 - Identify conceptual gaps and training needs.
- Develop tailored engagement strategies and plan their implementation.



Stakeholder Mapping and Analysis

NATMed example

Phase 1 in NATMed

- Collected perceptions through surveys in the start of the project (Diagnosis of Sites).
- Extracted social risks (Roadmap to Implementation).
- Analysed outputs of the first round of MedCoP sessions (traditional practices, local challenges).
- Identified key stakeholder lists for all five case studies (e.g. municipalities, cooperatives, irrigation boards).

Phase 2 in NATMed

- Planned semi-structured interviews with:
 - Farmers, cooperatives, water authorities;
 - Women cooperatives, immigrant groups;
 - Environmental NGOs.
- Interviews intended to reveal perceptions about NbS, cognitive barriers, and training needs.

Phase 3 in NATMed

- Multi-source analysis planned:
 - Integrate survey data, interviews, and MedCoP findings.
 - Define local training needs for each case study.
 - Support targeted engagement strategies.
- Results expected to guide:
 - Tailored learning activities;
 - Improved stakeholder participation;
 - Refinement of NbS design and replication strategies.

Stakeholder Mapping and Analysis



Conclusions

Understanding stakeholder perceptions early is essential for targeted and effective engagement.



Combining multiple data sources (surveys, interviews, MedCoP insights) provides a fuller picture of local needs.

Integrating engagement findings into governance and training processes strengthens decision-making and promotes inclusivity.

A phased, iterative structure increases the accuracy and relevance of stakeholder strategies.

Stakeholder Mapping and Analysis



Actions to take

- ★ **Start with existing data** to avoid duplication and build on what is already known.
- ★ **Conduct semi-structured interviews** to reveal perceptions and hidden barriers that are not visible in surveys.
- ★ **Use a mixed-methods approach** (quantitative + qualitative) for a balanced understanding of social conditions.
- ★ **Align engagement planning with governance processes** to ensure inclusive decision-making.
- ★ **Identify training needs** early to adapt capacity-building programmes accordingly.
- ★ **Ensure continuous refinement** by updating analyses as the project progresses.

Pitfalls to avoid

- ★ **Relying only on surveys or only on interviews**, which may lead to a partial or biased understanding.
- ★ **Engaging stakeholders too late**, missing the chance to influence design or increase ownership.
- ★ **Assuming all stakeholder groups have the same needs**, which may cause misaligned training or messaging.
- ★ **Poor documentation of perceptions and barriers**, reducing the ability to compare case studies or make evidence-based decisions.
- ★ **Failing to integrate findings into governance**, leading to engagement activities that do not influence real decisions.

Participatory Governance Plan



A Participatory Governance Plan is a guiding framework that structures how stakeholders are actively involved in NbS decision-making processes, ensuring inclusive, equitable, and context-sensitive collaboration from problem definition to implementation and maintenance. It outlines the steps, roles, and levels of participation that support shared understanding, social learning, and effective long-term governance of NbS.

The Participatory Governance Plan:

- ✦ Strengthens **institutional coordination** across agencies, levels of government, and community actors.
- ✦ Creates **flexible structures** that can adapt to evolving socio-ecological conditions over time.
- ✦ Addresses major barriers to NbS adoption, which are often **social, institutional, and governance-related**, rather than technical.

The levels of participation include:

- **Informing** – one-way communication.
- **Consulting** – gathering inputs but with limited influence.
- **Collaborating** – structured engagement with dialogue and joint activities.
- **Co-deciding** – shared decision-making and joint planning.
- **Empowering** – communities gain agency, long-term involvement, and influence.
- Higher levels generally lead to stronger ownership, social learning, and better long-term NbS outcomes.

Participatory Governance Plan



NATMed used a six-step Governance Planning Process

1. **Internal Consensus:** Align goals, expectations, roles, and success metrics within the project team.
2. **Contextualize the Problem:** Understand local challenges, environment, socio-economic context, and relevant NbS options.
3. **Strategize Project Aims:** Identify stakeholders, prepare communication plans, and develop shared vision and dialogue.
4. **Co-plan & Co-design NbS:** Engage stakeholders, adapt NbS to local needs, clarify roles, plan responsibilities, test ideas.
5. **Implementation:** Facilitate participation, prevent inequalities, encourage citizen responsibility.
6. **Maintenance:** Establish long-term responsibilities, continue engagement, and secure resources for sustainability.

