

This project has received funding from the European Union's Horizon EUROPE research and innovation program under grant agreement No. 101086512.



This project was funded by UK Research and Innovation (UKRI) under the UK government's Horizon Europe funding guarantee [grant number 10066637].

Call: HORIZON-CL6-2022-GOVERNANCE-01 Project 101086512



Promoting social innovation to renew multi-level and cross sector water governance

D4.1: Water Governance diagnostic tool

Juan Diego RESTREPO (Etifor | Valuing Nature)

Delivery date: 30/08/2024



Disclaimer

This document reflects only the author's view. The European Commission is not responsible for any use that may be made of the information it contains.

Intellectual Property Rights

© 2023-2026, InnWater Consortium

All rights reserved.

This document contains original unpublished work except where clearly indicated otherwise. Acknowledgement of previously published material and of the work of others has been made through appropriate citation, quotation, or both.

This document is the property of the InnWater Consortium members. No copying or distributing in any form or by any means is allowed without the prior written agreement of the owner of the property rights. In addition to such written permission, the source must be clearly referenced.

Project Consortium





EXECUTIVE SUMMARY

This report details the development until month 18 of the InnWater Water Governance Diagnostic Tool, one of the components of the Governance Platform of the InnWater project. This tool is designed to help potential users identify and understand governance gaps within their water systems at various scales and facilitate discussions between water-related stakeholders.

Grounding on the enhanced methodology from the project's Work Package 2, which is based on the OECD Principles on Water Governance, the diagnostic tool incorporates 16 principles across four dimensions: effectiveness, efficiency, trust and engagement, and sustainability and resilience.

Led by Etifor and heavily supported by Eurecat's expertise in web development, this tool aims to translate the theoretical and methodological contents developed in Work Package 2 and become a practical tool that can reach a broader audience within the project's scope.

The tool's development process results in a questionnaire-based instrument comprising 29 questions divided into compulsory and voluntary. Designed as an online application, the tool provides visual assessment outcomes and will be available in the five languages of the project's pilot sites in its latest version in month 24. The tool aims, among other things, to facilitate the comparison of assessments from different stakeholders and promote discussions on governance challenges, allowing for flexibility in assessment depth while maintaining informative outcomes.

The report outlines the tool's development within the overall structure of InnWater, including the theoretical framework used, the development process, the main results so far, and the planned next steps. This Water Diagnostic Tool seeks to contribute significantly to sustainable and resilient water management practices across Europe by providing a user-friendly, adaptable approach to governance gaps assessment that invites different stakeholder groups to participate in water governance processes.



Document information

Programme	HORIZON Research and Innovation Action - HORIZON-CL6-2022-GOVERNANCE-01-06
Grant Agreement N°	101086512
Project Acronym	InnWater
Project full name	Promoting social INNovation to renew multi-level and cross sector WATER governance
Start of the project	1 March 2023
Duration	36 months
Project coordination	Natacha Amorsi, Office International de l'Eau, OiEau
Deliverable	D4.1: Water Governance diagnostic tool
Work Package	WP4: Digital tools for water governance
Task	Task 4.1: Water Governance diagnostic tool
Lead Beneficiary	Etifor Valuing Nature (ETIFOR SRL)
Lead Beneficiary Author(s)	Etifor Valuing Nature (ETIFOR SRL) Juan Diego RESTREPO (Etifor Valuing Nature)
Lead Beneficiary Author(s) Contributor(s)	Etifor Valuing Nature (ETIFOR SRL) Juan Diego RESTREPO (Etifor Valuing Nature) Marc Ribalta (Eurecat), Julie Magnier, Natacha Amorsi (OiEau)
Lead Beneficiary Author(s) Contributor(s) Quality check	Etifor Valuing Nature (ETIFOR SRL)Juan Diego RESTREPO (Etifor Valuing Nature)Marc Ribalta (Eurecat), Julie Magnier, Natacha Amorsi (OiEau)Chiara Focacci (EUI) and Laurence Couldrick (WRT)
Lead Beneficiary Author(s) Contributor(s) Quality check Planned Delivery Date	Etifor Valuing Nature (ETIFOR SRL) Juan Diego RESTREPO (Etifor Valuing Nature) Marc Ribalta (Eurecat), Julie Magnier, Natacha Amorsi (OiEau) Chiara Focacci (EUI) and Laurence Couldrick (WRT) 31/08/2024
Lead Beneficiary Author(s) Contributor(s) Quality check Planned Delivery Date Actual Delivery Date	Etifor Valuing Nature (ETIFOR SRL) Juan Diego RESTREPO (Etifor Valuing Nature) Marc Ribalta (Eurecat), Julie Magnier, Natacha Amorsi (OiEau) Chiara Focacci (EUI) and Laurence Couldrick (WRT) 31/08/2024 30/08/2024
Lead Beneficiary Author(s) Contributor(s) Quality check Planned Delivery Date Actual Delivery Date Citation	Etifor Valuing Nature (ETIFOR SRL)Juan Diego RESTREPO (Etifor Valuing Nature)Marc Ribalta (Eurecat), Julie Magnier, Natacha Amorsi (OiEau)Chiara Focacci (EUI) and Laurence Couldrick (WRT)31/08/202430/08/2024Restrepo, J. (2024): Water Governance diagnostic tool. Deliverable D4.1, Public, EU Horizon InnWater Project, Grant agreement No. 101086512

