

LEarning and action alliances for NexuS Environments
in an uncertain future

LENSES

WP2

D2.4. Report on LENSES strategic roadmaps for Nexus future

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Project coordinator



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Foreword

The present deliverable relates to Task 2.3 of the LENSES project, "Visioning of prosperous Nexus communities", which aims to design and develop a series of visioning exercises for a subset of the LENSES pilot areas. These visions are defined as imaginative representations of a desirable future based on both aspirations and concerns, and will be represented through scenarios developed through a participatory planning process and backcasting techniques. The process will be synthesized into strategic roadmaps outlining strategies and actions to realize these long-term goals. This initial version of the deliverable provides guidelines to facilitate the implementation of the visioning methodology by the pilot teams as part of the overall participatory process, with the primary objective of providing an introduction to key concepts and essential resources and highlighting guiding questions and ways to co-produce nexus visions with stakeholders that can make the scenarios comprehensive, relevant, and useful to policy-makers, practitioners, and businesses. A second version incorporating the main results of the visioning exercises in the form of strategic roadmaps will be produced by M34. The deliverable is divided into three parts: the first outlines the theoretical framework for scenario co-production, the second proposes methodological steps for engaging stakeholders in the visioning approach, and the third provides guidance on the planning and application of the visioning approach with the support of Work Packages 2 and 4.

1. Background

1.1. Introduction

This deliverable is related to the Task 2.3 'Visioning of prosperous Nexus communities'. The task focuses on the design and development of a series of visioning exercises that will be undertaken by some of the LENSES pilots. These visions are defined as a picture or an imagination of a desirable future, (i.e. based upon hopes and dreams but also upon concerns and fears) rather than a forecast of the future. In the case of LENSES, the proposed approach is based on the identification of visions on a more resilient and integrated nexus approach to face the core challenges in each area.

The visions will be represented under the form of scenarios through a participatory planning process to be complemented with the use of backcasting techniques for building narratives that can lead from the business-as-usual scenario towards the consensual vision of the group of local and regional stakeholders. As a final step, this process will be synthesized in the form of LENSES strategic roadmaps describing bundles of strategies and actions that can support the achievement of the long-term desirable visions.

This initial version of the deliverable (M20) provides detailed guidelines to facilitate the implementation of the visioning methodology by the pilot teams as part of the overall participatory process within the frame of the LAAs. Therefore, this deliverable aims at supporting LENSES pilot areas to promote the science/society/policy interface in the project, and to create capacity for the design of future scenarios and strategic roadmaps in decision-making. Thus, its core objective is not to develop all aspects related to scenarios in detail, but rather, to provide an entry point to core concepts and essential resources available. It aims at highlighting guiding questions and possibilities to co-produce nexus visions with stakeholders that could make scenarios comprehensive, relevant, and useful to potential users (policy-makers, practitioners, businesses).

By M34, a second version of this report will be produced, synthesizing the main results of the visioning exercises in LENSES pilot under the form of strategic roadmaps.

In a nutshell, this initial version of the deliverable aims to produce guidelines and supporting material for the implementation of the LENSES visioning approach in some pilots whereas the final version will also incorporate several strategic roadmaps as a final output of the process.

The first part of the deliverable (i.e., section 1) outlines the foundations or theoretical framework that is needed to understand scenario co-production; **the second part** (section 2) proposes methodological steps to engage stakeholders in the visioning approach; finally, **the third and final part** gives the next steps to plan and apply the visioning approach by LENSES pilots, with the support of WP2 (LAAs) and WP4 (PSDMs).

1.2. Key concepts: visions, scenarios, and strategic roadmaps for Nexus future

As an initial step, this section defines and provide some generic information on key concepts used in the LENSES visioning approach, i.e., visions, scenarios, and strategic roadmaps.

1.2.1 Visions

A **desirable future or vision** refers to a scenario directed towards an image or narrative in which a set of agreed-upon objectives have been achieved, thus offering a positive image of the future. In other words, a 'vision' is an image of what is desirable for a community. The proposed method in LENSES for the construction of common visions is based on a participatory scenario exercise. Through this approach, we aim at co-developing with stakeholders several future visions for their pilots and elicit the sets of actions that are needed to materialise such visions. While there is flexibility in the number of visions to be co-developed in each pilot, the exploration of at least 2 contrasting visions and associated pathways, including a Business as Usual (BAU) and a Desired Future scenario (vision) is suggested (see Figure 1).