NATMed example



- Case studies use the six-step guide to adapt governance models to local constraints.
- Early MedCoP sessions informed contextualization (Step 2) and stakeholder identification (Step 3).
- Governance steps are being used to:
 - Build shared understanding between municipalities, farmers, cooperatives, NGOs, and vulnerable groups.
 - Structure co-design sessions and clarify decision-making processes.
 - Align local administrative bodies with project teams for NbS implementation and long-term maintenance.
 - Ensure transparency and clarity around roles, responsibilities, and expectations among all stakeholders.
 - Provide a consistent structure for monitoring, feedback and adaptive management during and after implementation.
- Each case study produced its own governance plan based on this guide.

Participatory Governance Plan



Conclusions

- Participatory governance is essential for acceptance, trust-building, and successful NbS implementation.
- High-quality participation strengthens legitimacy, reduces conflicts, and leads to more robust solutions over time.
- The process must remain flexible: each area should adapt the steps based on local institutional and cultural conditions.



Participatory Governance Plan



Actions to take

- **Define internal goals first**, ensuring clarity before engaging external groups.
- Follow a **stakeholder map** practice.
- **Select the appropriate participation level** (informing → empowering) based on context and capacity.
- **Define responsibilities clearly** during co-design to avoid misunderstandings.
- **Develop a communication plan** that supports transparency and ongoing dialogue throughout all stages.
- **Test NbS ideas on a small scale** before full implementation to reduce risk and refine the design.
- **Plan for maintenance early**, including financing, monitoring roles, and accountability structures.
- **Iterate continuously**; review and adapt governance arrangements as the project evolves.

Pitfalls to Avoid

- **Assuming one participation model fits all contexts.**
- Treating participation as a **single event** instead of an ongoing process.
- **Making decisions in a top-down way** or running participation without clear decision-making structure.
- **Superficial engagement** (e.g. one-off consultation) that creates distrust and resistance.
- **Underestimating institutional barriers**, such as low administrative flexibility or rigid procedures.
- **Engaging too few stakeholder groups**, leading to conflict or missing key perspectives.
- **Neglecting long-term maintenance responsibilities**, resulting in degradation of NbS over time.
- **Failing to provide equal opportunities** for vulnerable or less-equipped groups to participate meaningfully.



Mediterranean Community of Practice (MedCoP)

What is a CoP?

- ✦ A group of people who share a common concern or interest and who learn how to do it better by interacting regularly.
- ✦ Built on three core elements (social learning theory, Wenger-Trayner)
 - **Domain** – the shared topic or problem that gives members a common purpose.
 - **Community** – the relationships, discussions, and interactions through which people learn from each other.
 - **Practice** – the shared tools, stories, experiences, and ways of working that the group develops together.
- ✦ A CoP creates social learning, where knowledge is generated collectively rather than individually.
- ✦ In complex fields like water management or sustainability, CoPs help bridge scientific, policy, and traditional knowledge, support collaboration, and improve the design and adoption of solutions.





Mediterranean Community of Practice (MedCoP)

What is the NatMed MedCoP?

- ★ A multi-actor ecosystem enabling participatory, transdisciplinary co-design of Full Water-Cycle Nature-based Solutions (FWC-NbS).
- ★ Designed to foster mutual learning, shared understanding, and co-creation of context-sensitive water management solutions.
- ★ Brings together:
 - Public authorities and policymakers;
 - Water infrastructure managers;
 - Water/agro-food sector actors;
 - Researchers and academics;
 - Civil society and vulnerable groups;
 - General public.
- ★ Designed to be inclusive across gender, age, background.
- ★ Moves away from top-down planning toward collaborative governance.
- ★ Three levels of participation:
 - **Core stakeholders** – fully involved in all co-design phases and decisions.
 - **Active members** – contribute to specific activities, support replication, join knowledge exchange.
 - **External stakeholders** – broader audience for dissemination and learning, potential upscaling.





Mediterranean Community of Practice (MedCoP)

Methodology for Co-Design

The co-design process in the MedCoP unfolds through **three iterative rounds of workshops**, each building on the previous one to deepen collaboration and refine the design of NbS.