Revision history

Version	Date	Author(s)/Contributor(s)	Comments
V1	12/08/2024	Juan Diego RESTREPO (Etifor)	First version
V2	13/08/2024	Chiara Focacci (EUI) and Laurence Couldrick (WRT)	Feedback from internal reviewers
FV	30/08/2024	Julie Magnier, Natacha Amorsi (OiEau)	Feedback from project coordinator

Related deliverables

This deliverable relates to D2.1, "Enhanced water governance assessment tool" from WP2 (Water governance for sustainability and resilience) since its structure is based on the contents of this document. Furthermore, this deliverable belongs to a suite of tools to be developed within WP4 (Digital tools for water governance) and to be available in the InnWater water governance platform (D4.4).



TABLE OF CONTENTS

EXECUT	IVE SUMMARY
LIST OF	FIGURES
LIST OF	TABLES6
ACRON	/MS6
Introduc	tion7
1. THE	WATER GOVERNANCE DIAGNOSTIC TOOL AT A GLANCE8
1.1 T	he tool in relation to the InnWater structure8
1.2 T	heoretical Framework for the tool's development9
2. TOOI	_ DEVELOPMENT PROCESS11
2.1 D	efining the tool's objectives11
2.2 U	ser definition11
2.2.1	User personas
2.3 Q	uestions definition12
2.4 S	coring process13
2.5 V	isual interface design14
2.6 T	ool development15
3. RESU	JLTS17
3.1 V	isual interface – design17
3.1.1	Landing page
3.1.2	Questionnaire sections
3.1.3	Results section
3.2 N	ext steps for the tool's development19
3.2.1	Pilot site testing
3.2.2	Multilingual Development19
3.2.3	Multi-stakeholder Comparison Feature20
3.2.4	Integration with Task 2.2 "Reference Guide for programming"20
4. CON	CLUSIONS21
Reference	ces22
ANNEXE	S23
Annex 1	: Master online tool (attached)23
Annex 2	: Visual interface23



LIST OF FIGURES

FIGURE 1: INNWATER WP STRUCTURE	
FIGURE 2: METHODOLOGICAL PROCESS FROM TASK 2.1	9
FIGURE 3: THE INNWATER WATER GOVERNANCE ASSESSMENT FRAMEWORK	
FIGURE 4: FIRST VERSION OF THE LANDING PAGE	
FIGURE 5: EXAMPLE FROM THE QUESTIONNAIRE PART OF THE TOOL	
FIGURE 6: EXAMPLE FROM THE RESULTS PART OF THE TOOL	

LIST OF TABLES

TABLE 1. SCORING CATEGORIES FROM THE GOVERNANCE FRAMEWORK DEVELOPED IN WP2	13
TABLE 2. ADDITIONAL FEATURES OF THE WATER GOVERNANCE DIAGNOSTIC TOOL ACCORDING TO THE VERSION	15

ACRONYMS

EU	European Union
OECD	Organisation for Economic Co-operation and Development
PS	Pilot sites
WP	Work Package



INTRODUCTION

Water-related challenges, including scarcity, access, and allocation, are becoming increasingly pressing in the context of accelerating global environmental and natural resource issues. These challenges are compounded by excessive greenhouse gas emissions (IPCC, 2022), biodiversity loss (IPBES, 2019), population growth, and a global economy heavily dependent on fossil fuels (Steffen et al., 2015). To address these complex issues, societies must improve water management and, more broadly, water governance to achieve resilient and sustainable systems.

As defined by the Organisation for Economic Co-operation and Development (OECD), water governance encompasses the political, institutional, and administrative rules, practices, and processes through which decisions are made and implemented concerning water management and service delivery (OECD, 2015). It involves identifying key stakeholders, their responsibilities, interactions, and the policies and strategies they pursue to manage water resources sustainably and equitably. Jiménez et al. (2020) elaborate on this concept, describing water governance as a combination of functions, attributes, and outcomes that responsible organizations should undertake or facilitate to develop the sector effectively.