The main premise is that achieving a WEF security in a given pilot under climate change pressures is largely determined by decisions made by a wide range of state and non-state actors across many scales, ranging from local to national, regional, and even global decision makers. For this reason, the participatory scenario process distinguishes two main "spheres": "sphere of influence" and "sphere of uncertainty".

The **"sphere of influence"** refers to those sets of actions and policy solutions (i.e., pathways) that local, regional, and national actors can agree on and have the capacity to influence to materialise the proposed vision within a given pilot.

The **"sphere of uncertainty"** takes into consideration that countries, basins, and regions are also affected by the so-called global drivers, such as climate change, global prices, political instability, crisis, etc., which add significant challenges to any local and/or national planning process. This requires that local to national decision makers take them explicitly into account, ensuring that their proposed plans, solutions, and related pathways, are robust enough in the light of such global drivers.

Conceptual framework

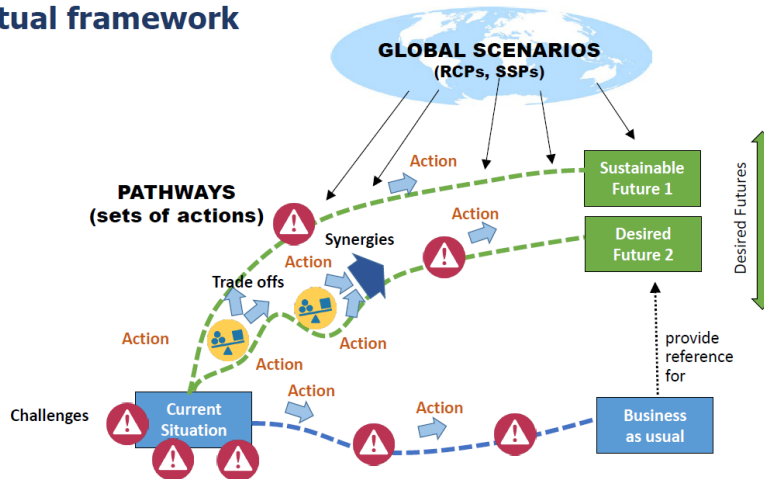


Figure 1. Conceptual framework for the visioning exercise. The figure shows our aim to identify desired futures that may be achieved through specific pathways (i.e., set of well-defined actions and policies) under the uncertainty of global drivers –not specifically considered by these pathways. The visions provided a clear alternative to business-as-usual scenarios.

1.2.2 Scenarios

The analysis of **scenarios** can be defined as a study of events that may occur in the future, organized in a limited and structured list with the possible future situations. The use of scenarios has been recognised as a powerful tool for exploring plausible future dynamics and uncertainty in complex socio-ecological systems.

There are many **types of scenarios**¹, depending on the aim they are defined for and how they are built (see Figure 2):

- **Exploratory scenarios** answer questions such as: *if we assume certain conditions (consumption behavior, irrigation rates...) characterizing specific trajectories of drivers, what would be the effects on one or more specific variables?* Thus, this kind of scenarios examine a range of plausible futures, based on potential trajectories of direct and indirect drivers. Because of their flexibility, they are well suited to allow awareness-raising, problem identification, and agenda setting, and stimulate creative thinking.
- **Target-seeking or intervention scenarios** answer questions such as: *if a certain target is to be achieved (e.g. keeping a certain level of water, reducing biodiversity loss,..), what are the possible pathways to reach this goal?* Therefore, their development may directly **contribute to policy design**. Based on an agreed-upon future target, they focus on how a desired future can be achieved, allowing to examine the viability and effectiveness of alternative pathways to a desired outcome. They start

Commentato [AP1]: Some references, if available, could be relevant here

¹ Goudeseune, L., Solerød, M., Aleksandrova, M., Asanica, A., Eggermont, H., Jacques, C., Le Roux, X., Lemaitre, F., Popa, A., Ungvári J. (2020). Handbook on the use of biodiversity scenarios. BiodivERSA-Belmont Forum report. 36 pp.

with the definition of a clear objective or a set of objectives that can be either specified in terms of targets or functions to be optimised.