Round 1 – Understanding and Scoping

- Build common understanding of objectives.
- Identify intervention areas for FWC-NbS.
- Discuss local water challenges and infrastructures.
- Collect traditional practices and perceptions through surveys (sense of place, awareness of nature).

Round 2 – Collaborative Design

- Align on shared vision for interventions.
- Identify strengths, weaknesses, opportunities, and technical/legislative barriers.
- Integrate traditional knowledge.
- Use structured participatory tools:
 - **5 Bold Steps Canvas**
 - **SOAR analysis**
 - **Storyboarding**

Round 3 – Evaluation & Refinement

- Assess real pilot implementations of FWC-NbS.
- Extract lessons learned and refine designs.
- Evaluation tools used:
 - **Critical Friend (peer review)**
 - **I Like / I Wish / What If**
 - **Pilot Appraisal (holistic evaluation)**
- Generates insights for Mediterranean-wide replication.

Mediterranean Community of Practice (MedCoP)



Examples of stakeholder engagement from NATMed



Carrión de los Céspedes, Spain:

Farmers and irrigation associations co-designed water reuse interventions (wetlands, floating gardens). Their buy-in ensured smooth implementation and willingness to operate the system long-term.



Chimaditida, Greece:

Livestock breeders and local communities contributed to the buffer zone and irrigation design. Their participation reduced resistance and ensured solutions fit daily practices.



Arborea, Italy:

Agricultural cooperatives and aquifer managers co-developed infiltration areas. They also agreed to joint monitoring, ensuring sustained engagement.



Bozcaada, Türkiye :

Wine producers, farmers, and tourism operators engaged in discussions on conservation agriculture and smart irrigation. This helped balance ecological goals with local economic interests.



Oued Righ, Algeria:

Citizen groups and farmers helped shape canal bank revegetation and wastewater reuse strategies. Their involvement minimized conflicts and fostered acceptance.

Mediterranean Community of Practice (MedCoP)



Lessons Learned

- Early and continuous engagement of stakeholders is essential.
- Builds trust, ownership, and practical relevance of NbS.
- Capacity gaps exist in local authorities (NbS training, technical skills).
- Motivating stakeholders is challenging due to limited time and skepticism.
- Clear communication, advance material sharing, and good facilitation are key.
- Blending scientific, policy, and traditional knowledge requires skilled facilitation and mutual respect.
- Flexibility in tools and methods improves outcomes.





Mediterranean Community of Practice (MedCoP)

Actions to take

- ★ **Engage stakeholders early and continuously**, ensuring they help shape objectives, priorities, and solutions from the start.
- ★ **Build local ownership** by creating transparent, trust-based processes and integrating stakeholder feedback into real decisions.
- ★ **Provide targeted capacity building** for local authorities and technical staff to address gaps in NbS knowledge, planning, and implementation.
- ★ **Use iterative co-design cycles** (scoping → design → evaluation) to ensure continuous learning and refinement of solutions.
- ★ **Apply structured c-design tools** to support collaboration, visioning, and evaluation.
- ★ **Communicate clearly and consistently**, sharing materials in advance and explaining the benefits of participation to maintain engagement.
- ★ **Blend scientific, policy, and traditional knowledge**, using skilled facilitation to create a shared language and understanding among diverse stakeholders.
- ★ **Document lessons learned and challenges** during pilot evaluation to support replication and scaling in similar Mediterranean or water-stressed contexts.
- ★ **Foster inclusive participation**, ensuring gender, age, and social diversity to enhance legitimacy and relevance of the solutions.
- ★ **Use the MedCoP model as a method** for establishing structured, participatory governance frameworks that strengthen long-term stewardship of NbS.

