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Definition of the NB-WoLL action plan

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Table of Contents

1. Executive report 5

2. List of actions 6

3. Description of actions 7

PHASE 0: What can I expect from this document? 7

PHASE 1: Preparation and Definition of Needs 10

Action 1.1: Analysis of the local water system and regional context 11
Action 1.2: Assessment of water sources and water resource balance 12
Action 1.3: Assessment of existing water infrastructure 13
Action 1.4: Assessment of the regulatory and administrative framework for water reuse 14
Action 1.5: Assessment of current and potential demand for reclaimed water 15
Action 1.6: Identification of opportunities for water reuse 16
Action 1.7: Characterisation of water reuse opportunities by type of use 17
Action 1.8: Identification and prioritisation of key needs and issues 18
Action 1.9: Definition of the NB-WoLL challenge and value proposition 19

PHASE 2: Design of the living lab approach 20

Action 2.1: Consolidation and mapping of the NB-WoLL stakeholder ecosystem 21
Action 2.2: Analysis of stakeholder interests and conditions for participation 22
Action 2.3: Identification of leaders and potential change agents 23
Action 2.4: Assessment of social acceptance and awareness of water reuse 24
Action 2.5: Definition of the NB-WoLL service catalogue 25
Action 2.6: Definition of the funding model 26

PHASE 3: Governance Model 28

Action 3.1: Institutional anchoring and strategic alignment 29
Action 3.2: Agreement of Institutional Commitments 30
Action 3.3: Organisational Anchoring 31
Action 3.4: Definition of the governance structure and decision-making system 32
Action 3.5: Formalisation of the institutional and governance arrangements 33
Action 3.6: Definition of internal and external communication mechanisms 34

PHASE 4: Co-creation of solutions 35

Action 4.1: Preparation and definition of the challenge 36
Action 4.2: Identification and engagement of stakeholders 37
Action 4.3: Definition of the participatory approach and methods 38
Action 4.4: Co-design and initial prototypes 39

PHASE 5: Experimentation **40**
Action 5.1: Definition of the experimentation framework 41
Action 5.2: Prototype development and implementation in the real-world environment 42
Action 5.3: Data collection and monitoring 43
Action 5.4: Iterative refinement and re-testing 44

PHASE 6: Impact assessment **45**
Action 6.1: Evaluation of technical and operational performance 46
Action 6.2: Evaluation of user experience and adoption 47
Action 6.3: Evaluation of economic and organisational impacts 48
Action 6.4: Evaluation of environmental and social impacts 49
Action 6.5: Capture of insights and lessons learnt 50

PHASE 7: Scalability and transfer **51**
Action 7.1: Documenting the NB-WoLL experience and lessons learnt 52
Action 7.2: Planning how solutions can be scaled and replicated 53
Action 7.3: Defining the business and financing model for the solution 54
Action 7.4: Planning pathways for market, public procurement and institutional uptake 55
Action 7.5: Developing recommendations for practice and policy 56
Action 7.6: Sharing results and knowledge 58

Relevant documentation **59**

1. Executive report

As explicitly established in Section 4, "Concluding remarks", of Deliverable **D2.2, "Strategy for Nature-Based Water-Oriented Living Labs"** (p. 32), the Action Plan is conceived as the practical implementation instrument of the NB-WoLL Strategy. The Action Plan is defined as a "*practical template, or a road-map, for implementing NB-WoLL on the ground*", whose purpose is to "*translate strategic concepts into actionable steps*" and provide concrete guidance for applying the Strategy in real-world settings.

The present Action Plan therefore operationalises the strategic framework established in D2.2, maintaining direct alignment between the principles and components of the NB-WoLL Strategy and the actions proposed for their implementation. This operational approach is further informed by Deliverable **D3.1.1, "Strategic report on the long-term deployment of NBS**", which identifies the main barriers to NBS adoption through Regional Focus Groups in Spain, France and Portugal and, in Section 5 (pp. 48–50), sets out key recommendations concerning transnational cooperation, administrative coordination, financing and incentives, stakeholder engagement, knowledge transfer, capacity building and citizen participation. These recommendations provide the deployment priorities to be addressed through the Action Plan.

Thus, this Action Plan is conceived as a practical implementation tool, structured in seven differentiated phases, with specific objectives and general narratives describing their expected outcomes and results. We also provide a Phase 0 to identify the right expectations and facilitate the use:

0. What can I expect from this document?
1. Preparation and definition of needs
2. Design of the living lab approach
3. Governance model
4. Co-creation of solutions
5. Experimentation
6. Impact assessment
7. Scalability and transfer

Within each phase, every action leads to a concrete output that documents its completion and provides the basis for subsequent actions and phases. Outputs are tangible records resulting from the implementation of each action, such as completed templates, inventories, matrices, maps, reports or definition sheets.

To support implementation and ensure a consistent approach across different contexts, the Action Plan includes a set of templates in Annex I that can be used as a starting point for each action. The templates are intended as adaptable tools to develop and document the respective outputs and may be adjusted to the specific characteristics and needs of each NB-WoLL, as well as to the expected results according to the maturity level and context of each Living Lab.

2. List of actions

Phase 1 Preparation and Definition of Needs	Phase 2 Design of the living lab approach
1.1 Analysis of the local water system and regional context **1.2** Assessment of water sources and water resource balance **1.3** Assessment of existing water infrastructure **1.4** Assessment of the regulatory and administrative framework for water reuse **1.5** Assessment of current and potential demand for reclaimed water **1.6** Identification of opportunities for water reuse **1.7** Characterisation of water reuse opportunities by type of use **1.8** Identification and prioritisation of key needs and issues **1.9** Definition of the NB-WoLL challenge and value proposition	**2.1** Consolidation and mapping of the NB-WoLL stakeholder ecosystem **2.2** Analysis of stakeholder interests and conditions for participation **2.3** Identification of leaders and potential change agents **2.4** Assessment of social acceptance and awareness of water reuse **2.5** Definition of the NB-WoLL service catalogue **2.6** Definition of the funding model
Phase 3 Governance Model	**Phase 4 Co-creation of solutions**
3.1 Institutional anchoring and strategic alignment **3.2** Agreement of Institutional Commitments **3.3** Organisational Anchoring **3.4** Definition of the governance structure and decision-making system **3.5** Formalisation of the institutional and governance arrangements **3.6** Definition of internal and external communication mechanisms	**4.1** Preparation and definition of the challenge **4.2** Identification and engagement of stakeholders **4.3** Definition of the participatory approach and methods **4.4** Co-design and initial prototypes
Phase 5 Experimentation	**Phase 6 Impact assessment**
5.1 Definition of the experimentation framework **5.2** Prototype development and implementation in the real-world environment **5.3** Data collection and monitoring **5.4** Iterative refinement and re-testing	**6.1** Evaluation of technical and operational performance **6.2** Evaluation of user experience and adoption **6.3** Evaluation of economic and organisational impacts **6.4** Evaluation of environmental and social impacts **6.5** Capture of insights and lessons learnt
Phase 7 Scalability and transfer	
7.1 Documenting the NB-WoLL experience and lessons learnt **7.2** Planning how solutions can be scaled and replicated **7.3** Defining the business and financing model for the solution **7.4** Planning pathways for market, public procurement and institutional uptake **7.5** Developing recommendations for practice and policy **7.6** Sharing results and knowledge	

3. Description of actions

PHASE 0: What can I expect from this document?

This Action Plan should not be interpreted as a prescriptive methodology or as a mandatory set of activities to be implemented in full. Rather, its purpose is to provide **practical guidance that helps NB-WoLLs identify possible courses of action and structure a roadmap tailored to their specific needs and circumstances**. The proposed phases, actions, and tools should therefore be viewed as examples and references that can be adapted, combined, modified, or replaced according to the context of each initiative.

First and foremost, it is important to emphasize that there is **no expectation for organizations to undertake all the actions described** in this document. Each NB-WoLL operates in a unique environment, with different levels of maturity, resources, capabilities, and strategic priorities. The value of this Action Plan lies in offering a broad overview of potential activities and allowing each organization to select and focus on those actions that are most relevant and beneficial to its objectives.

Likewise, **the actions presented in this document do not represent the only possible approach to designing and implementing an Action Plan**. A wide range of methodologies, frameworks, and organizational models can lead to equally valid and successful outcomes. The proposed structure should therefore be regarded as a useful starting point for reflection and planning rather than as a rigid pathway that must be followed.

The proposed phases and actions offer a coherent way of organizing activities, helping stakeholders to identify priorities, sequence tasks, and structure their efforts. However, **their application should always be adapted to the specific reality of each NB-WoLL**. In many cases, important information such as stakeholder mappings, business models, market analyses, governance arrangements, or strategic assessments may already exist. When this is the case, certain actions may require less effort or may not need to be carried out at all.

Similarly, **not all phases will necessarily be relevant in every context**. For example, activities related to scalability or replication may have limited relevance for short-term demonstrator projects whose primary objective is to test and validate a specific solution before the end of the project lifecycle. Flexibility in the application of the proposed phases is therefore essential to ensure that the Action Plan remains practical, efficient, and aligned with the needs of each initiative.

Regarding expected outputs, **the outcome templates are intended to support the generation of tangible and documented results arising from the implementation of the proposed actions.** However, these templates should be understood solely as illustrative examples and not as mandatory formats. Organizations are free to use alternative tools, reporting structures, or monitoring mechanisms, provided that they allow progress and results to be effectively captured and communicated.

The templates also incorporate several analytical dimensions that are considered relevant based on current practices and state-of-the-art approaches. Nevertheless, these dimensions should not be regarded as exhaustive. Depending on the sector, territory, innovation ecosystem, or strategic objectives involved, additional dimensions may need to be incorporated to better reflect local needs and priorities.

Furthermore, **the tools, references, and examples included within the templates are intended to serve as a starting point for discussion and strategic reflection**. They are designed to support users in defining realistic and meaningful outcomes while drawing upon existing knowledge and best practices. The examples provided are for illustrative purposes only and, in many cases, are entirely fictional. Their role is simply to demonstrate the type of outputs that could be achieved and to inspire organizations to develop solutions that are appropriate to their own context.

Ultimately, this Action Plan should be considered a **flexible guidance tool that supports decision-making, strategic thinking, and implementation planning**. Rather than prescribing a fixed set of requirements, it encourages each NB-WoLL to adapt both the proposed actions and the expected outcomes to its own stage of development, available resources, operational realities, and long-term ambitions.

All these recommendations are summarized in the table below, which identifies a set of **preliminary actions** that can serve as a practical starting point for the process of defining and developing a Living Lab. Rather than representing a fixed sequence of mandatory steps, these actions are intended to provide initial guidance, helping organizations establish the foundations, engage relevant stakeholders, and define the strategic, operational, and governance elements required for a successful Living Lab.

PHASE 0 OBJECTIVE: To identify how I can make the best use of this document		
#	**ACTIONS**	**OUTCOMES / RESULTS**
0.1	Read and review the Action Plan as a whole to understand the proposed phases, actions and types of outcomes.	A first overview of the range of activities that may be considered within an NB-WoLL Action Plan.
0.2	Identify the phases and actions that are most relevant to the specific context, maturity, needs and objectives of the NB-WoLL.	Mapping between the proposed Action Plan and the actual needs and maturity of the initiative.
0.3	Identify what is already available and does not need to be produced again, such as existing studies, stakeholder maps, governance arrangements, business models, monitoring systems or previous outputs.	Identification of existing information and resources that can be reused as inputs to the selected actions.
0.4	Select and prioritise the actions to be implemented, adapting their scope where necessary.	A tailored set of priority actions for the NB-WoLL.
0.5	Review the corresponding outcome templates and references and decide whether they can be used directly, adapted or replaced by another suitable approach.	A practical approach for producing the tangible results associated with the selected actions.

PHASE 1: Preparation and Definition of Needs

Phase 1 builds the foundation for the NB-WoLL by understanding the local water system, assessing resources, infrastructure, regulation and demand, and identifying viable water reuse opportunities. These opportunities are characterised and used to prioritise key needs and issues, ultimately enabling stakeholders to co-create the NB-WoLL challenge and value proposition. The proposed sequence of actions will allow:

1.1 Understand the territorial water system
1.2 Quantify and characterise water resources
1.3 Assess existing infrastructure
1.4 Establish regulatory and administrative conditions
1.5 Establish reclaimed-water demand
1.6 Match supply, infrastructure, regulation and demand to identify reuse opportunities
1.7 Organise and characterise those opportunities by type of use
1.8 Identify and prioritise the needs, barriers and key issues that affect them
1.9 Co-create the challenge and value proposition that the NB-WoLL will address

PHASE 1 OBJECTIVE: Identification of the problem / challenge to be solved

#	ACTIONS	OUTCOMES / RESULTS
1.1	Analysis of the local water system and regional context.	Shared understanding of the territorial water system and its context, establishing the common baseline for the NB-WoLL.
1.2	Assessment of water sources and water resource balance.	Clear understanding of water availability, flows, quality and imbalances, including wastewater potentially available for reuse.
1.3	Assessment of existing water infrastructure.	Understanding of the infrastructure capacity and limitations for water reuse, including assets that could be used or adapted.
1.4	Assessment of the regulatory and administrative framework for water reuse.	Clarity on the regulatory and administrative conditions affecting water reuse, including requirements, procedures, responsibilities and barriers.
1.5	Assessment of current and potential demand for reclaimed water.	Understanding of current and potential reclaimed-water demand, including who could use it, how much, when and under what conditions.
1.6	Identification of opportunities for water reuse.	Identification of concrete and potentially feasible water reuse opportunities resulting from matching available resources with demand and enabling conditions.
1.7	Characterisation of water reuse opportunities by type of use.	Structured understanding of how reclaimed water could be used across the territory, and of the requirements associated with the different types of use.

PHASE 1 OBJECTIVE: Identification of the problem / challenge to be solved		
#	**ACTIONS**	**OUTCOMES / RESULTS**
1.8	Identification and prioritisation of key needs and issues.	Shared prioritisation of the needs, barriers and key issues that must be addressed to enable the identified water reuse opportunities.
1.9	Definition of the NB-WoLL challenge and value proposition.	Shared agreement on the challenge and value proposition of the NB-WoLL, providing the strategic focus for the following phases.

Action 1.1: Analysis of the local water system and regional context

OBJECTIVE:	To gain a comprehensive understanding of how the water cycle works in the region.
DESCRIPTION:	This action establishes a baseline understanding of the local water ecosystem and its territorial context, providing the initial information required to assess the potential for transforming wastewater into reclaimed water resources through the subsequent actions of Phase 1. To this end, existing information is gathered on the main water resources and uses, sources of wastewater (urban, industrial or agricultural), wastewater characteristics and available flows, and existing treatment and water management infrastructure. The analysis also provides an initial overview of the environmental, institutional, regulatory, economic and social context relevant to water reclamation and reuse. The purpose is to provide a common information baseline from which the subsequent actions can undertake the detailed assessment of water resources and their balance, infrastructure, regulatory constraints, demand and potential uses of reclaimed water, and opportunities for water reuse.
TOOLS:	• Existing water, environmental and territorial datasets • Water management and planning documents • Geographic Information Systems (GIS) • Existing cartographic and institutional information
OUTPUT	Local Water Ecosystem Baseline Report
EXAMPLE FOR REFERENCE	Ghodeif, K. (2013). Baseline Assessment Study for Wastewater Treatment Plant for Al Gozayyera village, West Kantara City, Ismailia Governorate, Egypt. SWIM-Sustain Water MED – Egypt. Final Report. Suez Canal University / GIZ / Holding Company for Water and Wastewater (HCWW). See particularly pp. 7–13: Sections 1.2 “Purpose”, 1.3 “Approach and Methodology”, 1.4 “Sources of Data”, and 2 “Background Information”. DOI: 10.13140/RG.2.2.34897.63844.