In response to the need for improved water governance, the InnWater project seeks to build on definitions and seminal works on water governance assessment like the OECD one to promote social innovation to renew multi-level and cross-sector water governance. Specifically, the project aims to provide a set of digital tools and services to support tailored multi-level and cross-sector water governance associated with economic and financial mechanisms to support the European Union (EU) Green Deal transition while ensuring water systems sustainability. These tools will be gathered in the so-called InnWater Governance Platform, accessible to the project partners and a larger community of water governance-related actors.

One of the critical components of this platform is a water governance diagnostic tool. This tool will enable users to identify and understand the main governance gaps within their water systems, whether at the catchment, municipal, or regional level. The diagnostic tool is based on the project's definition of water governance, which comprises a series of principles grouped into four dimensions: effectiveness, efficiency, trust and engagement, and sustainability and resilience.

This report presents the work in progress to develop the InnWater Water Governance Diagnostic tool, including the conceptual and methodological approaches, early results, and next steps. The document is structured as follows:

- 1. A section outlining the motivation for developing the water governance diagnostic tool in the frame of the InnWater project and the theoretical basis for its structure.
- 2. A section on the tool Development Process, detailing the tool's conceptualization, user definition, question formulation, scoring process, visual interface design, and overall development.
- 3. The results section, presenting the primary outcomes, including the visual interface design and outlines the next steps in the tool's development.
- 4. The concluding remarks and relevant annexes of the process.



1. THE WATER GOVERNANCE DIAGNOSTIC TOOL AT A GLANCE

1.1 The tool in relation to the InnWater structure

The InnWater **Water Diagnostic Tool lies at the interface between WP2** on Water Governance for Sustainability and Resilience and WP4 on Digital tools for water governance (Figure 1). WP4's primary objective is to provide instruments that enable informed decision-making around water governance and other water-relevant sectors, including energy, food, and environment, to promote win-win strategies. Other tools within the WP include a methodology and digital dashboard related to the domestic water sector tariffs to provide a set of indicators to support transparent decision-making. These tools will be harmonised and made available in the InnWater Water Governance Platform, a digital e-learning platform to guide stakeholders in implementing sound water governance principles.



Figure 1: InnWater WP structure

The diagnostic tool is envisioned in WP4 as an entry point to other specific tools within the project, designed for use by stakeholders at various levels. It will be an online application providing a visual assessment of individual governance systems, available in the languages of the project pilot sites: English, French, Italian, Spanish, and Hungarian. The tool will allow comparisons of multiple assessments of the same governance system by different stakeholders (e.g., water managers, regulators, associations, and cross-sector stakeholders) to facilitate discussions on governance gaps and challenges. In its final version, the tool will connect the identified governance gaps with potential with inspiring governance practice and solutions mapped from relevant case studies across Europe and other regions. The tool should use web technologies that allow access from different terminals such as PC, tablet or smartphone.



From a theoretical perspective, the Water Diagnostic Tool is grounded in the work of WP2, which aims to develop conceptual, methodological, and practical foundations for identifying and assessing water governance approaches, organizational models, and practices at different geographical scales. The tool directly draws from Task 2.1, which provides an enhanced methodology for water governance assessment based on the OECD Principles on Water Governance and will connect in its latest version with Task 2.2 (Identification and characterization of effective governance practice and solutions), feeding examples of good practices for the identified governance gaps.

The tool and other WP4 tools will be tested within the project's pilot sites (WP5: Experiencing Innovative Governance in Pilot Sites) to gather feedback on their usefulness and usability. Further exploitation is planned in Task 6.3 (Replication assessment throughout Europe replication sites) under WP6 (Impact maximisation). Feedback and improvements will be documented in Task 2.3 (Framework validation and future governance recommendations).

1.2 Theoretical Framework for the tool's development

The InnWater Water Diagnostic Tool contents and structure are defined by the enhanced methodology for water governance assessment developed in WP2, based on the OECD Principles on Water Governance. This methodology conceptualizes good water governance around 12 principles and includes four complementary aspects to represent resilience and sustainability, aiming to align with the EU 2030 Biodiversity Agenda and the EU Green Deal (Figure 2).



Figure 2: Methodological process from Task 2.1

To this end, Task 2.1 conducted a comprehensive literature review of existing water governance assessment frameworks, and recent academic and non-academic studies related to water policy and issues of interest to the EU regarding sustainable and resilient practices. As a result, the InnWater Governance assessment framework incorporates aspects such as the polluter pays principle (Art. 9 WFD), the restoration of freshwater ecosystems (within the 2030 EU Biodiversity Strategy), and the implications of the EU Green Deal.

The framework is structured around the original three dimensions and 12 principles from the OECD framework, with the addition of a new dimension (Sustainability and Resilience) that includes four new principles, namely Circular economy, Environmental resilience, Engagement of vulnerable categories and Integrated strategies and local empowerment (Figure 3).