- **Policy or management screening scenarios** answer questions such as: *What would have happened if other policy/management options were considered?* These scenarios are **well suited for supporting the implementation of interventions**. They consider various policy or management options and are used to forecast the effects of alternative policy or management interventions. For example, in policy-screening scenarios, a policy or management is applied and an assessment of how the policy/management modifies the future is carried out.
- **Retrospective intervention evaluation scenarios** answer questions such as: *Have the policy options (e.g. locations of protected areas and level of protection) achieved the anticipated outcomes and goals (e.g. biodiversity enhancement)?* Therefore, this last group of scenarios allows the comparison between the trajectory of a policy or management implemented in the past and scenarios that would have achieved the intended target. Simply put, they are useful for evaluating interventions that have been implemented, comparing them to hypothetical or alternative policies or management practices.

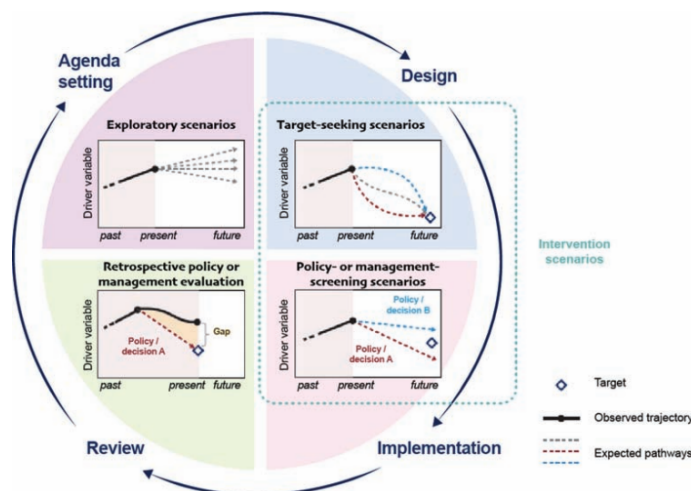


Figure 2. Main types of scenarios that can be developed, according to the objective of scenario builders and users (Biodiversa+ 2020; Modified after: IPBES, 2016a). In **exploratory scenarios**, the dashed lines represent different plausible futures, often based on storylines. In **target-seeking scenarios**, the rhombus represents an agreed-upon future target and the coloured dashed lines indicate scenarios that provide alternative pathways for reaching this target. In **policy/management-screening scenarios**, the dashed lines represent various policy options under consideration. In **retrospective policy evaluation**, the observed trajectory of a policy implemented in the past (black line) is compared to scenarios that would have achieved the intended target (dashed line)

To develop LENSES strategic roadmaps, we will in general use a combination of exploratory and target-seeking, although we may also consider policy-management screening scenarios.

1.2.3 Strategic roadmaps

In its simplest form, a **roadmap** is a set of interventions defined along a certain timeline. A **strategic roadmap** uses scenario methodology to place these interventions in time to reach a certain vision (desirable future), and considers barriers, risks, and power differences between involved sectors.

These interventions are bundled into clear pathways. In our visioning approach, the exploration of the different sets of actions including the potential trade-offs and synergies among them, comprises the sets of pathways that are required to reach the different visions.

These pathways shall integrate: i) a set of related actions, i.e., policies and norms, behavioral changes, infrastructures (grey, green or hybrid), governance arrangements, etc.; ii) analysis of potential trade-offs between different domains when implementing each pathway; and iii), when clearly identified, potential political or economic barriers hampering the implementation of the key actions.

As a final step, the planned integration of the visioning exercise with the PSDM approach shall allow to combine these pathways with quantitative scenarios for some key variables, thus allowing to estimate the potential effectiveness of each pathway.

1.3. Why a participatory visioning process for prosperous Nexus communities?

Nexus systems are highly complex, which makes their management difficult and requires making decisions under uncertain conditions. Conflicts between users of the same resources, or between different stakeholders with different priorities, as well as competing regulations, arise and undermine the potential of the nexus approach for sustainable development and social prosperity. **A Nexus approach to develop scenarios can help providing solutions to these conflicts,** by aiming for a sustainable and fair allocation of resources, fostering a collaborative paradigm, and overcoming sectorial isolation.