Action 1.2: Assessment of water sources and water resource balance

OBJECTIVE:	To identify, quantify and characterise all available water sources across the region, with a particular focus on wastewater potentially available for reuse.
DESCRIPTION:	A detailed inventory should cover both conventional water resources, including surface water and groundwater, and unconventional resources, such as effluent from urban wastewater treatment plants, industrial discharges and greywater. For each water source, available volumes and flow rates, water quality, temporal variability and current levels of utilisation are analysed to establish its current contribution to the water system and its potential availability for reclamation and reuse. Based on this information, the system's water resource balance is established by quantifying water inflows, consumption, losses and outflows within the defined territorial boundaries. Where data are available, the balance should consider seasonal variations in both resource availability and water use. The resulting balance enables the identification of supply-demand imbalances and potentially available wastewater flows, providing a quantitative basis for the subsequent assessment of reclaimed-water demand, reuse opportunities and potential substitution of conventional water resources.
TOOLS:	• Hydrological and operational databases • Measurement and monitoring systems • Water resource balance models • Geographic Information Systems (GIS)
OUTPUT	Water Sources Inventory and Water Resource Balance Report
EXAMPLE FOR REFERENCE	Jodar-Abellan, A., Fernández-Aracil, P. & Melgarejo-Moreno, J. (2019). "Assessing Water Shortage through a Balance Model among Transfers, Groundwater, Desalination, Wastewater Reuse, and Water Demands (SE Spain)." Water, 11(5), 1009. See pp. 3–13, particularly pp. 3–4 (methodology and conceptual water-balance model), pp. 7–8 (wastewater reuse and other non-conventional resources), and pp. 11–13 (integrated water balance and deficits). Access article/PDF Kulranjan, R., Palur, S. & Nesi, M. (2023). How Water Flows Through Bengaluru: Urban Water Balance Report. WELL Labs, Bengaluru. See pp. 6–10 (Urban Water Balance Chart) and pp. 16 onwards, particularly §4.1 p. 17 (scope) and the subsequent calculation of individual water flows. Access report Mateo-Sagasta, J., Al-Hamdi, M. & AbuZeid, K. (Eds.) (2022). Water Reuse in the Middle East and North Africa: A Sourcebook. Colombo, Sri Lanka: International Water Management Institute (IWMI). DOI: 10.5337/2022.225. See particularly Chapter 2, "Wastewater production, treatment and reuse in MENA: Untapped opportunities?", pp. 15–41; especially pp. 20–24 (wastewater fate flows and generation), pp. 24–29 (wastewater composition and treatment), pp. 30–33 (§2.3, actual water reuse and reuse inventories), and pp. 33 onwards (§2.4, potential for resource recovery and reuse). Review chapter.

Action 1.3: Assessment of existing water infrastructure

OBJECTIVE:	To inventory and characterise key water-cycle infrastructure, paying particular attention to those elements that can contribute to water reclamation and reuse.
DESCRIPTION:	A detailed inventory should identify and characterise the existing infrastructure associated with water supply, wastewater collection, treatment, storage, conveyance and distribution, including WWTPs, drinking water treatment plants (DWTPs), sewerage and distribution networks, pumping stations, storage facilities and existing water reuse systems. For each infrastructure element, relevant characteristics should be assessed, including location, function, ownership and management, installed technology, design and operational capacity, current operational status, condition and performance. For wastewater treatment and reclamation facilities, particular attention should be paid to treatment configuration, current and peak flows, treatment capacity, existing tertiary or advanced treatment processes, and the technical potential for adaptation to additional treatment requirements. The assessment should also identify the existing infrastructure potentially usable for the production, storage, conveyance or distribution of reclaimed water, as well as infrastructure limitations and potential adaptation or upgrading needs. The resulting infrastructure assessment provides the technical baseline for the subsequent identification and assessment of water reuse opportunities and for defining interventions that make effective use of existing assets and minimise unnecessary new infrastructure.
TOOLS:	• Geographic Information Systems (GIS) • Technical infrastructure audits • Capacity and performance models • Infrastructure and operational databases
OUTPUT	Water Infrastructure Inventory and Assessment Report
EXAMPLE FOR REFERENCE	European Commission, Joint Research Centre (JRC) (2022). Technical Guidance – Water Reuse Risk Management for Agricultural Irrigation Schemes in Europe. Publications Office of the European Union, Luxembourg, JRC129596. See particularly Case Study 8, "Fregene ACEA water reuse system, Italy", pp. 89–96, especially p. 89, Figure CS8.1, which provides a schematic representation of the complete reuse infrastructure, including the catchment and sewer network, pumping, WWTP treatment stages, filtration and UV disinfection, reclaimed-water distribution and irrigated districts. Table CS8.1 on p. 89 also identifies infrastructure operators and responsibilities. JRC Technical Guidance Sanz, J., Suescun, J., Molist, J., Rubio, F., Mujeriego, R. & Salgado, B. (2015). "Reclaimed Water for the Tarragona Petrochemical Park". Water Supply, 15(2), pp. 308–316. See particularly pp. 309–312, which describe the Camp de Tarragona water reclamation infrastructure, including the interconnection of the Tarragona and Vila-seca–Salou WWTPs, the 4-km conveyance pipeline, the Advanced Water Reclamation Plant, treatment configuration and reclaimed-water distribution system. The process-flow diagram and description of the AWRP are particularly useful as a concrete Spanish example of identifying existing infrastructure and determining how it can be integrated and adapted for water reuse. Access paper.

Action 1.4: Assessment of the regulatory and administrative framework for water reuse

OBJECTIVE:	To identify and assess the regulatory and administrative conditions applicable to water reclamation and reuse in the NB-WoLL territory, determining the requirements and procedures that potential reuse initiatives must meet.
DESCRIPTION:	This action establishes the regulatory and administrative framework applicable to water reclamation and reuse at European, national and, where relevant, regional and local levels. The assessment identifies the regulations and competent authorities applicable to the production, supply and use of reclaimed water. For the different types of potential reuse, it determines permitted, restricted or prohibited uses; applicable water-quality and monitoring requirements; risk-management obligations; responsibilities of the actors involved; and the permits, authorisations and administrative procedures required for implementation. Based on the water sources and infrastructure identified in Actions 1.2 and 1.3, a preliminary regulatory screening is carried out to determine which requirements would apply to potential reuse situations and whether the available information indicates regulatory gaps or additional evidence needs. This screening is intended to identify issues requiring further assessment and does not constitute a formal compliance evaluation. The action also maps the administrative pathway for implementing water reuse initiatives, identifying competent authorities, applicants, required documentation, consultation and coordination requirements, procedural dependencies and relevant uncertainties. Regulatory and administrative constraints that could affect implementation are documented accordingly. The resulting assessment identifies the regulatory and administrative barriers and limitations that may constrain or condition the development of water reuse initiatives, including restrictions on particular uses, compliance gaps, additional health or environmental requirements, unclear responsibilities, and complex or uncertain authorisation procedures. It provides the regulatory and administrative baseline for assessing the feasibility of water reuse opportunities and, in subsequent actions, for identifying measures that may help overcome these barriers, facilitate compliance and reduce regulatory risks.
TOOLS:	• Systematic legal and regulatory review • Regulatory requirements matrix • Administrative process and pathway mapping • Preliminary regulatory screening • Consultation with competent authorities, where necessary
OUTPUT	Water Reuse Regulatory and Administrative Framework Assessment
EXAMPLE FOR REFERENCE	Région Occitanie, Direction de la Transition Écologique et Énergétique – Service Eau, Milieux aquatiques et Risques. (2021). Cahier méthodologique : La réutilisation des eaux usées traitées en Occitanie. Région Occitanie, November 2021. Contributors: J. Béraud, B. Noury, P. Phan-Dong, L. Burtin, A. Nouet-Allemand, J. Baroni and C. Rey. Editorial coordination: J.-M. Clerc and E. Combes. Relevant sections: pp. 4–5 (regulatory framework); p. 7 (actors); p. 8 (possible uses); p. 9 (main barriers); pp. 10–16 (development pathway for a reuse project); p. 17 (regional constraints and SWOT); pp. 20–28 (practical case studies). Full PDF – Région Occitanie methodological guide Cerema. Attendus réglementaires – Dossier d'autorisation pour la réutilisation des eaux usées traitées (REUT). Centre d'études et d'expertise sur les risques, l'environnement, la mobilité et l'aménagement (Cerema), France. Relevant sections: pp. 1–2 (actors and responsibilities, project and reuse-system description, wastewater source, treatment, intended uses, storage, transport and distribution); p. 3 (health and environmental risk assessment and preventive/corrective measures); p. 4 (monitoring, operational arrangements, incident management, responsibilities and economic information). The document is particularly relevant as a practical model for the Regulatory Requirements Matrix, Administrative Pathway Matrix and Preliminary Regulatory Screening Matrix. Full PDF – Cerema regulatory dossier checklist

Action 1.5: Assessment of current and potential demand for reclaimed water

OBJECTIVE:	To identify and characterise current and potential demand for reclaimed water across the NB-WoLL territory, including potential users, volumes, temporal patterns and conditions for uptake
DESCRIPTION:	This action assesses current and potential demand for reclaimed water across the relevant sectors of the NB-WoLL territory, including agricultural, municipal, industrial, tourism and environmental uses. The assessment identifies potential users and characterises their current water uses and sources, location, approximate demand, seasonal patterns and relevant requirements for reclaimed water, including quality, reliability and delivery conditions. Existing data are complemented, where necessary, through interviews, surveys or workshops with potential users to identify needs, expectations, barriers and conditions for uptake. The resulting assessment establishes who could use reclaimed water, for what purposes, how much and when, and under what conditions. It provides the demand-side evidence that, together with the information generated in Actions 1.2–1.4, will be used in Action 1.6 to identify and assess specific water reuse opportunities.
TOOLS:	• Reclaimed Water Demand Register • Demand Profile • Potential User Consultation Card • Barriers and Enabling Conditions Canvas • Demand Assessment Snapshot • Demand Map (optional)
OUTPUT	Reclaimed Water Demand Assessment
EXAMPLE FOR REFERENCE	Urkiaga, A., de las Fuentes, L., Bis, B., Hernández, F., Koksis, T., Balasz, B. & Chiru, E. (2006). *Handbook on Feasibility Studies for Water Reuse Systems. AQUAREC – Integrated Concepts for Reuse of Upgraded Wastewater, European Commission*, Contract EVK1-CT-2002-00130. Relevant pages: pp. 20–21, Section 3.5.1 "Potential users for the reclaimed water". Provides a practical framework for identifying potential users and assessing present and future quantities, timing and reliability of demand, quality requirements, user concerns and willingness to pay, including the use of questionnaires and field surveys. AQUAREC Handbook — PDF Camp de Tarragona industrial water-reuse case, "*Caracterización de la demanda de agua*". Relevant section: §2 "Caracterización de la demanda de agua" (online technical case, without pagination). Provides a concrete Spanish example of analysing existing industrial water consumption and its temporal pattern, consulting potential users and examining their water uses to quantify potential reclaimed-water demand. Camp de Tarragona: Caracterización de la demanda de agua

Action 1.6: Identification of opportunities for water reuse

OBJECTIVE:	To identify and assess opportunities for reclaimed water reuse by combining the available water resources, existing infrastructure, regulatory conditions and reclaimed-water demand identified in the previous actions.
DESCRIPTION:	This action identifies specific opportunities where reclaimed water could partially or fully replace conventional water resources. It combines the information generated in Actions 1.2–1.5 to match available wastewater resources with current and potential demand, considering water quantity and seasonality, quality requirements, spatial proximity, existing infrastructure, regulatory conditions and relevant technical, economic, environmental and social factors. The identification of opportunities is complemented by participatory workshops and working sessions with key stakeholders, including water managers, wastewater producers, potential users, public authorities and other relevant actors. These sessions are used to explore possible source-user combinations, identify synergies and innovative uses, and incorporate local knowledge on practical constraints and enabling conditions. Structured workshop tools support the generation, mapping and preliminary assessment of the opportunities identified. For each opportunity, the main requirements, constraints, infrastructure or treatment adaptations and other conditions affecting its feasibility are documented. The resulting set of assessed reuse opportunities provides the basis for their subsequent characterisation by type of use and for identifying the needs, barriers and key issues that should be addressed to enable their development.
TOOLS:	• Supply–Demand Matching Matrix • Opportunity Mapping Workshop • Source–User Matching Canvas • Opportunity Assessment Card • Water Reuse Opportunity Map • Preliminary Feasibility Screening Matrix
OUTPUT	Water Reuse Opportunities Assessment
EXAMPLE FOR REFERENCE	SUWANU EUROPE (2020). Deliverable 2.5 – Regional Working Group Report. SUWANU EUROPE – Network for effective knowledge transfer on safe and economic wastewater reuse in agriculture in Europe, Horizon 2020, Grant Agreement No. 818088. See particularly p. 6, Section 2.3 "Stakeholders engagement support tools", which describes the World Café methodology and its use for generating ideas, collaborative decision-making, exploring complex issues and identifying steps for implementation. The project applied this participatory approach in regional water-reuse workshops, including the Braunschweig workshop, where stakeholders jointly explored challenges and opportunities for reclaimed-water use. SUWANU EUROPE – Deliverable 2.5 PDF Naus, F., Carter, K., Sierra Olea, M., Narain-Ford, D., Walhout, B., Martinez, X. & Bosch, C. Summary of Two Co-creation Stakeholder Workshops for the Besòs River Basin (CS3): Developing a System-wide, Zero Pollution Strategy for the Reuse of Water for Agricultural Use. Annex D, PROMISCES – Preventing Recalcitrant Organic Mobile Industrial chemicals for Circular Economy in the Soil-Sediment-Water System, Horizon 2020, Project No. 101036449. See particularly pp. 5–6 for the co-creation process and workshop structure; pp. 7–10 for the use of preliminary surveys, World Café, identification of barriers and enablers and participatory prioritisation; and pp. 10–12 for brainstorming with sticky notes, identification of solutions and selection of priority actions. This provides a particularly practical example of how structured co-creation tools can be used with stakeholders to generate and assess possible water-reuse solutions. PROMISCES – Besòs co-creation workshops PDF

Action 1.7: Characterisation of water reuse opportunities by type of use

OBJECTIVE:	To classify and characterise the water reuse opportunities identified in Action 1.6 according to their type of use.
DESCRIPTION:	This action groups the water reuse opportunities identified in Action 1.6 into the main types of use relevant to the territory, such as agricultural, industrial, urban, recreational and environmental uses. For each type of use, the main characteristics of the identified opportunities are summarised, including potential users, water demand, quality requirements, seasonality, infrastructure needs and relevant regulatory or operational conditions. The resulting classification provides a clear overview of how reclaimed water could be used across the territory and the main requirements associated with each type of use, providing a structured basis for identifying and prioritising the needs, barriers and key issues addressed in Action 1.8.
TOOLS:	• Use Classification Matrix • Use Characterisation Card • Water Reuse Uses Map
OUTPUT	Water Reuse Opportunities by Type of Use
EXAMPLE FOR REFERENCE	AQUARES (2020). Water Reuse Technology Application Guide. AQUARES – Water Reuse Policies Advancement for Resource Efficient European Regions, Interreg Europe. See particularly p. 6, Table 1, which classifies water reuse applications into urban, agricultural, industrial, recreational, environmental and potable uses and provides examples for each category; p. 12, Table 4, which compares the main sectors with water-reuse potential across the participating European territories; and pp. 13–15, which provide regional examples illustrating how reuse applications can be characterised according to sector, demand, treatment and implementation conditions. This provides a practical reference for the Use Classification Matrix and Use Characterisation Card proposed in Action 1.7. AQUARES – Water Reuse Technology Application Guide (PDF) Alcalde-Sanz, L. & Gawlik, B.M. (2014). Water Reuse in Europe: Relevant Guidelines, Needs for and Barriers to Innovation. JRC Science and Policy Reports, EUR 26947 EN. Luxembourg: Publications Office of the European Union. DOI: 10.2788/29234. See particularly Section 2, pp. 11–20, which reviews the principal applications of reclaimed water in Europe and the different requirements associated with intended uses, including agricultural irrigation, urban uses, industrial applications, environmental enhancement and groundwater recharge. The report provides the methodological basis for characterising reuse possibilities according to their intended use and associated requirements and constraints. European Commission JRC – Water Reuse in Europe