Figure 3: The InnWater Water Governance assessment framework

The practical tool to assess water governance via the abovementioned framework consist of a **questionnaire** that comprises five macro sections:

- i) Mega Trends & Resilience
- ii) Policy, Institutions & Regulation
- iii) Financing
- iv) Data, Monitoring & Evaluation
- v) Stakeholder Engagement.

Each macro section includes pre-existing questions from the OECD Water Governance Framework Indicator and newly developed questions encompassing the four new principles within the sustainability and resilience dimension. The questionnaire also integrates questions taken or developed from other questionnaires related to circular economy and the role of decentralizing bodies in governance, as well as UN questionnaires related to gender differences in water access, use, and governance.



2. TOOL DEVELOPMENT PROCESS

2.1 Defining the tool's objectives

Based on the assessment methodology for governance framework developed in WP2, the Water Governance Diagnostic tool **seeks to facilitate water governance assessment** by water-related stakeholders with different backgrounds, belonging to different sectors (e.g., energy, food, environment) and with different kinds of knowledge (e.g., water regulators, water associations, citizens). In this sense, this tool aims to translate the theoretical contents and methodologies from WP2 into a user-friendly interface to promote stakeholder involvement and facilitate discussions on governance gaps and challenges by a broader audience than technical actors.

The Water Governance Diagnostic tool includes specific elements to facilitate water governance assessment and promote stakeholder involvement such as the following:

- The tool uses a shortened version of the questionnaire from the governance assessment framework from WP2, making it less information-demanding.
- The tool calculates a performance score for each of the 16 principles of water governance and represents it in a visual way. This facilitates results interpretation by the user. The governance principles where the score was relatively lower can be considered gaps where to work to improve the water governance situation
- Along with the visual results, the tool will provide a small, tailored narrative interpretation of the results.
- In its final version, the tool will connect the identified governance gaps with potential inspiring governance practice and solutions mapped from relevant case studies across Europe and other regions.

2.2 User definition

The Water Governance Diagnostic Tool seeks to support a diverse range of stakeholders in assessing and improving water governance. The target audience for the tool grounds from the stakeholder map developed in WP6, focusing on stakeholder categories directly relevant to the pilot sites. These categories include:

- <u>Water Managers</u>: Professionals responsible for the planning, allocation, and management of water resources, requiring insights into governance practices to optimize resource use and compliance with regulations.
- <u>Water Regulators</u>: Authorities and agencies that enforce water-related policies and standards, who need a tool that provides actionable data to inform policy adjustments and regulatory decisions.
- <u>Water Associations</u>: Organizations that represent the interests of water users, advocating for effective governance and needing access to assessments that support their advocacy and policy recommendations.
- <u>Citizens</u>: Individuals and community groups with an interest in water governance, seeking transparency, involvement in governance processes, and understandable information on governance performance.



• <u>Cross-Sector Stakeholders</u>: Representatives from sectors such as energy, food, and the environment, who interact with water systems and require a broader understanding of governance to align sectoral strategies with water sustainability goals.

2.2.1 User personas

According to the identified target audience, **four user personas were considered** for the tool's design, considering the diverse backgrounds and expertise of its potential audience:

- <u>Water Managers</u> will likely use the tool to evaluate governance structures, monitor compliance, and identify areas for operational improvement.
- <u>Water Regulators</u> may focus on the tool's scoring system and tailored narratives to guide policy updates or to engage with stakeholders on regulatory matters.
- <u>Water Associations</u> can leverage the tool for gathering data that supports advocacy efforts, members education on governance issues, and identifying best practices to recommend to members.
- <u>Citizens</u> can engage with the tool to understand local water governance challenges and participate more meaningfully in public consultations or advocacy efforts.
- <u>Cross-Sector Stakeholders</u> might use the tool to understand the water governance landscape, identify potential risks and opportunities related to water use, and align sectoral strategies with sustainable water management practices.

2.3 Questions definition

The original questionnaire from Task 2.1 has 77 questions, all related to one or more of the 16 principles of water governance according to the InnWater governance framework. These questions are grouped in two main phases:

- 1. Preparation, **including 19 questions** to understand fundamental information about the governance structure within the water system of analysis, the main actors and institutions, and the main regulatory and economic instruments present
- 2. Assessment, including 58 questions divided into five macro sections

The five macro sections constituting the assessment phase include

- i) Mega-trends & resilience (6 questions)
- ii) Policy, institutions, and regulation (14 questions)
- iii) Financing (10 questions)
- iv) Data, monitoring and evaluation (10 questions)
- v) Engagement & accountability (18 questions)

The questionnaire incorporated existing questions based on OECD assessment tools and new questions representing the four new principles of the sustainability and resilience dimension.

To optimize the tool's usability and effectiveness, an expert judgment exercise was conducted collaboratively between WP2 and WP4 partners to define the final questions to include in the Water Governance Diagnostic Tool. The primary objectives were to *i*) Shorten the questionnaire to reduce the information burden on users; *ii*) Create a more user-friendly and agile experience; *iii*) Maintain a minimum standard of detail in the governance analysis.