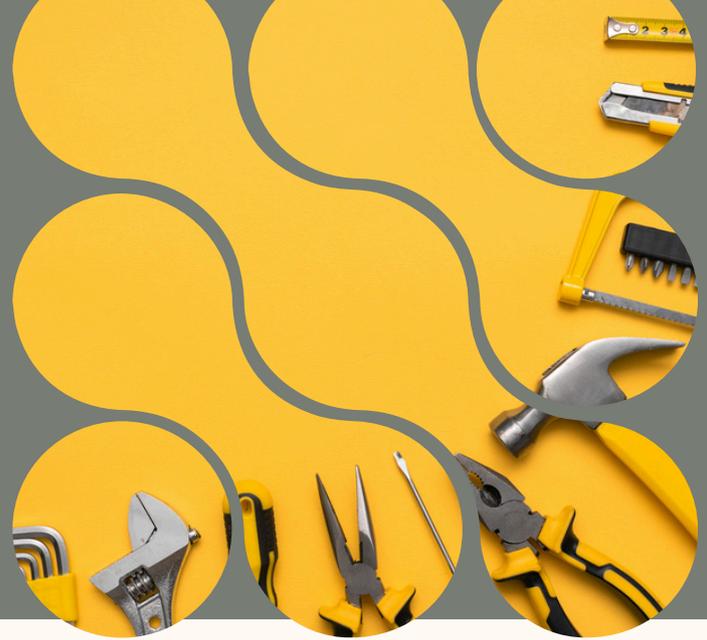


Mediterranean Community of Practice (MedCoP)

Pitfalls to Avoid

- ✘ **Late stakeholder involvement** → reduces ownership and trust.
- ✘ **Top-down decision-making** → undermines the purpose of a MedCoP.
- ✘ **Over-technical discussions** that exclude non-experts.
- ✘ **Neglecting capacity building** for local authorities and technical services.
- ✘ **Insufficient preparation** (not sharing materials beforehand).
- ✘ **Ignoring traditional ecological knowledge.**
- ✘ **Using rigid facilitation tools** without adapting them to local contexts.
- ✘ **Assuming all stakeholders have equal time or motivation** to participate.
- ✘ **Weak communication** leading to disengagement.
- ✘ **Skipping the evaluation phase**, which is essential for learning and replication.

Toolbox for participation



Tools Produced by NATMed

- **Participatory Governance Plan:** Framework for inclusive decision-making with principles, steps, and methods.
- **MedCoP:** Mediterranean Community of Practice as a structured methodology for regional dialogue.
- **Clustering and Networking Plans:** Strategy for extending citizen voices beyond pilots and into Mediterranean/EU initiatives.

Tools Adapted/Used in NATMed

- **Influence–interest matrices:** Standard method for classifying stakeholders by power and interest, applied in each case study.
- **Workshop and co-design templates:** Questionnaires, agendas, and facilitation techniques for participatory sessions.
- **Communication tools:** Project newsletters, social media, awareness campaigns, and public meetings.
- **Peer-to-peer training:** Citizens learning from one another within the case study area.



Further Information

For further reading and practical guidance, please consult the following project deliverables available on the NATMed website:

- D2.1 Report of the local stakeholders
- D5.2 Participatory Governance Plan
- D5.3 NatMed MedCoP
- D5.4 Clustering and networking plans
- D4.2 FWC-NbS Guidelines

More information on the co-design tools is available from the toolboxes developed by the:

a. 'Urban Nature Labs' (<https://unalab.enoll.org/this-toolkit>)

b. 'Institute for Housing and Urban Development Studies' (HIS) of Erasmus University in Rotterdam (<https://www.ihs.nl/en/advisory-training-and-research/tools-and-toolkits/co-create-your-city-toolkit/toolkit>).

c. 'URBACT' (<https://urbact.eu/toolbox-home/engaging-stakeholders>)

Quiz



Q1. Which of the following best describes the purpose of stakeholder mapping and analysis?

- A) To identify and understand the actors involved, their roles, needs, and potential barriers
- B) To evaluate the economic cost of implementing NbS
- C) To select technical specifications for infrastructure projects

Q2. What is the main goal of a Participatory Governance Plan?

- A) To centralize all decisions within the project team
- B) To structure how different stakeholders participate in decision-making throughout the project
- C) To speed up implementation by reducing the number of stakeholder interactions

Q3. Which of the following is a key feature of a Community of Practice used in co-design processes?

- A) Stakeholders only receive information passively
- B) Stakeholders collaboratively learn, exchange knowledge, and refine solutions through iterative engagement
- C) External experts make all final decisions without stakeholder input



Glossary

D Deliverable

FWC-NbS Full water Cycle Nature-based Solutions

MedCoP Mediterranean Community of Practice

NATMed Nature-based Solutions on existing infrastructures for resilient Water Management in the Mediterranean

NbS Nature-based Solutions

SOAR Strengths, Opportunities, Aspirations, and Results (SOAR is an adaptation of the SWOT Analysis)

NATMed

Nature-based Solutions on existing
infrastructures for resilient Water
Management in the Mediterranean



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