Action 1.8: Identification and prioritisation of key needs and issues

OBJECTIVE:	To identify and prioritise the main needs, barriers and key issues affecting the development of water reuse in the NB-WoLL territory, establishing a shared set of priorities for action.
DESCRIPTION:	This action identifies and prioritises the main needs, barriers and key issues emerging from the assessments and water reuse opportunities developed in Actions 1.1–1.7. The analysis considers issues related to water availability and quality, user needs, infrastructure, regulatory and administrative requirements, economic feasibility, environmental conditions, social acceptance and governance. These issues are consolidated into a common set of needs and discussed with relevant stakeholders to incorporate their knowledge and perspectives. A participatory prioritisation process is then used to determine which needs and issues are most important for enabling water reuse in the territory. Priorities may be assessed according to simple criteria such as their importance, urgency, impact on water reuse opportunities and capacity to be addressed through the NB-WoLL. The resulting priorities provide the basis for defining the NB-WoLL challenge, scope and value proposition in Action 1.9.
TOOLS:	• Needs and Key Issues Register • Prioritisation Matrix • Priority Needs Summary
OUTPUT	Prioritised Water Reuse Needs and Key Issues
EXAMPLE FOR REFERENCE	SOLLAGUA – Interreg Sudoe (2025). Identification of Stakeholders and Quality Needs for Water, Deliverable 2.1.1. The report identifies reclaimed-water users, stakeholder needs and key challenges in the SUDOE region and includes Living Lab workshops and stakeholder surveys. SOLLAGUA project page and report access IIASA / Water4All (2024). SDG Methodological Framework. See p. 50 for a participatory prioritisation of water-security actions using a simplified multi-criteria approach based on impact and feasibility. Methodological Framework (PDF) PROMISCES. Besòs River Basin Stakeholder Workshops. The workshops review barriers, enablers and solutions, discuss links between them and support the short-listing of priorities for a local reclaimed-water strategy. PROMISCES Besòs River Basin Stakeholder Workshop

Action 1.9: Definition of the NB-WoLL challenge and value proposition

OBJECTIVE:	To define, through a participatory and co-creation process with relevant stakeholders, the main challenge and value proposition of the NB-WoLL, based on the evidence, opportunities and priority needs identified in Actions 1.1–1.8.
DESCRIPTION:	This action translates the evidence, water reuse opportunities and priority needs identified in Actions 1.1–1.8 into a clear and shared challenge for the NB-WoLL and its corresponding value proposition. Through participatory workshops and co-creation sessions with relevant stakeholders, the priority needs identified in Action 1.8 are discussed and translated into a common challenge formulation. The process brings together the perspectives of potential users, water managers and operators, public authorities, businesses and other relevant actors in the local water ecosystem. The challenge definition considers the problem to be addressed, the stakeholders affected, the main factors influencing the situation, the available evidence and the change that the NB-WoLL seeks to enable. The participatory process is also used to delimit the scope of the challenge and establish a shared understanding of what the NB-WoLL should address. Based on the agreed challenge, stakeholders co-create the value proposition of the NB-WoLL, identifying the value that experimentation, innovation and collaboration could generate for the territory and the different stakeholder groups involved. The resulting challenge and value proposition provide a shared strategic direction for the subsequent design, governance, co-creation and experimentation phases of the NB-WoLL.
TOOLS:	• Challenge Definition Canvas • Participatory Challenge Definition Workshop • Value Proposition Canvas • Stakeholder Validation Session
OUTPUT	NB-WoLL Challenge and Value Proposition
EXAMPLE FOR REFERENCE	*Nesta Collective Intelligence Design Playbook* Nesta (2019). Challenge Definition (A1), pp. 72–73. Particularly relevant for the participatory definition of the NB-WoLL challenge. The Challenge Definition Worksheet is explicitly designed to be completed with a diverse group of stakeholders and structures the discussion around the issue, affected stakeholders, influencing factors, evidence, intended change and constraints before agreeing a common challenge formulation. It therefore provides a strong practical basis for the Challenge Definition Canvas and participatory workshop. *Nesta Collective Intelligence Design Playbook* Nesta (2019). Particularly relevant for translating the agreed challenge into the purpose and value proposition of the NB-WoLL. The canvas connects challenge definition with the people who need to participate, the knowledge and ideas required, collective interpretation and the change that the initiative seeks to create. It is designed for facilitated group work and iteration, making it a useful methodological reference for co-creating and validating the NB-WoLL's value proposition with stakeholders.

PHASE 2: Design of the living lab approach

Phase 2 translates the challenge and value proposition defined in Phase 1 into the stakeholder and operational foundations of the NB-WoLL. It starts by consolidating and mapping the stakeholder ecosystem, understanding stakeholders' interests and conditions for participation, identifying leaders and change agents, and assessing the wider social acceptance and awareness of water reuse.

Building on these assessments, the phase defines the portfolio of services that the NB-WoLL will offer and establishes a sustainable and diversified funding model to support its operation and development. Together, these actions provide the basis for organising the NB-WoLL, engaging its ecosystem and preparing its subsequent governance, co-creation and experimentation activities.

The proposed sequence of actions will allow to the following results:

PHASE 2 OBJECTIVE: To define the stakeholder, service and financial foundations for the operation of the NB-WoLL.

#	ACTIONS	OUTCOMES / RESULTS
2.1	Consolidation and mapping of the NB-WoLL stakeholder ecosystem.	Stakeholder ecosystem structured for engagement.
2.2	Analysis of stakeholder interests and conditions for participation.	Conditions for stakeholder participation established.
2.3	Identification of leaders and potential change agents.	Leadership and mobilisation capacity established.
2.4	Assessment of social acceptance and awareness of water reuse.	Social acceptance conditions established.
2.5	Definition of the NB-WoLL service catalogue.	NB-WoLL service model defined. .
2.6	Definition of the funding model.	NB-WoLL funding model defined.

Action 2.1: Consolidation and mapping of the NB-WoLL stakeholder ecosystem

OBJECTIVE:	To consolidate and map the stakeholders that form the NB-WoLL ecosystem.
DESCRIPTION:	This action builds on the stakeholder involvement undertaken during Phase 1. It consolidates the stakeholders already identified, identifies any relevant actors that may still be missing, and structures them according to their role in the NB-WoLL ecosystem. Their influence, interest, potential contribution and relationships are analysed to provide a clear picture of who forms part of the ecosystem and how the different actors are connected. The resulting stakeholder map provides the basis for the subsequent analysis of interests, change agents and social acceptance in Actions 2.2–2.4.
TOOLS:	• Stakeholder register • Influence-Interest matrix • Stakeholder ecosystem map
OUTPUT	Stakeholder map
EXAMPLE FOR REFERENCE	OECD (2015). Stakeholder Engagement for Inclusive Water Governance. OECD Studies on Water, OECD Publishing, Paris. Particularly relevant is Chapter 3, "Mapping water-related stakeholders at all levels", which provides a systematic approach to identifying water-sector stakeholders and understanding their roles, motivations, influence and interactions. This is a strong methodological reference for the Stakeholder Register and Stakeholder Ecosystem Map. OECD – Stakeholder Engagement for Inclusive Water Governance Guittard, A., La Jeunesse, I., Akinsete, E., et al. (2026). Implementing Living Labs to Support Local Climate Change Adaptation and Resilience Strategies Using a System Innovation Approach. Sustainability, 18(10), 4918. The methodology explicitly starts from a stakeholder inventory and applies an influence–interest matrix to identify the actors forming the core Living Lab stakeholder group, considering representatives from government, industry, academia and civil society. It is therefore a particularly close practical precedent for the tools proposed in Action 2.1. Guittard et al. – Living Lab methodology and stakeholder mapping

Action 2.2: Analysis of stakeholder interests and conditions for participation

OBJECTIVE:	To understand stakeholders' interests, motivations and conditions for participating in the NB-WoLL.
DESCRIPTION:	Building on the Stakeholder Map developed in Action 2.1, this action analyses what the different stakeholders expect from the NB-WoLL, what may motivate their participation, what concerns or barriers may limit their involvement, and what conditions could facilitate it. Particular attention is given to converging and conflicting interests between stakeholder groups. The analysis provides the basis for defining appropriate forms of stakeholder involvement in subsequent phases.
TOOLS:	• Stakeholder Interest and Motivation Matrix • Barriers and Enabling Conditions Canvas • Stakeholder consultation
OUTPUT	Stakeholder Interests and Participation Assessment
EXAMPLE FOR REFERENCE	OECD (2015). Stakeholder Engagement for Inclusive Water Governance. OECD Studies on Water, OECD Publishing, Paris. Relevant pages: pp. 55–68, Chapter 2, "Drivers of stakeholder engagement in the water sector", and especially pp. 109–118, Chapter 4, "Obstacles to engaging stakeholders in the water sector". These sections examine why stakeholders participate in water governance and the factors that hinder their engagement, including conflicting interests, lack of political will, limited resources, consultation fatigue and institutional constraints. This provides a strong basis for the Stakeholder Interest and Motivation Matrix and the Barriers and Enabling Conditions Canvas. OECD – Stakeholder Engagement for Inclusive Water Governance (PDF) Schubert, I., Sohre, A., Hearn, A. X. & Keshishian, N. M. (2026). "Differentiating motivations, barriers, and enablers of key stakeholder engagement in living lab processes: a Swiss case study." Sustainability: Science, Practice and Policy, 22(1), Article 2659399. Relevant pages: particularly pp. 8–14. Table 2 (around pp. 8–9) is especially useful as a practical precedent because it organises, by stakeholder group, motivations, enablers and barriers to participation. The subsequent analysis explains differences between civil society, public administration, businesses and research actors, while p. 14 synthesises cross-cutting barriers and enablers. This is very close to what we want to capture in Action 2.2. Schubert et al. – Living Lab motivations, barriers and enablers

Action 2.3: Identification of leaders and potential change agents

OBJECTIVE:	To identify stakeholders who can mobilise, connect and facilitate participation within the NB-WoLL ecosystem.
DESCRIPTION:	Building on Actions 2.1 and 2.2, this action identifies individuals, organisations or groups that can play a key role in mobilising stakeholders and supporting the NB-WoLL process. Potential leaders and change agents are assessed according to their influence, legitimacy, connections, capacity to build trust and mobilise others, and willingness to contribute. Both formal and informal leaders should be considered. The resulting analysis identifies the actors who can help strengthen participation, collaboration and the uptake of the NB-WoLL activities in subsequent phases.
TOOLS:	• Change Agent Identification Matrix • Network/Relationship map
OUTPUT	Leaders and Change Agents Map
EXAMPLE FOR REFERENCE	World Bank (2013). Institutional and Governance Reviews: A New Type of Economic and Sector Work. Results Framework and Guidance Note. Relevant page: p. 69, Appendix F – "Checklist for Identifying Change Agents". This is an especially useful practical reference for Action 2.3 because it provides an explicit checklist for identifying change agents according to characteristics such as influence and leadership, networks and relationships, capacity to build consensus, implementation capacity, communication skills, and relevant knowledge and experience. These criteria can be adapted almost directly to the proposed Change Agent Identification Matrix. World Bank – Checklist for Identifying Change Agents Taylor, A. C. (2009). "Sustainable urban water management: understanding and fostering champions of change." Water Science & Technology, 59(5), 883–891. Relevant pages: pp. 883–891. This is particularly relevant because it focuses specifically on change agents in the water sector. The study examines influential "champions" working within Australian water agencies and identifies characteristics associated with their capacity to promote more sustainable forms of urban water management. It provides a strong sector-specific basis for identifying the types of leadership and influence that should be considered in the NB-WoLL. Taylor – Sustainable urban water management: understanding and fostering champions of change

Action 2.4: Assessment of social acceptance and awareness of water reuse

OBJECTIVE:	To assess the level of awareness, perceptions and social acceptance of water reuse in the NB-WoLL territory.
DESCRIPTION:	Building on the stakeholder analysis undertaken in Actions 2.1–2.3, this action assesses the wider social context surrounding water reuse. It examines how different groups understand and perceive reclaimed water, their level of awareness, perceived benefits and risks, trust, concerns and acceptance of different reuse applications. The assessment identifies the main factors influencing social acceptance and provides evidence for subsequent communication, awareness-raising and engagement activities.
TOOLS:	• Social Acceptance and Awareness Survey • Social Perception Assessment Matrix • Participatory Diagnostic Workshop
OUTPUT	Water Reuse Social Acceptance Assessment
EXAMPLE FOR REFERENCE	López-Ruiz, S., Moya-Fernández, P. J., García-Rubio, M. A. & Roldán-López de Hierro, A. F. (2022). Recycled water acceptance: Data from two Spanish regions with opposite levels of scarcity. Data in Brief, 43, 108402. Particularly useful for SOLLAGUA because it provides an actual survey instrument and dataset from Spain (Galicia and Murcia). The questionnaire covers awareness of water scarcity, trust, perceived health risks, cost-benefit perceptions and acceptance of recycled water for different uses. It therefore provides a close practical model for the Social Acceptance and Awareness Survey. Article and survey methodology Smith, H. M., Brouwer, S., Jeffrey, P. & Frijns, J. (2018). Public responses to water reuse – Understanding the evidence. Journal of Environmental Management, 207, 43–50. Relevant pages: pp. 43–50, particularly the review of factors affecting public responses, including knowledge, trust, risk perception, emotional responses and social influences. It provides a strong conceptual basis for deciding which dimensions should be captured in the Social Perception Assessment Matrix and interpreted through the diagnostic workshop. Public responses to water reuse – Understanding the evidence

Action 2.5: Definition of the NB-WoLL service catalogue

OBJECTIVE:	To define the portfolio of services that the NB-WoLL will offer to its stakeholders.
DESCRIPTION:	Building on the NB-WoLL challenge and value proposition defined in Phase 1 and on the stakeholder and social assessments undertaken in Actions 2.1–2.4, this action translates the identified needs and available capabilities into a concrete portfolio of services. For each proposed service, the following practical questions will be addressed: • What service will the NB-WoLL offer? • What need does the service address? • Who is the service for? • What activities will the NB-WoLL provide as part of the service? • What resources and capabilities are required to provide it? • What value or benefits can users expect from the service? • Under what basic conditions can stakeholders access the service? The answers to these questions will be used to structure the services into a coherent portfolio and to prepare a standard description for each service. The proposed catalogue will be reviewed with relevant stakeholders to ensure that the services respond to identified needs and are consistent with the NB-WoLL mission and value proposition. The definition of the service catalogue will focus on establishing what the NB-WoLL offers, to whom, for what purpose and under what basic conditions. Other questions concerning the operation, sustainability and evolution of the services will be addressed in the subsequent actions and phases of the Action Plan: • How will the services be financed and economically sustained? → Action 2.6 – Definition of the Funding Model. • How will the services be implemented and tested in practice? → Phase 5 – Experimentation. • How will service performance be monitored and what indicators will be used? → Phase 6 – Evaluation. • How will the outcomes and impact of the services be assessed? → Phase 6 – Evaluation. • How can the services be improved based on experience and evidence? → Phase 6 – Evaluation and the subsequent improvement process. • How can the resources required to provide the services be optimised? → Phases 5 and 6 – Experimentation and Evaluation. • How can successful services be maintained, transferred or scaled? → Phase 7 – Scale-up and Transfer.
TOOLS:	• Service Portfolio Canvas. • Service Definition Card. • Service Catalogue Validation Workshop.
OUTPUT	NB-WoLL Service Catalogue
EXAMPLE FOR REFERENCE	European Network of Living Labs (ENoLL), Evaluation Criteria for ENoLL Membership. Relevant sections: Values/services offered/provided to Living Lab actors; user-centricity within the entire service process; full product lifecycle support; testbeds; business model and sustainability. Useful for identifying the main dimensions to consider when structuring the services offered by a Living Lab. ENoLL – Evaluation Criteria for Living Labs European Network of Living Labs (ENoLL), Training Series on Service Design for Living Labs – Evolve2Care. Relevant section: Service Design for Living Labs. Provides a practical approach for structuring Living Lab services around user needs, value creation and the capabilities required to provide them. ENoLL – Service Design for Living Labs

Action 2.6: Definition of the funding model

OBJECTIVE:	To define a sustainable and diversified funding model for the NB-WoLL.
DESCRIPTION:	Building on the NB-WoLL Service Catalogue defined in Action 2.5, this action establishes how the resources required to operate and develop the NB-WoLL can be financed over time. The aim is to define a realistic combination of funding sources that reduces dependence on a single source and strengthens the financial resilience of the NB-WoLL. The definition of the funding model will address the following practical questions: • What are the main costs required to establish and operate the NB-WoLL? • Which costs are associated with infrastructure, management, stakeholder engagement, experimentation and the provision of services? • Which European, national, regional or local public funding opportunities could support the NB-WoLL? • Which partners, companies or other private actors could contribute financially or through in-kind resources? • Which services and activities identified in Action 2.5 could generate own revenue, and who could pay for them? • Which additional funding mechanisms could be considered, such as sponsorship, membership, public-private partnerships or other collaborative financing arrangements? • What combination of public funding, private contributions and own revenues provides an appropriate and diversified funding mix? • How do expected costs, funding and revenues evolve over time, and are potential financial gaps anticipated? • What factors could affect the long-term financial sustainability of the NB-WoLL? (A broader assessment of its strengths, weaknesses, opportunities and threats will be undertaken through a SWOT analysis in Phase 7 – Scale-up and Transfer, informed by the evidence generated during experimentation and evaluation.) The analysis will first estimate the financial requirements of the NB-WoLL, distinguishing between the resources required for its basic operation and those associated with specific services, projects or experimentation activities. Both monetary costs and relevant in-kind contributions should be considered. Potential funding and revenue sources will then be identified and related to the different financial requirements. These may include European, national, regional or local public funding, contributions from participating organisations, private investment or sponsorship, public-private arrangements and revenues associated with the services defined in Action 2.5. Based on this analysis, a Financial and Cash Flow Plan will bring together expected costs, funding sources, own revenues and relevant in-kind contributions over an appropriate planning period. The purpose is to assess whether the proposed funding mix is coherent, identify potential financial gaps and provide a practical basis for adapting the model as the NB-WoLL develops. The resulting funding model will provide the initial financial framework for the NB-WoLL. Its actual performance will subsequently be tested during Phase 5 – Experimentation, reviewed through Phase 6 – Evaluation, and assessed from a longer-term sustainability and scale-up perspective in Phase 7 – Scale-up and Transfer.
TOOLS:	• Cost Analysis and Budget. • Funding Sources and Revenue Analysis. • Financial and Cash Flow Plan.