LENSES innovates by contextualizing Resilient Nexus Systems and creating a common vision to address chronic stresses and acute shocks in the diverse pilot contexts. In some pilots, this visioning approach will be developed as a core part of the participatory activities. In these pilots, the LENSES Learning and Action Alliances (LAAs) **will integrate stakeholders' discussions and knowledge sharing activities into a structured visioning process concluding in the elaboration of transition roadmaps for the management and operationalization of the Water-Food-Ecosystem nexus** in a plausible, realistic, and holistic manner.

The process of visioning prosperous nexus communities **begins with sharing knowledge among stakeholders in a participatory way,** with the final aim of addressing such conflicts. In its most mature form, the process will lead to trust building between competing stakeholders, and eventually, to appropriate resource management. Such is the intention of the LAA environment. LENSES LAAs involve multi-level and multi-scale stakeholders who will produce shared visions and find tangible ways to implement methods and tools through cooperation. The foundation of the co-creation process in the LAA is the development of transformative (visionary) scenarios for resilience building through the integration of explorative models and participatory activities in line with the work of other WPs outputs. **At the pilot level,** this approach will allow knowledge exchange and improve stakeholders' scientific and technical capacities regarding Water-Food-Ecosystem nexus, as well as a roadmap for their implementation. **At the project level,** LAAs are intended to enable a multiplicity of stakeholders to set-up a collaborative Nexus space across the Mediterranean region, in which more solutions can be socialized, and scaled-up. The reason behind is that LENSES aims at **not only sharing, but actually integrating methods to develop applicable tools/services** for the Nexus.

2. Guidelines for the development of LENSES strategic roadmaps for Nexus future

The visioning exercise follows a common structured approach comprising four phases through a participatory scenario process:

- i) Identifying the key systemic Nexus challenges;
- ii) Developing a vision for a “business-as-usual” future building on a consolidated narrative of present challenges and stakeholders’ perspectives;
- iii) Use of backcasting techniques to identify and think of actions, norms, policies and programs that could potentially connect the consensual visions for desirable futures with the present situation;
- iv) Assessment of LENSES results for consensus building on policy changes and with best potential for reaching the shared visions, information, and investment gaps.

This section presents guidelines that summarise the methodological approach for the development of the strategic roadmaps through these four steps. The application of this methodology is however very flexible and can be tailored to specific requirements and needs from the pilots.

STEP 1: Identifying the key systemic Nexus challenges

This process builds on a **collective understanding of the current situation and the main sectoral and systemic challenges**. This aim is articulated through a number of potential steps, and it is expected to be the core part of the initial workshop with stakeholders.

STEP 1.1: Problem framing

The process starts with the characterisation of the current situation of the pilot area, represented in a simplified visual format. To this end, a predefined set of materials such as maps and cards with descriptions of infrastructures, economic activities and resources will be provided by WP2 leader to facilitate discussions. These materials will build upon the information collected through the pilot baseline description and the interviews carried out as initial step of the participatory system dynamic model, if available.

Such visual representation provides an opportunity for better understanding the landscape from the perspectives of the different domains and facilitates a deeper discussion of key issues among stakeholders within and across sectors. While this step is largely going to be implemented during workshop 1, it may be presented during workshop 2 as a starting point to engage stakeholders in the exercise, especially in case new stakeholders join in the workshop 2.

As part of the activity, it is suggested to open a discussion where participants can state the main sectoral challenges they identify. This can be done in an oral format, or in a written format:

- **Oral format:** around ten minutes asking in plenary about the main challenges they encounter. Some examples (from the same pilot area or from different case studies) can be provided to facilitate and initiate the process. The facilitator or another person of the organizing team needs

to write down all the proposed problems, in a way that can be read by all participants (in a big screen or in a big piece of paper or on a board).

- **Written/ participatory mapping format:** providing each participant with sticky-notes or cards, so that they can write one problem in each sticky-note or choose it from the set of cards. In a second step, participants stick their notes on a big white paper, on the wall or on a blackboard. Alternatively, they place them into a map. In a third step, the facilitator reads to the audience each sticky-note, and groups them by similarity. Some time can be provided at the end for participants to make oral proposals of additional problems.