Based on the expert judgment exercise, the questionnaire was shortened to 29 priority questions for the Water Governance Diagnostic Tool. The revised structure includes both compulsory and voluntary questions in each phase, allowing users to choose their desired level of detail in the governance analysis:

- Preparation phase, including 7 questions (3 voluntary and 4 compulsories)
- Assessment phase, including 22 questions
 - *i*) Megatrends and resilience: **4** voluntary and **1** compulsory
 - ii) Policy, institutions and regulation: 2 voluntary and 2 compulsories
 - iii) Financing: 2 voluntary and 2 compulsories
 - iv) Data, monitoring and evaluation: 1 voluntary and 4 compulsories
 - v) Engagement and accountability: **3 voluntary and 1 compulsory**

This flexible structure offers two levels of assessment, useful for users with varying needs and time constraints while still providing insights into water governance gaps and challenges:

- <u>Basic Assessment</u>: Users answering only the compulsory questions will receive a less detailed but informative result of governance gaps via the spider graph.
- <u>Comprehensive Assessment</u>: Users answering both compulsory and voluntary questions will receive a more detailed narrative explanation of the results and reduced uncertainty regarding the performance for each governance principle.

2.4 Scoring process

The scoring process for the InnWater Water Governance Diagnostic Tool has been designed to transform qualitative assessments into quantifiable data, building upon the original questionnaire developed in WP2. The questions from the WP2 questionnaire were designed to guide the in-presence governance assessment workshops for the InnWater pilot sites. In the workshop context, questions served as guiding prompts to facilitate discussions about specific water governance issues and challenges. Pilot site leaders and WP2 facilitators identified such issues and challenges beforehand during the preparation phase. The scoring was based on expert judgment, considering information from various sources (e.g., documents, management plans, policies) and qualitative explanations provided by stakeholders during the workshops. Table 1 presents the original scoring categories:

Score	Meaning	Coding color
3	In place/functioning	Green
2	In place/partly implemented	Orange
1	Not in place	Red
0	No data available	Gray

 Table 1. Scoring categories from the governance framework developed in WP2

To adapt this approach to the online Water Governance Diagnostic Tool, several modifications were made:



- 1. <u>Question Format</u>: All questions were transformed into an open-ended format to allow for more detailed responses.
- 2. <u>Scoring Parameters</u>: Specific scoring parameters were established for each question, with a value from 0 to 3 assigned based on the respondent's input. These parameters are detailed in Annex 1, "Master online tool."
- 3. <u>Algorithmic Processing</u>: An algorithm was developed to process user responses and generate a) Spider graphs summarizing the governance situation across the 16 principles and b) Tailored, explanatory text providing a narrative interpretation of the results
- 4. <u>Gradual Scoring</u>: The online tool allows for more nuanced scoring, including decimal points (e.g., 2.5) to reflect partial implementation or progress more accurately.
- 5. <u>Comparative Scoring</u>: In its latest version, the tool will allow for comparing scores across different stakeholders or time periods, facilitating the tracking of governance improvements.

2.5 Visual interface design

The Water Governance Diagnostic Tool's visual interface was designed to be embedded within the InnWater Governance platform, which will either be integrated into the InnWater website or exist as an independent website linked to the main project site. To develop the visual interface of the tool, it was required to have <u>i</u>) the final shortened questionnaire (29 questions divided into phases and macro sections); *ii*) the InnWater project's visual identity, developed within WP6's communication kit; *iii*) the initial website prototype, created in Figma by Eurecat.

The resulting visual interface consists of several sections including

- 1. Landing Page:
 - States the tool's objectives
 - Identifies target audience
 - Provides a brief overview of the assessment process
- 2. Questionnaire Sections:
 - Divided into five macro-sections
 - Progress bar to show completion status (to be included in the final version)
 - Clear distinction between compulsory and voluntary questions
- 3. Optional Registration:
 - Allows users to save and revisit their assessments
 - Compulsory fields: Name, Surname, Email, Password
 - Optional fields: Company, Role, Pilot Area
 - Clear explanation of data usage and privacy policy
- 4. Results Page:
 - Interactive spider graph visualizing scores for 16 water governance principles



- Color-coded for easy interpretation (matching the scoring system)
- Narrative explanation of scores, tailored to spider graph results
- Option to download results in various formats (PDF, CSV) (to be included in the final version)
- Inspiring governance practice and solutions from relevant case studies for improving low-scoring areas or gaps

Some additional features of the tool will be available, already in its first version or in the final one (Table 2).