OUTPUT	NB-WoLL Funding Model
EXAMPLE FOR REFERENCE	Gualandi, E. & Romme, A.G.L. (2019). How to Make Living Labs More Financially Sustainable? Case Studies in Italy and the Netherlands. Engineering Management Research, 8(1). Relevant section: Funding Mix Framework, pp. 11–14. Particularly useful for analysing how Living Labs can combine public subsidies, partner contributions, service revenues and other sources into a diversified funding mix. Gualandi & Romme – Living Lab financial sustainability ARCA Consortium, Living Lab Handbook. Relevant sections: business model and financial planning, addressing public and private funding, paid services, initial investment, potential markets and financial projections. It provides a practical reference for translating the funding model into financial requirements, revenue sources and a financial plan. ARCA – Living Lab Handbook

PHASE 3: Governance Model

Phase 3 establishes the governance model required for the operation of the NB-WoLL. It starts by aligning the NB-WoLL with the mandates and strategic priorities of the participating institutions and agreeing their commitments and contributions. These commitments are then translated into concrete organisational arrangements within each institution. Building on this foundation, the phase defines the collective governance structure and decision-making system, formalises the institutional and governance arrangements through an appropriate agreement, and establishes the internal and external communication mechanisms required for the operation of the NB-WoLL

PHASE 3 OBJECTIVE: To define the governance model for the operation of the NB-WoLL.

#	ACTIONS	OUTCOMES / RESULTS
3.1	Institutional anchoring and strategic alignment.	Institutional strategic alignment established.
3.2	Agreement of Institutional Commitments.	Institutional commitments agreed.
3.3	Organisational Anchoring.	Organisational arrangements established.
3.4	Definition of the governance structure and decision-making system.	Governance and decision-making system defined.
3.5	Formalisation of the institutional and governance arrangements.	Formal basis for the governance arrangements established.
3.6	Definition of internal and external communication mechanisms.	Communication mechanisms defined.

Action 3.1: Institutional anchoring and strategic alignment

OBJECTIVE:	To align the NB-WoLL with the mandates, strategic objectives and priorities of the participating institutions.
DESCRIPTION:	This action establishes the institutional basis for the governance of the NB-WoLL by identifying how its purpose and activities contribute to the mandate, strategic objectives and priorities of each participating institution. For each institution, the analysis will identify the relevant strategic plans, policies, programmes, institutional mandates or other formal frameworks that can support its participation in the NB-WoLL. The aim is to establish a clear connection between the objectives of the NB-WoLL and what each institution is already expected, committed or strategically positioned to achieve. The analysis will address three practical questions: Which institutional mandates, strategies, plans or policies are relevant to the NB-WoLL? Which institutional priorities or objectives can be advanced through participation in the NB-WoLL? What strategic value does participation in the NB-WoLL provide to the institution? The resulting institutional alignment provides the basis for Action 3.2, where the participating institutions will agree on their respective commitments to the NB-WoLL.
TOOLS:	• Strategic Institutional Alignment Matrix
OUTPUT	Included in Output 3.2
EXAMPLE FOR REFERENCE	REWAISE – Living Lab Methodology and Online Handbook. This is probably the best primary practical reference. The handbook reproduces the canvas as Figure 12, "Models of Governance – Developed by Fernando Vilariño-CVC-UAB-ENoLL" and explains its five core questions: participants; contributions; decision-making at different levels; internal/external communication; and benefits for participants. It also reproduces the visual canvas with Shared Motto, Needs & Opportunities, Who in the Lab, Who contributes, How decisions are taken, How innovation is communicated, and Exploitation/Business Model/Sustainability. REWAISE Living Lab Methodology and Online Handbook ENoLL (2025), *Living Lab Origins, Developments and Future Perspectives*. Relevant section: Living Lab Governance Model – Legal and Organisational Structure. It explicitly establishes that governance should align the objectives and activities of the Living Lab with those of host and collaborating organisations. ENoLL – Living Lab Origins, Developments and Future Perspectives ALL-Ready / ENoLL – Governance Models for Living Labs. This is a very strong ENoLL-connected reference. The ALL-Ready training module was organised by ENoLL in March 2023 and identifies you as the trainer for Part 2: Governance Models for Living Labs. The accompanying material reproduces the canvas and explicitly carries the attribution "© Fernando Vilariño – CVC – UAB – ENoLL". ALL-Ready – Understanding Living Lab Concepts and Co-creation

Action 3.2: Agreement of Institutional Commitments

OBJECTIVE:	To establish and agree on the commitments of the participating institutions to the NB-WoLL.
DESCRIPTION:	Building on the NB-WoLL challenge and value proposition defined in Phase 1 and the institutional alignment established in Action 3.1, this action translates the strategic interest of the participating institutions into explicit commitments to the NB-WoLL. The participating institutions will agree on a shared motto that concisely expresses their collective commitment to the NB-WoLL. For each institution, the expected results from participation and the corresponding contributions will then be defined. These may include financial resources, personnel, infrastructure and other in-kind resources, institutional representation, expertise, data, communication capacities or other relevant contributions. The commitments will be jointly discussed and agreed to ensure their consistency with the NB-WoLL objectives, their complementarity across institutions and a clear basis for the governance model. They will subsequently inform Action 3.3, where the organisational arrangements required within each institution to implement these commitments will be defined.
TOOLS:	• Strategic Institutional Alignment Matrix • Institutional Commitments Matrix
OUTPUT	Institutional Alignment and Commitments
EXAMPLE FOR REFERENCE	Vilariño, F. (2023). "Modelos de gobernanza para Living Labs", in *Un modelo de Living Lab para acelerar la transición ecológica*, Funseam. The report contains a dedicated section 3. Modelo de Gobernanza, beginning with "Modelos de gobernanza para Living Labs – Fernando Vilariño, Centro de Visión por Computador (CVC)-UAB." Funseam – Un modelo de Living Lab para acelerar la transición ecológica

Action 3.3: Organisational Anchoring

OBJECTIVE:	To define the internal organisational arrangements required by each participating institution to implement its agreed commitments to the NB-WoLL.
DESCRIPTION:	Building on the institutional commitments agreed in Action 3.2, this action translates each commitment into the concrete organisational arrangements required for its implementation. Each participating institution will identify the internal mechanisms needed to make its commitments operational. Depending on the institution and the nature of the commitment, these may include the designation of responsible persons, allocation of staff and resources, internal authorisations, agreements or contracts, procurement and financial procedures, access to infrastructure, data-sharing arrangements, or other administrative and operational instruments. This assessment should be carried out individually by each institution, involving the relevant operational, technical, legal, administrative, financial or managerial staff as required. The purpose is to determine not only what the institution has committed to, but how that commitment can actually be implemented within its organisational structure and procedures. The proposed arrangements will subsequently be reviewed in a joint validation meeting, where participating institutions present their organisational solutions, identify dependencies or incompatibilities between them, address remaining gaps and confirm that the agreed commitments can be operationalised coherently across the NB-WoLL. The resulting organisational anchoring provides the operational basis for the subsequent definition of the governance structure and decision-making system.
TOOLS:	• Organisational Anchoring Matrix
OUTPUT	Organisational Anchoring
EXAMPLE FOR REFERENCE	Purcell et al. – *Governing University Living Labs for Sustainable Development*. This is probably the strongest conceptual and practical precedent. It explicitly discusses the "institutional embedding of a living lab approach" and identifies the organisational mechanisms required to move from strategic commitment to actual operation: investment in people, systems and capabilities; programme-management capacity; partnerships; data management; communication; and organisational coordination. Governing University Living Labs for Sustainable Development: Lessons from International Case Studies — Monash University repository

Action 3.4: Definition of the governance structure and decision-making system

OBJECTIVE:	To define the governance structure and decision-making system of the NB-WoLL.
DESCRIPTION:	Building on the institutional alignment, commitments and organisational anchoring established in Actions 3.1–3.3, this action defines how the participating institutions will collectively govern the NB-WoLL. Using the **Governance Model Canvas**, the participating institutions will identify the governance levels required for the NB-WoLL and define the bodies or mechanisms operating at each level. The governance model should distinguish, where appropriate, between **strategic decision-making, operational coordination and day-to-day management**, adapting the number and type of governance levels to the scale and characteristics of each NB-WoLL rather than imposing a predefined structure. For each governance level, participants will determine **who takes part and how decisions are made**. This includes defining the purpose and decision-making authority of each governance body or mechanism; how decisions are initiated, discussed, approved and documented; meeting or interaction arrangements; relationships between governance levels; and procedures for referring issues from one level to another. The governance structure should build directly on the institutional commitments and organisational arrangements already established, ensuring that decision-making authority is consistent with the mandates and capacities of the participating institutions. The resulting structure will constitute the **decision-making component of the NB-WoLL Governance Model Canvas**. Action 3.5 will subsequently formalise the institutional and governance arrangements, while Action 3.6 will establish the internal and external communication mechanisms.
TOOLS:	• Governance model canvas
OUTPUT	NB-WoLL Governance Model Canvas and agreement (Actions 3.4, 3.5 and 3.6)
EXAMPLE FOR REFERENCE	ALL-Ready / ENoLL – Governance Models for Living Labs. This is a very strong ENoLL-connected reference. The ALL-Ready training module was organised by ENoLL in March 2023 and identifies you as the trainer for Part 2: Governance Models for Living Labs. ALL-Ready – Understanding Living Lab Concepts and Co-creation. ALL-Ready / ENoLL – Governance Models for Living Labs (PDF)

Action 3.5: Formalisation of the institutional and governance arrangements

OBJECTIVE:	To establish the appropriate formal basis for the institutional commitments and governance arrangements of the NB-WoLL.
DESCRIPTION:	This action defines the appropriate institutional and legal form for formalising the operation of the NB-WoLL. The participating institutions will determine the level and type of formalisation required according to the characteristics of the NB-WoLL, the participating organisations and the applicable institutional and legal context. This may range from a cooperation agreement or Memorandum of Understanding to a consortium agreement, partnership agreement, protocol, terms of reference or, where necessary, the establishment of a specific legal entity or other formal organisational arrangement. The formalisation should consolidate the elements already agreed rather than redefine them. It should establish, as appropriate, the participating institutions, purpose and scope of cooperation, institutional commitments and contributions, governance and decision-making arrangements, duration, financial and resource provisions, use of infrastructure and data, intellectual property where relevant, procedures for accession or withdrawal, modification of the agreement and mechanisms for resolving disputes. Each participating institution should assess the proposed arrangement against its own legal and administrative requirements before the final institutional agreement is adopted.
TOOLS:	• Governance model canvas
OUTPUT	NB-WoLL Governance Model Canvas and agreement (Actions 3.4, 3.5 and 3.6)
EXAMPLE FOR REFERENCE	ALL-Ready / ENoLL – Governance Models for Living Labs. The ALL-Ready training module was organised by ENoLL in March 2023 and identifies you as the trainer for Part 2: Governance Models for Living Labs. The accompanying material reproduces the canvas. ALL-Ready – Understanding Living Lab Concepts and Co-creation. ALL-Ready / ENoLL – Governance Models for Living Labs (PDF)

Action 3.6: Definition of internal and external communication mechanisms

OBJECTIVE:	To define the internal and external communication mechanisms supporting the governance and operation of the NB-WoLL.
DESCRIPTION:	Building on the institutional commitments, organisational anchoring, governance structure and formal institutional arrangements established in Actions 3.2–3.5, this action defines how information will circulate within the NB-WoLL and how its activities and decisions will be communicated to its wider ecosystem. Using the Governance Model Canvas, the participating institutions will distinguish between internal and external communication and establish the mechanisms required for each. Internal communication will define how information flows between the institutions, governance levels and operational actors involved in the NB-WoLL. This includes the communication channels and agreed tools to be used, the circulation and documentation of decisions, meeting information and records, reporting between governance levels, and the mechanisms through which relevant information is shared among participating institutions. External communication will define how the NB-WoLL communicates with stakeholders and the wider territory. This includes the main audiences, communication channels and responsibilities for communicating activities, opportunities for participation, relevant decisions and results of the NB-WoLL. For both dimensions, the participating institutions will determine the people responsible and the modus operandi, including the communication channels and tools to be used, frequency or triggering conditions where appropriate, and any communication guidelines required to ensure consistent communication across the NB-WoLL. The resulting arrangements will complete the communication component of the NB-WoLL Governance Model Canvas and provide the operational basis for communication during the subsequent co-creation, experimentation and evaluation phases.
TOOLS:	• Governance model canvas
OUTPUT	NB-WoLL Governance Model Canvas and agreement (Actions 3.4, 3.5 and 3.6)
EXAMPLE FOR REFERENCE	ALL-Ready / ENoLL – Governance Models for Living Labs. The ALL-Ready training module was organised by ENoLL in March 2023 and identifies you as the trainer for Part 2: Governance Models for Living Labs. The accompanying material reproduces the canvas. ALL-Ready / ENoLL – Governance Models for Living Labs (PDF)

PHASE 4: Co-creation of solutions

Phase 4 marks the transition from the macro level of the Living Lab to the meso and micro levels of the innovation process. While the previous phases establish the NB-WoLL as a Living Lab constellation, defining its territorial context, stakeholder ecosystem, services, resources and governance, the meso level focuses on a specific innovation project undertaken within this established environment. Phase 4 therefore starts by defining the concrete challenge to be addressed and identifying and engaging the stakeholders relevant to that challenge. It then moves to the micro level, where the participatory approach and methods through which stakeholders will contribute are defined. Through these methods, stakeholders collaboratively generate, discuss and develop potential solutions, integrating different needs, perspectives and forms of knowledge. The most promising solutions are selected and prepared for subsequent experimentation. Phase 4 thus connects the macro-level NB-WoLL ecosystem with a meso-level innovation project and its micro-level co-creation activities, providing the transition from a defined challenge to co-designed solutions ready to enter Phase 5 Experimentation.

PHASE 4 OBJECTIVE: To co-create innovative solutions in the NB-WoLL.