STEP 1.2: Prioritisation of the main Nexus challenges

A second step consist in the prioritization of the problems. This can be general or by topic (a prioritization of Water-related problems, of Ecosystems-related problems, of Food-related problems, and of Climate Adaptation and Mitigation related problems). It is important to explain to the participants the criteria or reasons they need to follow in the prioritization, as well as define the challenges collectively (defined first by the analysts but also discussed with the stakeholders at this stage). It is needed to know the reasons behind the prioritization. This can be performed orally or in a written format:

- **Orally:** the facilitator asks for votes for each problem, one by one, and a person from the team writes down the votes for each problem.
- **Written:** each participant can provide a certain number of votes to each problem. They can stand up and stick their votes (stickers) to the most relevant problems.

Once the voting has taken place, the facilitator can read the prioritization of the problems, the ranking of problems with the number of votes. Then, an open discussion can be proposed, to find consensus about: a) the reasons for the prioritization; b) the degree of agreement or disagreement between participants; c) bring up specific problems which have been underlooked but are important, and viceversa.

STEP 1.3: Deduction of the most important Nexus objectives from the main challenges

Following the previous exercise, it may be decided to conclude identifying a set of the most important objectives for the participants towards a more resilient Nexus in the pilot area. Whenever possible, the facilitators will consider the main Domain Objectives defined for each pilot as part of the PSDM preliminary activities.

The identification of the objectives or aims of the participants can be done in a more complex or straightforward format:

- The longest and more complex method would be to follow the same steps of the previous point, just changing “challenges” by “objectives”.
- In a more straightforward way, the facilitator, based on the discussions of point 1, can directly propose the objectives that have been considered more important by the participants.

An open discussion can be proposed to the participants to know the level of agreement with the proposed objectives, any additional objective to be included, and any other consideration. This can take between 10-30 minutes (depending on the chosen method).

STEP 1.4: Prioritization of the objectives

The objective of this step is to finalize with the minimum number of problems and objectives to work with. The LENSES team can choose to work with a certain number of problems and objectives in general in the Pilot area or with a certain number of problems by topic (Water, Ecosystems, Food, Climate Adaptation and Mitigation). In the first case, we propose to work with between 2-5 problems and objectives; and in the second case, with 1-3 problems and objectives by topic.

STEP 2. Defining the “Business as Usual” (BAU) scenario

The business as usual scenario (BAU scenario) summarises a series of changes in key Nexus indicators that are likely to happen if current policies and ‘boundary conditions’ continue. Changes are represented visually by adding or changing existing elements on the map using the same set of cards prepared for the previous step. Next to the foreseen changes, stakeholders will also list along a timeline what actions are expected to take place and by when.

Our recommendation is that organizers start this activity by presenting the main challenges related to the sustainability of the NEXUS between Water, Ecosystems and Food, using the result from previous workshops and participatory activities. If available, results from the Climate Risk Assessment should also be added to this presentation as a key pressure affecting the system, i.e., by threatening water security, level of provision of ecosystem services and food security.

The following activities are recommended for the elaboration of the BAU scenario

STEP 2.1: Participatory mapping of key drivers

Once we have stated the main challenges and objectives of concern of the pilot for the WEF nexus, the next step is to define a business-as-usual scenario for a mid-term future. The “business as usual” can be defined as “the most probable future based on the current knowledge and on an agreement between participants in its design, that follows the current trends.

Previously to the participatory activity, the organizing team will define the temporal timeframe that can be used in the next steps, or the team can decide to involve the participants in its definition. As another option, the organizing team can propose a temporal horizon to the participants, and based on their reaction, change, or adapt it accordingly. The organizing team can also make it totally open and try to find a consensus between the participants. The temporal time frame is the year that can be used to imagine, to visualize the scenarios and the visions. It can be 2030, 2040, 2100... Since there are many EU-wide relevant policies (e.g., EU Green Deal, Climate neutrality, Farm2Fork) that have defined clear targets for 2050 linked to their main objectives, this time horizon is recommended as a basis for the elaboration of the BAU scenario as well as for the visions.