Feature	First version	Final version
Responsive design for various devices (i.e. desktop, tablet, mobile)	\checkmark	\checkmark
Multilingual support (i.e., English, French, Italian, Spanish, Hungarian)	×	\checkmark
Comparison feature to view results against benchmarks or previous assessments	×	\checkmark

Table 2. Additional features of the Water Governance Diagnostic Tool according to the version

The visual interface design process involved multiple iterations with Eurecat's development team to optimize user experience and address technical considerations like *i*) minimalist design to reduce cognitive load and *ii*) Clear navigation between sections Ongoing user testing and feedback collection will be implemented between months 18 to 24 to continuously refine and improve the interface for the tool's final version. The complete mockup of the visual interface is provided in Annex 2, "Visual interface."

2.6 Tool development

The tool development is led by Eurecat, who has identified specific development requirements that had to be considered. First, users need to access it from different devices, remotely, meaning that the visual interface must adapt to various devices and be accessible through a webpage. This requires a responsive design that ensures optimal functionality and appearance across desktops, tablets, and smartphones, providing a seamless user experience regardless of the device used.

Furthermore, this tool will be integrated into the InnWater platform and therefore needs to be developed using technologies that enable easy incorporation. By utilizing JavaScript, HTML, and CSS, the tool is built on a solid foundation of widely supported web standards, facilitating smooth integration.

Integrating the tool will require putting it in an iFrame, embedded into the Innwater platform website. It will be mandatory to resize dynamically the height of the iFrame, which is the hardest part to make the integration smooth and seamless. For this purpose, the library from GitHub - davidjbradshaw/iframe-resizer¹ will be used to keep same and cross-domain iFrames sized to

¹ https://github.com/davidjbradshaw/iframe-resizer



their content with support for window/content resizing, in-page links, nesting, and multiple iFrames.

The development of the tool had to follow the instructions set by the previously prepared visual design, which defined the style for the user interface. Additionally, the questions defined in WP2 were specifically selected to be added to the tool to shape the form that the user must fill out, including the format in which each question must be answered. The tool also needs to internally compute the weighting of answers to provide the governance assessment, which needs to include both the spider plot and the accompanying explanation.



3. RESULTS

This section shows the main results of the first prototype of the Water Governance Diagnostic Tool, to be put on the InnWater Governance Platform website.

3.1 Visual interface – design

3.1.1 Landing page

The landing page welcomes users with a clean design that aligns with the InnWater project's visual identity (Figure 4). This section states the tool's objectives, identifies the target audience, and provides a concise assessment process overview.



Figure 4: First version of the landing page



3.1.2 Questionnaire sections

The questionnaire part of the tool is divided in five macro-sections, each with a distinct visual identity (Figure 5). Colour coding and icons clearly distinguish compulsory questions from voluntary ones. The layout is designed for easy readability and navigation.

	SECTI	ON 1
	\sim	A
	Mega-trends a	nd resilience
	inega acitada	
Question 1		
Please fill in the two tables below, Indicate the institutions that are conducted any additional column / information of the second sec	for water resources management and for urrently in charge of designing and implem nation you deem necessary.	r water services provision. nenting water policies at the national or subnational level.
Roles and responsibilities for w	ater resources management	
Name of the institution	Nature of its role	Level of governance
Name	Choose v	Name
Name of the institution	Nature of its role	National government, province, city Level of governance
Name	Choose ~	Name
		National government, province, dty
Name of the institution	Nature of its role	Level of governance
Name	Choose ~	Name National government, province, dty
Save Edt		
Name of the institution	Nature of its role	Level of governance
Namo	Choose ~	Namo
Name of the institution	Notice of its role	National government, province, city
Name	Choose	Name
	010000	National government, province, dty
Name of the institution	Nature of its role	Level of governance
Name	Choose v	Name
Save		natura governen, prontov, dly

Question 2

Please map all river basin organisations (RBO) in your country

Figure 5: Example from the questionnaire part of the tool



3.1.3 Results section

The results part features a spider graph that visualizes scores for the 16 water governance principles (Figure 6). The graph will be color-coded to match the scoring system, allowing for quick interpretation by users about potential governance gaps within their water systems. Next to the graph, a narrative explanation of the scores is provided, tailored to the specific results of the graph, summarizing the mains strength points and governance gaps of the assessed system.





Figure 6: Example from the results part of the tool

3.2 Next steps for the tool's development

The following steps will be taken to refine and finalize the Water Governance Diagnostic Tool, between months 18 and 24 of the project

3.2.1 Pilot site testing

The main first step to take during the next months until month 24 include conducting a comprehensive testing on selected/all pilot sites to gather feedback by users on functionality, usability, and relevance. This testing will allow us to identify and address technical or content issues that can represent a challenge to the user experience.

3.2.2 Multilingual Development

After the first version of the tool is launched and tested within the project's pilot sites, the development of the tool in all five project languages (i.e., English, French, Italian, Spanish, and Hungarian) will be conducted. This process will ensure accurate translation of technical terms and concepts. The interface design will adapt to accommodate different language text lengths or peculiarities.