#	ACTIONS	OUTCOMES / RESULTS
4.1	Preparation and definition of the challenge.	Specific challenges for innovation defined.
4.2	Identification and engagement of stakeholders.	Relevant stakeholders identified and engaged.
4.3	Definition of the participatory approach and methods.	Participatory approach and methods defined.
4.4	Co-design and initial prototypes.	Solutions co-designed and selected for experimentation.

Action 4.1: Preparation and definition of the challenge

OBJECTIVE:	To define the specific innovation challenge to be addressed through the NB-WoLL co-creation process.
DESCRIPTION:	This action initiates a specific innovation project within the NB-WoLL. Building on the knowledge, priorities and governance framework established in the previous phases, it identifies and defines the concrete challenge that will be addressed through co-creation. The challenge should describe a specific problem, need or opportunity related to water reuse and Nature-Based Solutions that can be addressed through collaborative innovation. Its definition should clarify the problem to be solved, the context in which it occurs, the people or organisations affected, the expected change, and the main conditions or constraints that need to be considered. The challenge should be sufficiently focused to guide the subsequent co-creation activities while remaining open enough to allow different solutions to emerge. The resulting challenge definition provides the basis for identifying and engaging the specific stakeholders required in Action 4.2.
TOOLS:	• Challenge Definition Canvas
OUTPUT	Co-creation Challenge Definition
EXAMPLE FOR REFERENCE	Schuurman, D. (2015). *Bridging the gap between Open and User Innovation? Exploring the value of Living Labs as a means to structure user contribution and manage distributed innovation*. Ghent University. Relevant sections: Chapter 3, Living Labs as a research domain, particularly the three-layer Living Lab model (macro–meso–micro). The reference distinguishes between the Living Lab constellation (macro level), Living Lab innovation projects (meso level), and methodological research steps (micro level). It provides the conceptual basis for Action 4.1 as the starting point of a specific innovation project within the already established NB-WoLL. Schuurman (2015) – Ghent University Yasuoka, M., Akasaka, F., Kimura, A. & Ihara, M. (2018). "Living Labs as a Methodology for Service Design – An Analysis Based on Cases and Discussions from a Systems Approach Viewpoint". *Design 2018*. Relevant sections: Living Lab process and challenge-definition activities preceding idea generation, prototyping and testing. The reference provides a practical precedent for structuring a Living Lab innovation process around a clearly formulated challenge before moving to solution co-creation and prototyping. Yasuoka et al. (2018) – Design Society

Action 4.2: Identification and engagement of stakeholders

OBJECTIVE:	To identify and engage the stakeholders required to address the specific co-creation challenge.
DESCRIPTION:	Building on the challenge defined in Action 4.1 and the stakeholder ecosystem identified in Phase 2, this action identifies the specific stakeholders whose knowledge, experience, needs, resources or capacities are relevant to the co-creation process. Stakeholders should be selected according to their relationship with the challenge and the contribution they can make to addressing it. This should include the people directly affected by the challenge, potential users of the solutions, organisations with relevant knowledge or resources, actors able to support their implementation, and other stakeholders whose participation is necessary to ensure that different perspectives are represented. The selected stakeholders will then be contacted and engaged in the co-creation process, clarifying the purpose of their participation, the expected contribution and the activities in which they will be involved. The resulting group of participants provides the basis for selecting and implementing the participatory methods in Action 4.3.
TOOLS:	• Stakeholder Map • Stakeholder Engagement Plan
OUTPUT	Co-creation Stakeholder Map and Engagement Plan
EXAMPLE FOR REFERENCE	Nesta (2019). *Collective Intelligence Design Playbook*. Tool A3 – Stakeholder Map, pp. 31–32 of the activities section. The tool starts from the specific challenge and distinguishes stakeholders directly related, indirectly related and remotely related to it. It asks who is affected by the issue, who influences it and who may already have or could create solutions. This provides a very practical model for the Stakeholder Map proposed for Action 4.2. Nesta – Collective Intelligence Design Playbook EU CAP Network. *Engaging stakeholders in Living Labs*. Relevant section: Stakeholder analysis and engagement in Living Labs. The guidance recommends starting a Living Lab process with stakeholder analysis, assessing potential participants according to their interest in the situation and influence on the outcome, and subsequently bringing relevant stakeholders together to establish a shared understanding and support meaningful participation. It provides a direct practical precedent for moving from stakeholder identification to engagement in a specific Living Lab process. EU CAP Network – Engaging stakeholders in Living Labs

Action 4.3: Definition of the participatory approach and methods

OBJECTIVE:	To define the participatory approach and select the methods that will be used to involve stakeholders in the subsequent co-creation and experimentation activities
DESCRIPTION:	Building on the challenge defined in Action 4.1 and the stakeholders identified and engaged in Action 4.2, this action defines how stakeholders will participate in the subsequent activities of the NB-WoLL innovation project. The action establishes the purpose and intended level of participation for the different stakeholder groups and selects the participatory methods that are most appropriate according to the challenge, the characteristics of the participants and the type of contribution required. Depending on these factors, methods may include workshops, interviews, focus groups, collaborative mapping, idea-generation techniques, deliberation, prioritisation or other suitable participatory approaches. For each planned activity, the NB-WoLL team defines its purpose, participants, intended level of participation, selected method, facilitation requirements and expected contribution. Particular attention is given to ensuring that the selected methods are inclusive and appropriate for the participants and that the intended degree of stakeholder influence is explicit.
TOOLS:	• Participatory Activities Plan
OUTPUT	Participatory Activities Plan and Results
EXAMPLE FOR REFERENCE	Nesta (2019). *Collective Intelligence Design Playbook – Activities*. Relevant sections: Gather Data, Information and Ideas; Mobilise People; Connect and Interpret; and Create Change, with method-selection guidance and practical activities. The playbook provides concrete participatory methods—including structured idea generation, deliberation and collaborative decision-making—and specifies practical aspects such as purpose, group size, duration, materials and facilitation. It therefore provides a direct practical reference for preparing and implementing the activities included in the Participatory Activities Plan. Nesta – Collective Intelligence Design Playbook and Activities European Network of Living Labs (ENoLL) (2024). *Living Lab Self-Assessment Tool – Harmonised Evaluation Framework*. Relevant section: "Users and reality", pp. 12–14, particularly "Appropriateness of the participatory tools and methods". The framework assesses whether the participatory tools and methods used by a Living Lab are appropriate to users' evolving needs and to the different steps of the iterative Living Lab process. It also uses the IAP2 participation spectrum — Inform, Consult, Involve, Collaborate, Empower — to characterise the level of influence given to participants across the innovation cycle. This provides a methodological basis for selecting participatory methods according to both the purpose of the activity and the intended level of participation. ENoLL – Living Lab Self-Assessment Tool UNaLAB / ENoLL (2019). *UNaLAB Toolkit – Tools for Co-creation*. Relevant sections: "About the Toolkit" and the method collections for Need Finding, Ideation, Strategy, Experimentation and Feedback. Developed in the context of the Horizon 2020 UNaLAB project, the toolkit brings together participatory methods used to explore, design, implement and evaluate Nature-Based Solutions addressing climate- and water-related challenges. Methods are characterised by format, duration, group size, facilitation level and required materials, making the toolkit a particularly practical reference for selecting and preparing participatory activities in the NB-WoLL. As an online toolkit, it is not paginated; the individual method sheets provide the operational guidance. UNaLAB / ENoLL – Tools for Co-creation

Action 4.4: Co-design and initial prototypes

OBJECTIVE:	To co-design and select solution concepts addressing the challenge defined for the NB-WoLL innovation project.
DESCRIPTION:	Building on the challenge defined in Action 4.1, the stakeholders engaged in Action 4.2 and the participatory approach established in Action 4.3, this action brings stakeholders together to collaboratively develop potential solutions to the identified challenge. The co-design process supports the generation, discussion and combination of ideas, incorporating the different needs, knowledge and perspectives represented in the NB-WoLL. Promising ideas are progressively developed into more concrete solution concepts and compared according to their relevance to the challenge, expected benefits, feasibility and implementation conditions. The purpose is not necessarily to identify a single solution, but to develop and select the concepts that merit further experimentation. Selected concepts are then translated into **initial prototypes** that make the proposed solutions sufficiently tangible to be understood, discussed and further developed. Depending on the nature of the solution, these prototypes may take different forms, such as sketches, diagrams, service concepts, process models, mock-ups, physical representations, preliminary technical configurations or conceptual designs for Nature-Based Solutions. At this stage, prototypes are **representations of the proposed solutions rather than experimentally validated solutions**. Their purpose is to clarify how the solution could work, identify its main components and actors, and prepare it for subsequent implementation and testing. **Real-life implementation, testing and iterative refinement of the prototypes take place in Phase 5 – Experimentation.**
TOOLS:	• Solution Co-design Canvas • Initial Prototype Canvas
OUTPUT	Co-designed Solutions
EXAMPLE FOR REFERENCE	European Network of Living Labs (ENoLL) (2025). *Living Lab Origins, Developments and Future Perspectives*. Relevant section: "Living Lab Activities: Tools, Methods, and Services", pp. 63–64 of the publication (PDF pp. 31–32). The publication describes the Living Lab innovation process through Exploration, Co-Design/Co-Creation, Experimentation and Evaluation, and explains that methods should be adapted to the objectives and stage of each Living Lab project. The distinction between co-design/co-creation and experimentation provides the methodological basis for developing solution concepts and initial prototypes before their subsequent real-life testing. ENoLL – Living Lab Origins, Developments and Future Perspectives SCORE / European Network of Living Labs (ENoLL). *Living Lab Integrative Process and Co-creation Toolkit*. Relevant sections: Solution Space – "Ideate" and "Prototype"; see the Living Lab Integrative Process and associated SCORE co-creation tools. The methodology distinguishes the Problem Space, Solution Space and Deployment Space. Within the Solution Space, the Ideate stage supports collaborative generation and development of possible solutions, while Prototype makes selected concepts tangible and prepares them for subsequent piloting and feedback. This provides a particularly useful precedent for the transition from co-design to initial prototypes in Action 4.4. SCORE – Tools and Platforms / Co-creation Toolkit UNaLAB / ENoLL (2019). *UNaLAB Toolkit – Tools for Co-creation*. Relevant sections: "Ideation" and "Experimentation"; particularly the Co-Co Toolkit and Co-creation Assemblies. Online toolkit, not paginated. Developed in the context of an EU project applying Living Lab approaches to Nature-Based Solutions for climate- and water-related challenges, the toolkit provides practical methods for collaboratively developing solution ideas and making them tangible. Its separation between Ideation and subsequent Experimentation is particularly relevant to SOLLAGUA because it supports the development of initial solution concepts in Phase 4 while reserving implementation and testing for Phase 5. UNaLAB / ENoLL – Tools for Co-creation

PHASE 5: Experimentation

Phase 5 translates the solutions co-designed in Phase 4 into real-world experimentation within the NB-WoLL. It starts by defining the experimentation framework, specifying what will be tested, with whom, where, under which conditions and what evidence will be collected.

The selected solution is then developed into a testable prototype and deployed in its real-world environment, ensuring that the necessary technical, operational and organisational conditions are in place. During experimentation, quantitative and qualitative evidence is systematically collected and monitored, together with relevant contextual information that helps understand how the prototype operates, is used and behaves under real-world conditions. This evidence is subsequently used to identify improvements, modify the solution and re-test it through iterative cycles of test, learn, improve and re-test.

Phase 5 therefore enables the solution to be progressively refined through real-world experimentation and concludes with an experimentally matured solution and a traceable body of evidence ready for systematic evaluation in Phase 6, without implying that the solution has already been validated or that its impacts have been demonstrated.

PHASE 5 OBJECTIVE: To test and iteratively refine the co-designed solution under real-world conditions within the NB-WoLL.

#	ACTIONS	OUTCOMES / RESULTS
5.1	Definition of the experimentation framework.	Experimentation framework defined and ready for implementation.
5.2	Prototype development and implementation in the real-world environment.	Prototype developed, deployed and operationally ready for experimentation.
5.3	Data collection and monitoring.	Experimental evidence systematically collected, monitored and documented.
5.4	Iterative refinement and re-testing.	Solution refined and re-tested based on experimental evidence.

Action 5.1: Definition of the experimentation framework

OBJECTIVE:	To define how the co-designed solution will be tested in a real-world environment, including the experimentation conditions, participants, indicators and data collection methods.
DESCRIPTION:	Building on the solution selected for experimentation in Phase 4, this action defines the framework for its systematic testing in the NB-WoLL. The purpose is to establish, before implementation begins, **what will be tested, with whom, where, under which conditions and what evidence will be collected**. The experimentation framework should first define the solution or aspects of the solution to be tested and formulate the main **experimentation questions, assumptions or hypotheses** to be investigated. It should then identify the users and other stakeholders participating in the experiment, the real-world environment in which it will take place, the duration and main stages of the experiment, and any technical, organisational, regulatory or operational conditions that need to be considered. T The framework should also define the evidence required to monitor and understand the experiment. This includes selecting a limited set of **quantitative and qualitative indicators** appropriate to the solution and the experimentation questions, together with the corresponding data sources and collection methods. Depending on the experiment, these may address aspects such as use, functionality, technical performance, user experience, acceptance, operational feasibility or other characteristics relevant to determining how the solution performs under real-world conditions. Finally, the action should establish the practical arrangements for experimentation, including responsibilities, timing, participant involvement, data management and, where relevant, ethical, privacy, safety or consent requirements. The framework should remain proportionate to the scale and maturity of the experiment and should specify the evidence needed to support monitoring and subsequent iterative refinement. Action 5.1 therefore designs the experiment but does not implement it. Prototype development and deployment in the real-world environment take place in Action 5.2.
TOOLS:	• Experimentation Framework Canvas
OUTPUT	Experimentation Framework
EXAMPLE FOR REFERENCE	European Network of Living Labs (ENoLL) (2025). *Living Lab Origins, Developments and Future Perspectives*. Relevant section: "Living Lab Activities: Tools, Methods, and Services", pp. 63–64 of the publication (PDF pp. 31–32). The publication identifies Experimentation as a distinct stage of the Living Lab innovation cycle, following co-design/co-creation. Experimentation tests developed solutions in real-world settings to validate feasibility and problem-solution fit through approaches such as pilot studies, field trials and experimental designs. It provides the principal ENoLL methodological foundation for structuring Phase 5 as real-life experimentation rather than conventional implementation. ENoLL – Living Lab Origins, Developments and Future Perspectives UNaLAB / ENoLL (2019). *UNaLAB Toolkit – Prototype Testing Map*. Experimentation tool, pp. 1–2 of the tool sheet. The tool provides a practical framework for planning prototype tests, starting with the specification of the main idea or hypothesis to be tested, followed by prototype development, interaction with the target audience, structured testing and identification of what is required to make the solution sufficiently realistic for implementation. It emphasises structured testing as a means to challenge assumptions, reduce risk, identify improvements and support iterative development. Its NBS context makes it particularly relevant to SOLLAGUA. UNaLAB / ENoLL – Prototype Testing Map European Network of Living Labs (ENoLL), *Living Lab Integrative Process – Test Stage*. Relevant section: "Test Stage – Evaluating Performance and Impact". The methodology defines testing as the stage in which solutions are subjected to real-world piloting and experimentation, using clear indicators to measure their performance and generate evidence for refinement before wider implementation. It provides direct methodological support for integrating the definition of experimentation conditions, indicators and evidence requirements within a single experimentation framework. ENoLL Academy – Living Lab Integrative Process

Action 5.2: Prototype development and implementation in the real-world environment

OBJECTIVE:	To develop the selected solution into a testable prototype and implement it in the real-world environment defined in the Experimentation Framework.
DESCRIPTION:	Building on the co-designed solution selected in Phase 4 and the Experimentation Framework established in Action 5.1, this action transforms the proposed solution into a **testable prototype and deploys it under real-world conditions**. The prototype should represent the essential components and functions of the proposed solution at a level of maturity sufficient to address the experimentation questions defined in Action 5.1. Depending on the nature of the solution, the prototype may take the form of a pilot-scale treatment system, a Nature-Based Solution, a technical configuration, an operational process, a service or another testable intervention. The prototype does not need to represent the final solution; its purpose is to make the proposed solution sufficiently tangible and operational to generate evidence through experimentation. Prototype development includes specifying and assembling the components required for the experiment, making any implementation adaptations necessary to deploy the co-designed solution in the experimentation site, where necessary, with existing water, treatment or other relevant infrastructure. Users, operators and other relevant stakeholders should remain involved during this process to ensure that the prototype reflects the solution co-designed in Phase 4 and can be realistically operated and experienced in its intended context. Once prepared, the prototype is **installed, configured or otherwise introduced into the real-world experimentation environment identified in Action 5.1**. Before experimentation starts, the NB-WoLL team verifies that the prototype is operational, that the necessary infrastructure, resources and access arrangements are in place, and that relevant technical, environmental, regulatory, safety and organisational requirements have been addressed. The action concludes when the prototype has been deployed and is operationally ready for systematic experimentation and monitoring according to the framework defined in Action 5.1. The evidence generated during its operation is collected and monitored in Action 5.3, while modifications arising from experimental learning and subsequent re-testing are addressed in Action 5.4.
TOOLS:	• Prototype Development and Deployment Record
OUTPUT	Prototype Development and Deployment Record
EXAMPLE FOR REFERENCE	UNaLAB – Urban Living Labs / Experimentation phase. This is probably our strongest conceptual reference because it is both ENoLL-connected and NBS-specific. It explicitly defines experimentation as building a prototype, testing it and rebuilding it on the basis of feedback, and establishes the real-life setting as the place where the solution is intended to operate. UNaLAB – Urban Living Labs 2. SCORE – Living Lab Integrative Process / Prototype & Pilot. SCORE provides the strongest operational Living Lab precedent: after co-design, the MVP is placed in the real-life setting of the Living Lab and local pilots test whether it responds to stakeholder needs. Its methodology also explicitly defines prototypes as representations developed before the final solution and pilots as real-life experimentation in the field. SCORE – Living Lab Workplan 3. CEAB-CSIC / ACA – Boí NBS wastewater-treatment pilot (2026). I would include this as the practical water-sector mirror. A pilot plant has been installed at an operating wastewater treatment plant to experimentally test different NBS configurations for nutrient removal and their suitability for isolated mountain environments. This is very close to the type of experimentation that SOLLAGUA NB-WoLLs may undertake. CEAB-CSIC – Nature-based wastewater treatment pilot

Action 5.3: Data collection and monitoring

OBJECTIVE:	To systematically collect and monitor the quantitative and qualitative evidence generated during real-world experimentation.
DESCRIPTION:	Building on the Experimentation Framework defined in Action 5.1 and the prototype deployed in Action 5.2, this action implements the data collection and monitoring activities planned for the experiment. Its purpose is to generate reliable and traceable evidence on how the prototype operates, is used and behaves under real-world conditions. Data are collected according to the indicators, sources, methods and frequencies established in the Experimentation Framework. Depending on the characteristics of the experiment, evidence may include technical and environmental measurements, water-quality analyses, operational data, system or sensor records, observations, user interactions, interviews, questionnaires, operator or user logs and other quantitative or qualitative information relevant to the experimentation questions. Monitoring may therefore be continuous, periodic, event-based or qualitative, according to the nature of each indicator and the evidence required. Alongside the planned measurements, the NB-WoLL team documents the conditions and events occurring during experimentation that may influence the interpretation of the evidence. These may include changes in environmental or operating conditions, maintenance interventions, technical incidents, interruptions, unexpected user behaviour or other relevant contextual circumstances. This contextual information allows subsequent observations and measurements to be interpreted in relation to the conditions under which they were generated. The collected evidence is systematically recorded and organised, maintaining sufficient information on its source, timing, collection method and responsibility to ensure traceability and comparability throughout the experiment. Data quality is reviewed during experimentation to identify missing, incomplete, inconsistent or unreliable evidence while corrective action is still possible. Any relevant limitations affecting the evidence are documented. The resulting evidence provides the empirical basis for iterative refinement and re-testing in Action 5.4 and for the subsequent systematic evaluation of the solution in Phase 6. This action therefore monitors and documents what occurs during experimentation but does not itself determine whether the solution has been successful, validated or has achieved the expected impacts.
TOOLS:	• Experimental Evidence and Monitoring Record
OUTPUT	Experimental Evidence and Monitoring Record
EXAMPLE FOR REFERENCE	European Network of Living Labs (ENoLL) – Living Lab Integrative Process. Particularly the *Test* stage, which frames real-world piloting and experimentation as the generation of evidence using defined indicators, and the subsequent use of that evidence for learning and refinement. ENoLL – Living Lab Integrative Process UNaLAB – NBS Performance and Impact Monitoring methodology. Particularly useful for SOLLAGUA because it connects NBS experimentation with monitoring schemes, baselines, indicators and measurement methods. It provides the methodological bridge between Living Lab experimentation and systematic NBS monitoring. UNaLAB – Publications and monitoring resources proGIreg – Monitoring and Assessing NBS. Particularly useful as the practical implementation precedent: it translates NBS monitoring into measurement protocols, structured data collection and databases, while also recording implementation changes and barriers that affect interpretation of the evidence. proGIreg – Monitoring and Assessing NBS

Action 5.4: Iterative refinement and re-testing

OBJECTIVE:	To improve and re-test the solution based on the evidence generated during experimentation.
DESCRIPTION:	Building on the evidence collected in Action 5.3, this action uses the results of real-world experimentation to **identify necessary improvements, modify the solution and test it again**. The NB-WoLL team reviews the experimental evidence together with the relevant users, operators and other stakeholders, identifying aspects of the solution that should be improved. These may concern the technical configuration, operation, maintenance, user interaction or other practical aspects revealed through experimentation. The selected improvements are implemented and the modified solution is **re-tested under real-world conditions**. The changes introduced and the main learning from each iteration are documented, allowing successive versions of the solution to be compared and the experimentation process to remain traceable. This cycle of **test → learn → improve → re-test** may be repeated when necessary. Experimentation concludes when sufficient evidence has been generated to move the solution to Phase 6 – Evaluation, or when further iteration is not considered justified within the scope of the experiment. Reaching this point indicates **readiness for evaluation and does not in itself imply that the solution has been validated or that its impacts have been demonstrated**.
TOOLS:	• Experimentation Iteration Record (adapted from the UNaLAB Prototype Testing Map)
OUTPUT	Experimentation Iteration Record
EXAMPLE FOR REFERENCE	1. UNaLAB / ENoLL (2019), *Prototype Testing Map*, UNaLAB Toolkit – Experimentation. Relevant section: "Steps", "Benefits" and "Tips" (online tool, non-paginated). The tool explicitly recommends structured prototype testing, recording learning, identifying areas for improvement, and repeating prototypes to understand how an idea can be made better. This is the closest practical methodological precedent for the SOLLAGUA test → learn → improve → re-test cycle. UNaLAB / ENoLL – Prototype Testing Map 2. SWEET Lantern / Energy Living Lab (2023), *Onboarding Booklet – Living Lab Integrative Process*. Relevant pages: p. 5, Sections 2.1–2.2, "Living Lab Integrative Process". This is particularly strong for our wording because it explicitly describes LLIP as an iterative process: after testing, if something does not work properly for users, the solution is modified and the adapted solution is tested again. It therefore directly supports the iterative refinement logic of Action 5.4. SWEET Lantern – Living Lab Integrative Process Onboarding Booklet 3. Coenen, T. & Robijt, S. (2017), "Heading for a FALL: A Framework for Agile Living Lab Projects", *Technology Innovation Management Review*, 7(1), pp. 37–43. Relevant pages: pp. 37–43, particularly the description of the FALL framework and its iterative/agile development logic. The paper addresses a central problem for Action 5.4: Living Labs need to react to changing requirements and incorporate emergent user feedback into ongoing design and development. It provides the broader methodological justification for adapting a solution as evidence emerges during experimentation. Coenen & Robijt – Heading for a FALL

PHASE 6: Impact assessment

Phase 6 builds on the evidence generated through real-world experimentation in Phase 5 to **evaluate the performance, adoption, value and impacts of the tested solution and the NB-WoLL experimentation process**. It assesses technical and operational performance, user experience and adoption, economic and organisational changes, and environmental and social impacts.

These complementary assessments consider both the solution itself and the value generated through the Living Lab process, while distinguishing observed changes from impacts supported by stronger evidence. Finally, the phase consolidates the evidence through structured reflection to identify **key insights, enabling and constraining factors, and lessons learnt**, providing the evidence and learning base for sustainability, replication, scale-up and transfer in Phase 7.

PHASE 6 OBJECTIVE: To evaluate the performance, adoption, value and impacts of the tested solution and the NB-WoLL experimentation process, and to consolidate the resulting insights and lessons learnt.

#	ACTIONS	OUTCOMES / RESULTS
6.1	Evaluation of technical and operational performance.	Technical and operational performance of the tested solution evaluated.
6.2	Evaluation of user experience and adoption.	User experience, acceptance and adoption of the tested solution evaluated.
6.3	Evaluation of economic and organisational impacts.	Economic and organisational changes associated with the solution and Living Lab experimentation process evaluated.
6.4	Evaluation of environmental and social impacts.	Environmental and social impacts associated with the tested solution evaluated.
6.5	Capture of insights and lessons learnt.	Key insights, enabling and constraining factors, and lessons from the NB-WoLL experimentation and evaluation process identified and documented.

Action 6.1: Evaluation of technical and operational performance

OBJECTIVE:	To evaluate the technical and operational performance of the tested solution against the objectives, reference conditions and performance criteria.
DESCRIPTION:	Building on the experimental evidence collected and monitored in Phase 5, this action evaluates how the tested solution has performed from a technical and operational perspective under real-world conditions. The evaluation uses the technical and operational indicators defined in the Experimentation Framework and compares the observed results, where relevant, against the baseline, expected performance, design specifications, regulatory requirements or other reference conditions established for the experiment. Depending on the nature of the solution, the assessment may address aspects such as treatment performance, water quality, functionality, reliability, operating capacity, resource consumption, maintenance requirements and robustness under changing operating or environmental conditions. The analysis should consider not only average performance but also variability over time and the conditions under which the results were obtained. Operational events, maintenance interventions, environmental conditions, loading conditions or other contextual factors documented during Action 5.3 should therefore be taken into account when interpreting the results. Where applicable, compliance with relevant technical or water-quality requirements should also be examined. The action identifies the technical and operational strengths and limitations demonstrated during experimentation and determines the extent to which the available evidence supports the expected performance of the solution. Where evidence is incomplete or inconclusive, this should be explicitly documented rather than interpreted as demonstrated performance. The resulting evaluation provides one of the evidence components of the broader impact assessment undertaken in Phase 6 and contributes to the evidence base for subsequent sustainability, replication and scale-up decisions in Phase 7.
TOOLS:	• NBS performance indicators and corresponding assessment methods
OUTPUT	Technical and Operational Performance Evaluation
EXAMPLE FOR REFERENCE	European Commission (2021), *Evaluating the Impact of Nature-Based Solutions: A Handbook for Practitioners*, together with *Appendix of Methods*. This should be the principal methodological reference. The Handbook provides the overall NBS performance and impact-assessment framework, while the Appendix compiles methods for determining NBS performance and impact indicators across 12 challenge areas, explicitly including Water Management. The framework was developed collaboratively through EU-funded NBS projects and institutions including the EEA and JRC. European Commission – Handbook for Practitioners European Commission – Appendix of Methods 2. UNaLAB (2019), *D3.1 NBS Performance and Impact Monitoring Report*. This provides the practical EU NBS precedent. It addresses the selection of key indicators of NBS performance and impact, establishment of baselines, design of monitoring schemes and application of measurement/monitoring methods. It is particularly useful for showing practitioners how the general NBS evaluation logic can be operationalised in a Living Lab context. UNaLAB – D3.1 NBS Performance and Impact Monitoring Report 3. Gonzalez-Flo, E., Romero, X. & García, J. (2023), "Nature based-solutions for water reuse: 20 years of performance evaluation of a full-scale constructed wetland system", *Ecological Engineering*, 188, 106876. This is the strongest water-reuse practical example for SOLLAGUA. The Granollers case evaluates a full-scale constructed wetland/reclamation system using long-term operational and water-quality evidence. It considers treatment efficiency, temporal behaviour, reliability and compliance with water-reuse standards, including cases where individual performance criteria were not fully achieved.

Action 6.2: Evaluation of user experience and adoption

OBJECTIVE:	To evaluate user experience, acceptance and adoption of the tested solution.
DESCRIPTION:	Building on the real-world experimentation conducted in Phase 5, this action evaluates how users and other directly affected stakeholders experienced and accepted the tested solution and examines the extent to which it has been or could be adopted. The evaluation should consider the aspects of user experience and adoption that are relevant to the particular solution and its intended users. These may include satisfaction, perceived usefulness, perceived effectiveness, usability or ease of interaction, trust, concerns, willingness to continue using or supporting the solution, and actual forms of use or engagement observed during experimentation. The assessment draws primarily on the user-related evidence collected during Phase 5 and, where necessary, complements it with targeted feedback required specifically for the evaluation, to understand not only whether users were satisfied with the solution, but also why they accepted, rejected, used or were willing to adopt it. Particular attention should be given to differences between stakeholder or user groups and to contextual factors that may influence their experience or willingness to adopt the solution. The action identifies the main strengths, barriers and conditions affecting user acceptance and adoption and documents the extent to which the available evidence supports continued use or uptake of the solution. Where the duration or scale of experimentation does not allow actual adoption to be demonstrated, the evaluation should distinguish clearly between observed use, stated willingness or intention to adopt, and demonstrated adoption. The results complement the technical and operational evaluation undertaken in Action 6.1 and provide evidence for the evaluation of economic and organisational impacts in Action 6.3 and environmental and social impacts in Action 6.4.
TOOLS:	• Public Acceptance of Nature-Based Solutions Survey, adapted from Anderson et al. (2021)
OUTPUT	User Experience and Adoption Evaluation
EXAMPLE FOR REFERENCE	Anderson, C.C., Renaud, F.G., Hanscomb, S. et al. (2021), "Public Acceptance of Nature-Based Solutions for Natural Hazard Risk Reduction: Survey Findings From Three Study Sites in Europe", *Frontiers in Environmental Science*, 9:678938. This should be the principal methodological and tool reference. It provides the tested survey approach and separates attitudinal from behavioural acceptance. Anderson et al. – Public Acceptance of NBS European Network of Living Labs (ENoLL) (2025), *Living Lab Origins, Developments and Future Perspectives*, particularly "Living Lab Activities: Tools, Methods, and Services". This provides the Living Lab methodological foundation: evaluation assesses whether solutions meet stakeholder expectations, while Living Lab innovation is intrinsically based on active user involvement and real-world experimentation. ENoLL – Living Lab Origins, Developments and Future Perspectives Domènech et al. (2025), "Citizen perception of indirect potable reuse during drought emergencies in Europe: the case of metropolitan Barcelona", *Journal of Water Reuse and Desalination*. This provides the water-reuse-specific practical precedent, with explicit questionnaire items covering awareness, support and concerns about recycled water. Barcelona water-reuse perception study