3.2.3 Multi-stakeholder Comparison Feature

Another functionality to be developed after the first version is launched is the function to compare several assessments of the same governance system made by different stakeholders. This function will require developing a visual representation of these comparisons for easy interpretation and keeping track of the assessments done for different water systems, both inside and outside the project's pilot sites. Another potential feature of this function is creating a guide on how to facilitate discussions based on these comparisons.

3.2.4 Integration with Task 2.2 "Reference Guide for programming"

The final version of the tool should also incorporate the contents from the Task 2.2 reference guide for programming, namely a list of good governance practices to answer to the identified governance gaps from the assessments. This functionality implies developing a system to link specific governance principles with relevant governance practices from the reference guide.



4. CONCLUSIONS

The InnWater Water Governance Diagnostic Tool, developed as a key component of the InnWater Governance Platform, represents a significant advancement in the assessment and understanding of water governance systems across Europe. This report details the tool's development process up to month 18 of the project, highlighting its theoretical foundations, methodological approach, and practical implementation.

Grounded in the enhanced methodology derived from the OECD Principles on Water Governance and further refined by the project's Work Package 2, the diagnostic tool incorporates a comprehensive framework of 16 principles across four critical dimensions: effectiveness, efficiency, trust and engagement, and sustainability and resilience.

This collaborative effort between Etifor and Eurecat has resulted in a user-friendly online application that translates complex theoretical concepts into a practical instrument accessible to a broad audience. The tool's design, featuring 29 questions divided into compulsory and voluntary sections, seeks for a balance between depth of assessment and user engagement. This flexibility allows users to tailor the assessment to their specific needs and time constraints while still providing valuable insights into governance gaps and challenges. The planned multilingual support in five languages further enhances the tool's accessibility and relevance across diverse European contexts.

This report outlined the iterative development process, the questionnaire refinement, the design of the visual interface, and the implementation of scoring mechanisms. The following steps, planned for months 18 to 24, will focus on comprehensive testing in pilot sites, multilingual development, and integrating advanced features such as multi-stakeholder comparison and enhanced result visualization.

As water-related challenges continue to grow in complexity and urgency, tools like this become increasingly vital. The InnWater Water Governance Diagnostic Tool not only aids in the assessment of current governance structures but also promotes a culture of continuous improvement and adaptive management in the water sector. This tool represents a tangible outcome of the InnWater project's commitment to enhancing European water governance. Its user-centric design and solid theoretical foundation make it a valuable resource for policymakers, water managers, and other stakeholders working towards more sustainable and resilient water systems. As the tool progresses through its final development stages and is implemented across diverse contexts, it has the potential to contribute to improve the future of water governance in Europe.



REFERENCES

IPBES. (2019). Global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. IPBES Secretariat, Bonn, Germany.

IPCC. (2022). Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press.

Jiménez, A., Saikia, P., Giné, R., Avello, P., Leten, J., Liss Lymer, B., ... & Ward, R. (2020). Unpacking water governance: A framework for practitioners. Water, 12(3), 827.

OECD. (2015). OECD Principles on Water Governance. OECD Publishing, Paris.

Steffen, W., Broadgate, W., Deutsch, L., Gaffney, O., & Ludwig, C. (2015). The trajectory of the Anthropocene: The great acceleration. The Anthropocene Review, 2(1), 81-98.



ANNEXES

Annex 1: Master online tool (attached)

Annex 2: Visual interface



This tool aims to guide strategic decision-making towards more effective water management by pinpointing governance gaps and identifying priority areas for action. After filling it in, your results will be structured around the 16 sustainable and resilient water governance principles derived from the InNWater project and OECD framework, ensuring a thorough and effective evaluation.



Monate W			10-11-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	Search
IVEW3	About * Water govern	iarice Key exploitable results *	Media center *	
		SECTION 1		
		~7		
	Mega-tr	ends and resilience		
	inega a	ends and resilience		
Question 1				
Please fill in the two tables below, t	for water resources manage	ment and for water services provisi	on.	
Add any additional column / inform	nation you deem necessary.	g and implementing water policies	at the national or subnational leve	ei.
Roles and responsibilities for wa	ter resources managemen	t		
Name of the institution	Nature of its role	Level of governance		
Name	Choose	Name Name		
Name of the institution	Nature of its role Choose	Level of governance		
Name of the institution	Nature of its over	formal powerset, proses, thy		
Name	Choose	* Name		
Save Ede		fazzna governiwe, piccese, city		
Name of the institution	Nature of its role	Level of governance		
Nano	Choose	V Name have generated, going, ch		
Name of the institution	Nature of its role	Level of governance		
	Unoose	National Sectored Sec		
Nano	Choose	V Name		
Sava Edit		faileral generation, provide, vite		
Question 2				
Please map all river basin organisa	tions (RBO) in your country			
		225		
Name	Choose	 Choose 	 Choose 	
tarie of the test faam regardator		Add information	Add information	
Source				
print av enact tours ins where you allo, meetinging	NULTRALING CONTRACTORS and access			
Sivin Edit				
Question 3				
If appropriate, please provide infor	mation on how River Basin (Organisations are financed.		
Financing mechanisms				
	⊖Yes (No I don't know		
Water charges in river basins	mmant Vos			
Water charges in river basins Grants from national/federal gover	Initiality Ores	No Ol don't know		
Water charges in river basins Grants from national/federal gover Grants from regional/provincial go	vernments Ves (No I don't know		
Water charges in river basins Grants from national/federal gover Grants from regional/provincial go Other (specify)	vernments Yes	No I don't know		
Water charges in river basins Grants from national/federal gover Grants from regional/provincial go Other (specify)	vernments Yes (No I don't know		
Water charges in river basins Grants from national/federal gover Grants from regional/provincial go Other (specify)	vernments Yes	No Idon't know		
Water charges in river basins Grants from national/federal gover Grants from regional/provincial go Other (specify)	vernments Yes C	No I don't know		
Water charges in river basins Grants from national/federal gover Grants from regional/provincial go Other (specify) Cuestion 4 Are there laws regarding water reso	vernments Yes C	No I don't know	17	
Water charges in river basins Grants from national/federal gover Grants from regional/provincial go Other (specify) Cuestion 4 Are there laws regarding water rese	vernments Yes C	No don't know	17	
Water charges in river basins Grants from national/federal gover Grants from regional/provincial go Other (specify) Cuestion 4 Are there laws regarding water rest Financing mechanisms	vernments Yes (No don't know	Y?	
Water charges in river basins Grants from national/federal gover Grants from regional/provincial go Other (specify) Construction of the second secon	vernmenta Yes C	No don't know	1? service provision Yes	©No
Water charges in river basins Grants from national/federal gover Grants from regional/provincial go Other (specify)	vernments Ves C	No don't know	1? service provision Yes er service provision Yes	© No © No
Water charges in river basins Grants from national/federal gover Grants from regional/provincial go Other (specify) Cuestion 4 Are there laws regarding water ress Financing mechanisms Existence of national/federal laws Existence of regional/provincial law Existence of regional/provincial law	vernmenta resource manage ource management and wat	No don't know	1? service provision Yes ar service provision Yes	 No No
Water charges in river basins Grants from national/federal gover Grants from regional/provincial go Other (specify) Construction 4 Are there laws regarding water rese Financing mechanisms Existence of national/federal laws Existence of regional/provincial law Existence of regional/provincial law	vernmenta Pes C	No don't know No i don't know er and wastewater service provision ment and/or water and wastewate ement and/or water and wastewat	1? service provision Yes er service provision Yes	O No O No
Water charges in river basins Grants from national/federal gover Grants from regional/provincial go Other (specify) Cuestion 4 Are there laws regarding water rest Financing mechanisms Existence of national/federal laws Existence of regional/provincial law Existence of regional/provincial law EXISTENCE BEGISTENCE	ource management and wat	No don't know No i don't know er and wastewater service provision ment and/or water and wastewate ement and/or water and wastewate	1? service provision Yes ar service provision Yes	O No O No
Water charges in river basins Grants from national/federal gover Grants from regional/provincial go Other (specify) Cuestion 4 Are there laws regarding water rese Financing mechanisms Existence of national/federal laws Existence of regional/provincial law Existence of regional/provincial law	ource management and wat	No don't know No I don't know ar and wastewater service provision ment and/or water and wastewate ement and/or water and wastewate	1? service provision Yes er service provision Yes	• Na • No
Water charges in river basins Grants from national/federal gover Grants from regional/provincial go Other (specify) Cuestion 4 Are there laws regarding water rese Financing mechanisms Existence of national/federal laws Existence of regional/provincial law Existence of regional/provincial law Existence of regional/provincial law REGISTER Phases (iii) the two tables balow;	vernmenta Yes C	No don't know No I don't know ar and wastewater service provision ment and/or water and wastewater ement and/or water and wastewate meret and/or water and wastewate meret and/or water and wastewate	17 service provision Yes ar service provision Yes	No No No
Water charges in river basins Grants from national/federal gover Grants from regional/provincial go Other (specify) Image: Image: I	Internation Press () vernments Yes () ource management and wat a on water resource manage ws on water resource manage ws on water resource manage for water ter services reently in charge	No don't know No I don't know ar and wastewater service provision ment and/or water and wastewater ement and/or water and wastewate	12 service provision Yes er service provision Yes wer	No No No







Promoting social innovation to renew multi-level and cross sector water governance