Action 6.3: Evaluation of economic and organisational impacts

OBJECTIVE:	To evaluate the economic and organisational changes associated with the tested solution and the Living Lab experimentation process.
DESCRIPTION:	Building on the evidence generated during experimentation, this action evaluates the economic and organisational changes generated through the tested solution and the Living Lab experimentation process. This distinction is important because an NB-WoLL can generate significant organisational value even when this value does not result directly from the technological solution itself. For example, the Living Lab process may establish new relationships between organisations, strengthen collaboration, create new capacities or working practices, facilitate knowledge exchange, or influence institutional agendas independently of the performance of the tested solution. The economic assessment considers, where relevant, observable changes such as new economic activity, employment, changes in costs, new services or economic opportunities, mobilisation of resources, or other economic value generated during experimentation. The assessment should be proportionate to the scale and maturity of the solution and focus on changes supported by available evidence. It should not assess the future economic viability, financing arrangements or business model of the solution, which are addressed in Phase 7. The organisational assessment examines how participation in the NB-WoLL and the experimentation process has affected the organisations and stakeholder ecosystem involved. Relevant changes may include new or strengthened collaborations, development of skills and organisational capacities, generation and exchange of knowledge, improved coordination, changes in roles or working practices, alignment between organisations, and influence on institutional or policy agendas. The evaluation should capture both tangible and intangible forms of value and consider differences in the value generated for different stakeholders. Where possible, observed changes should be compared with the expectations or initial conditions established before experimentation. Participatory assessment involving the relevant stakeholders should help identify both expected and unexpected forms of value generated through the Living Lab process. The assessment should distinguish between observed changes, stakeholder-perceived value and impacts supported by stronger evidence, avoiding causal claims where the available evidence does not allow them. The results complement the technical and operational evaluation undertaken in Action 6.1 and the user experience and adoption evaluation undertaken in Action 6.2, and contribute to the broader assessment of impacts in Action 6.4.
TOOLS:	• Living Lab Assessment Method (LLAM): LLAM Template and Living Lab Value Fingerprint – Robaeyst et al. (2026) • Connecting Nature Impact Assessment Framework – Economic and Participatory Planning & Governance indicators
OUTPUT	Economic and Organisational Impact Evaluation
EXAMPLE FOR REFERENCE	Robaeyst, B., Van Nieuwenhove, T., Schuurman, D., Bourgonjon, J., Van Hove, S. & Baccarne, B. (2026). *Living Lab Assessment Method (LLAM): Towards a Methodology for Context-Sensitive Impact and Value Assessment*. Sustainability, 18(2), 779. Principal methodological reference and source of the LLAM and Living Lab Value Fingerprint. The method combines participatory assessment, Living Lab value dimensions and Theory of Change to identify and assess the different forms of value generated through Living Lab activities. Living Lab Assessment Method (LLAM) Robaeyst, B. & Baccarne, B. (2023). *A qualitative analysis of the value creation of Urban Living Labs*. Provides the empirical foundation for understanding Living Lab value beyond the performance of the technological solution, particularly through stakeholder capacity building, collaboration, knowledge creation and meaningful interaction within the innovation ecosystem. Urban Living Lab value-creation study Connecting Nature, *Impact Assessment Guidebook / Impact Assessment Framework*. Provides the NBS-specific complement, particularly indicators concerning economic outcomes and participatory planning and governance, and supports the assessment of changes against initial or baseline conditions. Connecting Nature Impact Assessment Framework

Action 6.4: Evaluation of environmental and social impacts

OBJECTIVE:	To evaluate the environmental and social impacts associated with the tested solution.
DESCRIPTION:	Building on the evidence generated during experimentation and the evaluations undertaken in the preceding actions, this action assesses the environmental and social impacts associated with the tested solution. While Actions 6.1–6.3 examine technical and operational performance, user experience and adoption, and economic and organisational changes, Action 6.4 focuses on the wider changes generated for the environment, communities and territory. The environmental assessment considers the impact areas that are relevant to the particular solution and its context. Depending on the nature of the intervention, these may include water availability and quality, water savings or substitution of conventional water resources, resource efficiency, ecosystem condition, biodiversity, soil conditions, climate resilience, emissions or energy use, and other environmental benefits or adverse effects. The indicators selected should reflect the objectives and expected impacts established for the solution rather than applying a fixed set of indicators to every NB-WoLL. This context-specific approach is consistent with the EC NBS Impact Assessment Framework, which provides indicators and methods across water management, climate resilience, biodiversity and other environmental challenge areas. The social assessment examines changes experienced by the communities and stakeholder groups affected by the solution. Depending on the intervention, these may include health and well-being, access to and benefits from water resources, social inclusion and equity, social cohesion, distribution of benefits and adverse effects, and other relevant community or territorial effects. Particular attention should be given to whether benefits and adverse effects are distributed differently among stakeholder groups. The assessment should be based primarily on the evidence generated through the experimentation and monitoring framework established in Phase 5. Relevant indicators should be compared, where possible, against the baseline or reference conditions established before experimentation. Quantitative evidence should be complemented by qualitative evidence where necessary to understand impacts that cannot be adequately captured through numerical indicators alone. The assessment should distinguish between observed changes, outcomes plausibly associated with the intervention and impacts for which stronger evidence supports attribution. The duration and scale of experimentation should also be considered: some environmental or social impacts may require longer observation periods than the NB-WoLL experiment allows and should therefore be identified as potential or emerging impacts rather than presented as demonstrated effects. Together with Actions 6.1, 6.2 and 6.3, this action provides the broader evidence base required to understand the effects and value generated by the tested solution and the NB-WoLL experimentation process. The resulting evidence subsequently supports the identification of insights and lessons learnt in Action 6.5 and informs decisions concerning sustainability, replication, scale-up and transfer in Phase 7.
TOOLS:	• Environmental and Social Impact Assessment Framework, based on the European Commission (2021)
OUTPUT	Environmental and Social Impact Evaluation
EXAMPLE FOR REFERENCE	European Commission (2021). *Evaluating the Impact of Nature-Based Solutions: A Handbook for Practitioners* and *Appendix of Methods*. These two complementary documents constitute the principal methodological reference for the action. The Handbook provides the overall framework for assessing NBS performance and impacts across the relevant societal challenge areas, including water management, climate resilience, biodiversity, health and well-being, social justice and social cohesion, and knowledge and social capacity building. The accompanying Appendix provides the corresponding indicators and practical assessment methods, including their applicability, methodological requirements, advantages and limitations. European Commission – Evaluating the Impact of Nature-Based Solutions Gonzalez-Flo, E., Romero, E. & García, J. (2023). *Long-term performance of a full-scale constructed wetland for wastewater treatment and reuse in Granollers, Spain*. Ecological Engineering, 188, 106876.A particularly relevant water-reuse precedent for SOLLAGUA, showing the long-term assessment of a full-scale nature-based wastewater treatment system under real operating conditions. The Granollers case provides a practical example of how environmental and technical evidence can be used to assess the contribution of an NBS to water reclamation and sustainable local water management. Granollers constructed-wetland water-reuse study

Action 6.5: Capture of insights and lessons learnt

OBJECTIVE:	To identify and document the main insights and lessons learnt from the NB-WoLL experimentation and evaluation process.
DESCRIPTION:	Building on the experimentation undertaken in Phase 5 and the evaluations completed in Actions 6.1–6.4, this action consolidates the experience and evidence generated through the NB-WoLL to identify the main insights and lessons learnt. Through a structured reflection involving the relevant stakeholders, the action examines what worked well, what worked less well, why particular results occurred, and what unexpected developments emerged. It identifies the main enabling and constraining factors, including technical, organisational, stakeholder, regulatory and contextual conditions. The resulting lessons distinguish between context-specific and potentially transferable learning, identifying practices that should be maintained, adapted or avoided in future applications. This action closes Phase 6 by transforming the accumulated evidence into structured learning that can inform sustainability, replication, scale-up and transfer in Phase 7.
TOOLS:	• After Action Review (AAR)
OUTPUT	NB-WoLL Insights and Lessons Learnt
EXAMPLE FOR REFERENCE	World Bank. *The Art of Knowledge Exchange: A Results-Focused Planning Guide for Development Practitioners – After-Action Review methodology*. The AAR section provides a directly actionable methodology for capturing lessons from implementation. It structures reflection around anticipated versus actual results, explanations for what occurred, practices to sustain or improve, and opportunities for applying the learning elsewhere. This is particularly strong for SOLLAGUA because it turns experience into actionable and potentially transferable knowledge, rather than merely compiling observations. World Bank – The Art of Knowledge Exchange World Health Organization (2019). *Guidance for After Action Review (AAR)*. A comprehensive 50-page operational guide describing how to design, prepare, conduct and follow up an AAR. It provides several formats—including debriefs, working groups, key-informant interviews and mixed-method reviews—and treats the process as a structured collective-learning exercise rather than another performance evaluation. WHO – Guidance for After Action Review UNaLab (2024). *Nature-Based Solutions Implementation Handbook*, Chapter 8: "Lessons Learned and Potential Barriers Preventing Adoption of NBS", from p. 88. This provides a practical NBS precedent for translating implementation experience into lessons and recommendations. It identifies good practices, barriers and mitigation measures derived from the UNaLab Living Labs, covering issues such as stakeholder involvement, knowledge transfer, monitoring and evaluation, maintenance, governance, data management, regulation and conditions for replication and upscaling. Importantly for SOLLAGUA, it distinguishes between lessons common across different Living Labs and those that are specific to a particular local context. UNaLab Nature-Based Solutions Implementation Handbook UNaLab (2022). *NBS Best Practices Booklet*. It was explicitly designed to turn project experience into recommendations for future NBS planners, designers, implementers and end users. It organises recommendations around stakeholder engagement, governance, financing, and impact monitoring and evaluation. UNaLab NBS Best Practices Booklet

PHASE 7: Scalability and transfer

Phase 7 builds on the evidence and learning generated through the NB-WoLL to prepare tested solutions and the knowledge surrounding them for wider use.

It starts by documenting the NB-WoLL experience and lessons learnt and then assesses how tested solutions can be scaled, replicated or adapted to other contexts, taking into account the conditions and adaptations required. Building on these pathways, the phase defines the business and financing model needed to sustain the solution and identifies concrete routes towards market, public procurement or institutional uptake. The accumulated evidence is then translated into recommendations for practice and policy, addressing the conditions that can facilitate wider NBS implementation.

Finally, the phase organises the resulting evidence, methods, tools, lessons and recommendations for knowledge transfer and exchange with relevant audiences, ensuring that they remain accessible and reusable beyond the NB-WoLL. Together, these actions provide the basis for the scalability, sustainability, uptake and adaptation of successful or promising solutions, while enabling the knowledge generated through the NB-WoLL to support NBS implementation in other contexts.

PHASE 7 OBJECTIVE: To assess the scalability of NB-WoLL solutions and facilitate their knowledge transfer and adaptation to other contexts.

#	ACTIONS	OUTCOMES / RESULTS
7.1	Documenting the NB-WoLL experience and lessons learnt.	NB-WoLL experience and transferable knowledge documented.
7.2	Planning how solutions can be scaled and replicated.	Appropriate scaling and replication pathways and their enabling conditions identified.
7.3	Defining the business and financing model for the solution.	Business and financing model for sustaining and scaling the solution defined.
7.4	Planning pathways for market, public procurement and institutional uptake.	Pathways for market, public procurement and institutional uptake of the solution defined.
7.5	Developing recommendations for practice and policy.	Evidence-based recommendations for practice and policy developed.
7.6	Sharing results and knowledge.	Results, transferable knowledge and recommendations shared with relevant audiences and made accessible for further use.

Action 7.1: Documenting the NB-WoLL experience and lessons learnt

OBJECTIVE:	To document the NB-WoLL experience and organise the knowledge generated so that it can be understood and used by others.
DESCRIPTION:	Building on the results, evidence and lessons learnt generated throughout the previous phases, this action documents the NB-WoLL experience in a clear and accessible form. It addresses the practical question: what should we document so that others can understand, learn from and reuse our experience? The documentation should provide a concise account of the context and challenge addressed, the NB-WoLL approach and methods used, the solution tested, the main activities undertaken and the results obtained. It should also incorporate the lessons identified in Action 6.5, including what worked well, what worked less well, the main enabling and constraining factors, and the contextual conditions that influenced implementation. The purpose is not to repeat the evaluation undertaken in Phase 6 or reproduce all the documentation generated during the NB-WoLL. Instead, the action should select, organise and explain the information that is most useful to other practitioners, providing access or references to relevant tools, methods, evidence and resources where appropriate. This follows practical precedents such as ENERGISE, which separates synthesis publications on methodology, experience and lessons from the underlying implementation tools and materials, and RUSTIK, which documents how Living Lab methods were applied and adapted across different rural contexts. The resulting documentation provides the knowledge base for the subsequent Phase 7 actions, particularly for determining what can be replicated or scaled, where, how and under which conditions.
TOOLS:	• NB-WoLL Experience Report Template
OUTPUT	NB-WoLL Experience and Lessons Report
EXAMPLE FOR REFERENCE	UNaLab (2024), *Nature-Based Solutions Implementation Handbook: A Summary for Practitioners*. The principal NBS implementation reference. It consolidates the knowledge and resources generated through the UNaLab implementation process, from challenge identification and co-creation through monitoring, maintenance and impact evaluation, with the explicit purpose of supporting practitioners implementing NBS in different socioeconomic and climatic contexts. UNaLab also provides a particularly useful precedent for connecting lessons learnt with the underlying project documentation and resources rather than duplicating them. UNaLab – NBS Implementation Handbook: Summary for Practitioners 2. ENERGISE (2019), *ENERGISE Living Labs – Methodology, Experience and Lessons Learned*, Deliverable 7.12. The strongest Living Lab documentation precedent. ENERGISE implemented Living Labs in eight countries and distinguishes between summary publications documenting methods, experience and lessons learnt and the underlying surveys, interview guides and other implementation materials. This is a particularly useful model for keeping the SOLLAGUA report concise while connecting readers to reusable resources. ENERGISE – Living Labs: Methodology, Experience and Lessons Learned 3. RUSTIK (2026), *Final Report on Living Labs Application and Lessons Learned*. The strongest rural Living Lab precedent. It synthesises how the RUSTIK Living Lab methodology was implemented across 14 rural Pilot Regions and explicitly examines how contextual factors such as institutional capacity, data maturity and stakeholder cohesion affected implementation. It is particularly valuable for showing SOLLAGUA practitioners how to document experience without losing the local conditions that help others interpret whether that experience may be relevant to them. RUSTIK – Final Report on Living Labs Application and Lessons Learned

Action 7.2: Planning how solutions can be scaled and replicated

OBJECTIVE:	To identify how the tested solution can be replicated or scaled and the conditions required to do so.
DESCRIPTION:	Building on the experience and knowledge documented in Action 7.1, this action examines what can be scaled or replicated, where, how and under which conditions. The purpose is not to assume that a successful solution can simply be copied elsewhere, but to identify which elements can be reproduced, which require adaptation and which conditions are necessary for wider application. The action starts by identifying realistic opportunities for extending the solution within the same territory or applying it in other contexts. For each opportunity, practitioners should consider the relevant technical, environmental, regulatory, institutional, stakeholder and economic conditions, together with the main enabling factors and barriers identified through the NB-WoLL experience. This reflects the evidence that NBS are strongly context-dependent and generally require adaptation when transferred or expanded. Based on this assessment, the NB-WoLL identifies the most appropriate scaling pathway or combination of pathways. Depending on the solution and context, this may involve replicating the solution in additional locations or for additional users, increasing its size or coverage, embedding the approach in institutional or policy frameworks, spreading it through organisations and networks, or supporting broader changes in practices and ways of working. The terminology of scaling out, scaling up, scaling deep or other scaling mechanisms can be used where useful, but practitioners should focus primarily on what needs to happen in practice for the solution to reach a wider scale or context. The action concludes by defining a practical scaling strategy indicating what is proposed to scale, the target context or beneficiaries, the preferred pathway, the main adaptations required, the actors that need to be involved, and the key enabling conditions and barriers to address. Detailed business and financing arrangements are subsequently developed in Action 7.3, while concrete pathways towards market, public procurement or institutional uptake are addressed in Action 7.4.
TOOLS:	• NBS Scaling Pathways Assessment, adapted from the Connecting Nature Nature-Based Solutions Initiating Scaling Guidebook.
OUTPUT	NB-WoLL Scaling and Replication Strategy
EXAMPLE FOR REFERENCE	Connecting Nature (2019), *Nature-Based Solutions Initiating Scaling Guidebook*, particularly pp. 2–13 and Appendix A, pp. 15–18. This should be the principal practical reference and tool. It was developed specifically to help practitioners move from isolated NBS pilots towards wider implementation. Pages 2–4 explain the scaling process and its purpose; pp. 5–12 provide the practical sequence of interviews, synthesis and stakeholder reflection; and p. 13 explains how identified assets, drivers and barriers become the basis for scaling strategies. The appendix is particularly useful because it provides the actual questions used to explore finance, business, technical conditions, governance and stakeholder issues affecting scalability. Connecting Nature – NBS Initiating Scaling Guidebook 2. European Environment Agency, *Scaling nature-based solutions for climate resilience and nature restoration*. This provides the strongest conceptual framework for selecting scaling pathways. The EEA emphasises that NBS are locally embedded and generally require adaptation rather than direct copying. It distinguishes scaling out, scaling up and scaling deep and examines socioeconomic barriers and enablers affecting scaling potential. This is especially useful for preventing SOLLAGUA from treating "scaling" as synonymous with simply making an installation larger. EEA – Scaling nature-based solutions 3. UNaLab (2020), *Replication Roadmaps for UNaLab Follower Cities*, D6.7, particularly Section 1.2 and the individual city roadmaps. This provides the strongest practical replication precedent. UNaLab used a structured road mapping process with follower cities—including Castellón—to translate local challenges and ambitions into NBS implementation pathways, projects and milestones. Its wider Replication Framework integrates technical, governance, co-creation and business/finance dimensions for widespread replication and upscaling. UNaLab – Replication Roadmaps for Follower Cities

Action 7.3: Defining the business and financing model for the solution

OBJECTIVE:	To define how the tested solution can be economically sustained and financed when implemented or scaled.
DESCRIPTION:	Building on the scaling and replication pathways identified in Action 7.2, this action defines the business and financing model required for the continued implementation or wider application of the tested solution. The focus is the innovative solution developed and tested through the NB-WoLL, not the financial sustainability of the NB-WoLL itself, which is addressed in Action 2.6. The action identifies the value created by the solution and its beneficiaries, together with the actors, activities, resources, responsibilities and lifecycle costs required for its implementation, operation and maintenance. It then examines appropriate funding and financing mechanisms, which may include public funding, user contributions, payments for services, public-private arrangements, blended finance or other mechanisms suited to the context. The resulting model should align value, beneficiaries, costs, responsibilities and funding sources to establish how the solution can be economically sustained when implemented or scaled. It provides the basis for considering concrete pathways towards market, public procurement or institutional uptake in Action 7.4.
TOOLS:	• Nature-Based Solutions Business Model Canvas.
OUTPUT	Solution Business and Financing Model
EXAMPLE FOR REFERENCE	Connecting Nature, *Nature-Based Solutions Business Model Canvas Guidebook*. The principal methodological and practical reference. The NBS Business Model Canvas was specifically developed to structure the multiple forms of value, actors, activities, resources, costs and funding/revenue arrangements associated with NBS. It is therefore directly applicable to the solution-level business model required here rather than to the financing of the Living Lab organisation itself. Connecting Nature – NBS Business Model Canvas Guidebook UNaLab, *Business Models and Financing Strategies for NBS*. A strong implementation precedent because it considers business models and financing strategies together and illustrates how different NBS configurations may require different combinations of actors, value propositions and financing mechanisms. UNaLab NetworkNature, *A Guide to the Nature-based Solutions Finance Landscape in Europe*. Useful for moving from the business case towards appropriate financing mechanisms and for recognising the diversity of public, private and blended approaches available for NBS. NetworkNature – NBS Finance Landscape in Europe. Invest4Nature, *NbS Decision-Support Toolbox*. A complementary resource when more detailed economic analysis is needed. Its cost-benefit and cost-effectiveness functionality can support the business case, but I would not make it compulsory for Action 7.3.Invest4Nature – NbS Decision-Support Toolbox

Action 7.4: Planning pathways for market, public procurement and institutional uptake

OBJECTIVE:	To identify and plan appropriate pathways for the tested solution to move from experimentation towards real-world adoption and implementation.
DESCRIPTION:	Building on the scaling pathways identified in Action 7.2 and the solution business and financing model developed in Action 7.3, this action examines how the tested solution can move into actual use. As in Actions 7.2 and 7.3, the focus is the innovative solution developed and tested through the NB-WoLL, rather than the operation of the NB-WoLL itself. Depending on the solution and context, uptake may occur through market adoption, where users or organisations purchase or contract the solution or associated services; public procurement, where a public authority or utility commissions the solution; or institutional uptake, where the solution becomes incorporated into plans, programmes, standards, services, investment decisions or routine organisational practices. More than one pathway may be relevant. For each appropriate pathway, practitioners identify the potential adopting actors, requirements for adoption, remaining barriers, responsibilities and concrete next steps. The action does not require the NB-WoLL to complete commercialisation, procurement or institutional adoption during the project. Its purpose is to establish a credible and actionable route from successful experimentation towards implementation.
TOOLS:	• Solution Uptake Pathways Assessment
OUTPUT	Solution Uptake Pathways Plan
EXAMPLE FOR REFERENCE	European Commission / UNaLab (2020), *Public Procurement of Nature-Based Solutions*. This is the strongest NBS-specific precedent. It identifies the principal difficulties encountered by public authorities when procuring NBS and draws on practical cases from nine European cities to show how procurement processes can be adapted. Public Procurement of Nature-Based Solutions European Commission, *Guidance on Innovation Procurement*. This is the strongest operational complement. It is particularly useful when the NBS is innovative enough that conventional specifications or procurement procedures may restrict adoption. The guidance covers preparing innovation procurement and the instruments available to public buyers. The associated European competence framework explicitly includes preliminary market consultation, functional or performance-based requirements, variants, innovation-friendly award criteria and KPIs. European Commission – Innovation Procurement UNaLab, *NBS Implementation Handbook*. This gives us the broader implementation precedent. Importantly for 7.4, the handbook connects implementation with governance, finance and procurement rather than treating uptake as a purely commercial step. Its finance and procurement sections refer practitioners directly to the project's governance guidelines, business models, financing strategies and value model. UNaLab – NBS Implementation Handbook for Practitioners NetworkNature / LAND4CLIMATE (2026). *Unlocking EU-wide uptake of Nature-Based Solutions on private land: Barriers, incentives and pathways for implementation*. NetworkNature Task Force 4 / LAND4CLIMATE. Practical evidence on barriers to NBS uptake on private land, including landowner incentives, administrative complexity, financing continuity, stakeholder engagement and governance conditions. NetworkNature / LAND4CLIMATE – Unlocking EU-wide uptake of NBS on private land

Action 7.5: Developing recommendations for practice and policy

OBJECTIVE:	To translate the evidence and lessons generated through the NB-WoLL into practical and policy recommendations that support wider implementation and scalability of NBS.
DESCRIPTION:	Building on the evidence, lessons learnt, scaling conditions and uptake barriers identified in previous phases, this action defines what practitioners, institutions and policymakers can do to facilitate the implementation and wider adoption of NBS. The recommendations should respond to concrete barriers or enabling conditions identified through the NB-WoLL experience. They may address issues such as regulation and administrative procedures, governance and institutional coordination, funding and incentives, procurement, technical capacity and training, stakeholder participation, evidence and monitoring, and integration of NBS into water, territorial or sectoral planning. These dimensions are consistently identified in European and international research as key conditions for wider NBS uptake. Recommendations should distinguish between practice recommendations, directed towards practitioners and organisations implementing NBS, and policy recommendations, directed towards public authorities and other actors able to change the enabling environment. Each recommendation should identify the problem or evidence on which it is based, the proposed action, the actor or decision-making level concerned and the expected contribution to wider implementation or scalability. The resulting recommendations complement the solution-level pathways developed in Actions 7.2–7.4 and provide actionable messages for knowledge transfer and dissemination in Action 7.6.
TOOLS:	• Evidence-to-Recommendations Matrix (Sollagua)

OUTPUT	NB-WoLL Practice and Policy Recommendations
EXAMPLE FOR REFERENCE	SOLLAGUA (2025), D3.1.1 – *Strategic Report on the Long-Term Deployment of Nature-Based Solutions*. This should be our principal project-specific reference. It is especially important because Action 7.5 can connect the evidence generated by individual NB-WoLLs back to the barriers and recommendations already identified at regional and transnational level by SOLLAGUA. The report explicitly identifies barriers to NBS adoption at local and regional levels and proposes corrective measures and strategies for more effective implementation. SOLLAGUA – Strategic Report on the Long-Term Deployment of NBS 2OECD (2020), *Scaling up Nature-based Solutions to Tackle Water-related Climate Risks*. This is probably the strongest external methodological reference because it is specifically concerned with water-related NBS and organises the enabling environment around five actionable dimensions: governance, policies, regulation, technical capacity and finance. Its recommendations demonstrate how identified barriers can be converted into policy actions supporting wider NBS implementation. OECD – Scaling up Nature-based Solutions to Tackle Water-related Climate Risks NetworkNature (2022), *Taking Nature-based Solutions up the policy ladder – from research to policy action*. This is particularly close to what we want 7.5 to accomplish. It explicitly addresses the transition from research evidence to policy action, drawing on research analysis, consultation, strategic dialogues and interviews with policymakers and policy think tanks. It concludes with recommendations aimed at addressing identified knowledge gaps and implementation barriers. NetworkNature – Taking NBS up the policy ladder NetworkNature / LAND4CLIMATE (2026), *Unlocking EU-wide uptake of Nature-Based Solutions on private land*. This is a strong recent example of converting project evidence into targeted policy recommendations. Based on evidence from LAND4CLIMATE regions, it links observed barriers—uncertain incentives, fragmented governance, legal uncertainty and insufficient landowner engagement—to concrete recommendations on long-term incentives, legal frameworks, regional capacity, advisory services and participatory governance. NetworkNature / LAND4CLIMATE – Unlocking EU-wide uptake of NBS on private land Durrant et al. (2025), *Nature-based Solutions for Urban and Regional Water Resilience: What to do with too much (dirty) water?*, NetworkNature Science Policy Brief 1. Practical science-policy precedent translating evidence from European NBS projects into recommendations for integrating NBS into water-resilience planning, including governance coordination, regulatory frameworks, investment and local stewardship. Science-Policy Brief – NBS for Urban and Regional Water Resilience

Action 7.6: Sharing results and knowledge

OBJECTIVE:	To transfer the knowledge generated through the NB-WoLL to relevant audiences and facilitate its understanding, exchange and reuse.
DESCRIPTION:	Building on the experience documented in Action 7.1 and the scalability, financing, uptake and recommendations developed in Actions 7.2–7.5, this action defines what knowledge should be shared, with whom, through which channels and for what purpose. The action goes beyond disseminating project results. It organises the most relevant evidence, methods, tools, lessons learnt, scaling and uptake experience, and practice and policy recommendations into forms suited to different audiences. Depending on their needs, these may include practitioners, public authorities, water utilities, farmers and user organisations, businesses, researchers, policymakers, networks and other territories interested in NBS. Knowledge transfer should combine appropriate knowledge products and channels—such as practical reports, case studies, policy briefs, repositories and digital resources—with opportunities for direct exchange and learning, including peer-to-peer sessions, demonstrations, workshops, webinars, communities of practice and exchanges through relevant networks. Connecting Nature's experience is particularly useful here: its knowledge-transfer activities connected front-runner and follower cities rather than relying only on publications, while its storytelling methodology helps teams translate complex NBS experience into narratives suited to different audiences. The action concludes by defining how the main knowledge resources will remain accessible and reusable beyond the immediate NB-WoLL activities, including appropriate repositories, platforms or networks. This supports continued learning and the wider implementation and adaptation of NBS.
TOOLS:	• Knowledge Transfer and Exchange Plan
OUTPUT	
EXAMPLE FOR REFERENCE	Connecting Nature – *Knowledge Transfer between Front Runner and Fast Follower Cities*. This is probably the closest precedent for Action 7.6. Connecting Nature explicitly organised knowledge transfer between cities with direct NBS implementation experience and cities preparing their own implementation. The approach combines experience, methods and resources with interaction between practitioners, making it a stronger model than conventional one-way dissemination. Connecting Nature – Knowledge Transfer resources Connecting Nature – *Nature-Based Solutions: A Storytelling Activity Book*. This is an excellent practical communication tool within 7.6. It was developed from workshops with Connecting Nature cities specifically to help NBS practitioners transform complex project experience and data into meaningful narratives. It emphasises identifying the purpose and audience of the narrative rather than simply communicating everything generated by a project. Connecting Nature – NBS Storytelling Activity Book Biodiversa+ (2025), *Guidelines for systematic upload/update of NBS case studies to NBS repositories*. This is particularly useful for the legacy and accessibility component of Action 7.6. Biodiversa+ reviewed 115 NBS tools and platforms, identified 27 case-study and knowledge-exchange hubs and narrowed these to 12 platforms that permit users to upload and update content. The resulting guidance helps projects decide where their NBS cases should be deposited so that knowledge remains findable and reusable. Biodiversa+ – Guidelines for sharing NBS case studies through repositories Invest4Nature (2026), *NbS Living Labs Engagement Programme*, Deliverable 4.2. This is an especially strong and very recent Living Lab precedent. The programme combines Living Lab stakeholder events with an online knowledge platform. Its objectives explicitly include engaging stakeholders in co-developing, testing and exploiting project outputs, wider dissemination through an online platform, and maintaining the workspace beyond project funding to support continued knowledge exchange on NBS economics and investment. Invest4Nature – NbS Living Labs Engagement Programme

Relevant documentation

ALL-Ready / European Network of Living Labs (ENoLL). (2023). *Understanding Living Lab concepts and co-creation: Governance models for Living Labs*. ALL-Ready. Referenced in **Actions 3.1, 3.4, 3.5 and 3.6**. ALL-Ready – Understanding Living Lab concepts and co-creation

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AQUARES. (2020). *Water Reuse Technology Application Guide*. AQUARES – Water Reuse Policies Advancement for Resource Efficient European Regions, Interreg Europe. Referenced in **Action 1.7**. AQUARES – Water Reuse Technology Application Guide

Biodiversa+. (2025). *Guidelines for systematic upload/update of NBS case studies to NBS repositories*. Referenced in **Action 7.6**. Biodiversa+ – Guidelines for NBS case-study repositories

CEAB-CSIC / Agència Catalana de l'Aigua. (2026). *Nature-based wastewater-treatment pilot in Boí*. Referenced in **Action 5.2**. CEAB-CSIC – Nature-based wastewater-treatment pilot

Cerema. (n.d.). *Attendus réglementaires – Dossier d'autorisation pour la réutilisation des eaux usées traitées (REUT).* Referenced in **Action 1.4**. Cerema – Réutilisation des eaux usées traitées

Coenen, T., & Robijt, S. (2017). Heading for a FALL: A framework for agile Living Lab projects. *Technology Innovation Management Review, 7*(1), 37–43. Referenced in **Action 5.4**. Coenen & Robijt – Heading for a FALL

Connecting Nature. (2019). *Nature-Based Solutions Initiating Scaling Guidebook*. Referenced in **Action 7.2**. Connecting Nature – NBS Initiating Scaling Guidebook

Connecting Nature. (n.d.). *Impact Assessment Guidebook / Impact Assessment Framework*. Referenced in **Action 6.3**. Connecting Nature – Impact Assessment Framework

Connecting Nature. (n.d.). *Nature-Based Solutions Business Model Canvas Guidebook*. Referenced in **Action 7.3**. Connecting Nature – NBS Business Model Canvas Guidebook

Connecting Nature. (n.d.). *Nature-Based Solutions: A Storytelling Activity Book*. Referenced in **Action 7.6**. Connecting Nature – NBS Storytelling Activity Book

Connecting Nature / NetworkNature. (n.d.). *Connecting Nature resources and knowledge-transfer materials*. Referenced in **Action 7.6**. Connecting Nature – Knowledge-transfer resources

Domènech, L., et al. (2025). Citizen perception of indirect potable reuse during drought emergencies in Europe: The case of metropolitan Barcelona. *Journal of Water Reuse and Desalination*. Referenced in **Action 6.2**. Barcelona indirect potable-reuse study

Durrant, L., et al. (2025). *Nature-based solutions for urban and regional water resilience: What to do with too much (dirty) water?* NetworkNature Science-Policy Brief 1. Referenced in **Action 7.5**. NetworkNature – Science-policy resources

ENERGISE. (2019). *ENERGISE Living Labs – Methodology, experience and lessons learned* (Deliverable 7.12). Referenced in **Action 7.1**. ENERGISE Living Labs resources

European Commission. (2021). *Evaluating the impact of nature-based solutions: A handbook for practitioners*. Publications Office of the European Union. Referenced in **Actions 6.1 and 6.4**. European Commission – NBS evaluation handbook

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