For the development of this activity, it is recommended to use the same materials (i.e., a map and a customised set of cards comprising key resources, socioeconomic activities, ecosystem services, pressures, and impacts) that were used in the previous phase for the definition of the systemic challenges.

The first step is the definition of the key drivers. For the design of this activity, it is useful to differentiate between the technological, social, political, economic and environmental drivers of change (using a set of cards and the map representing the pilot area). The central activity shall pivot around participants (representing all the Nexus domains) defining how they imagine the pilot area in the future. To this aim, the

attendants shall be asked to think over the expected evolution of the Domain Objectives and main systemic challenges in the future, i.e., describing how they think these will be. On top of this, they will be asked to explain the reason behind these appreciations, i.e., the drivers of change that will define that future.

As a support activity, participants can be asked to develop a discussion explaining the history of the pilot area concerning the WEF nexus issues. The objective of this step is to identify the drivers of change with the highest influence in the past. A good way of doing it is by differentiating between the technological, social, political, economic, and environmental drivers of change.

A timeline can be drawn in the wall, so that participants can add the main drivers of change, the key changes that took place, the disruptive situations (e.g. the approval of a law, the occurrence of a natural or human-driven disaster, the execution of a building, the introduction of a new technology), etc.

STEP 2.2: Business as Usual scenario

The activity will conclude with a recapitulation of the BAU scenario from the perspective of the WEF domains, by identifying how the main Nexus challenges extend over time and reaching a consensus on how the future may look like under current drivers (e.g., climate change) and existing political and economic conditions. This exercise will build on the Nexus resilient qualities and Nexus indicators (details are provided in the D4.1) as means to align these BAU scenarios with the PSDM approach.

The result of this exercise shall be compiled as a narrative explaining the expected status for some key indicators representative of the WEF Nexus and the key drivers that may explain this future status if no meaningful changes are made in current policies implementation and societal behaviour.

STEP 3: Develop the shared vision

It is recommended to carry out this step in conjunction with step 2 in a single workshop, since the development of the shared vision may benefit from the previous consolidation of the BAU scenario.

The identification of desired future states of the Nexus system should build on the ideation of audacious goals, to be coupled with a reflection on a balance for the desired futures.

STEP 3.1: Participatory mapping of objectives: seeking shared value

Participants must define how they would like the WEF Nexus to consolidate in the pilot area in the mid-term future. The defined “objectives” should have a desired state in the temporal frame. For example, it could be that the groundwater level has stabilized or recovered, that the agricultural production has increased its quality and value, that pollution decreased, and so on.

For this exercise, the facilitator can write on a screen or on a big paper the different objectives set in previous steps, and ask the participants about their preferred state in the temporal frame. Discussion between participants should be encouraged, and the consensus should be sought. In case a consensus cannot be reached, the two most different desired states can be defined and used for the next step. This exercise is much easier to be performed in small groups.

If the time allocated for the exercise is enough, after the consensus has been reached, each group should expose to the other groups in a plenary session their decision. In this case, an agreement between all the

groups should be achieved. For supporting this activity, the facilitator can write (on a screen or on a big paper) the defined states for each objective by each group, trying to define for a common value for each objective.

STEP 3.2: Connecting the future to the present (initial step)

As indicated earlier, the concept of 'visions' is closely linked to a back-casting approach for the development of scenarios, although the linkages between the vision and the current state may also be supported by forward planning methods.

To start building these connections, it is recommended to design a specific activity where the workshop participants are asked to identify potential actions that may favor the consecution of the desired vision for a specific domain. These actions may comprise new policies or rules, changes to ensure that existing policies are effectively implemented, the construction or recovery of relevant grey or green infrastructure or novel governance settings.

As a follow up step, these actions will be bundled accordingly to the specific systemic Nexus challenges they are addressing and potential trade-offs from their adoption or implementation will be investigated within the group.

STEP 4: Set the strategic roadmap to reach Nexus resilience

It is recommended that a specific workshop is organized to run through the exercises included in this final step, where the focus will be on developing the strategic roadmaps where the visions of "desirable futures" are linked with their corresponding pathways. Unlike the BAU that continues existing policies and directions, any desired future starts from clear, ambitious but realistic visions of what should be achieved. The rationale for exploring different desirable visions is that stakeholders have a wide range of preferences, values, and world views which make it difficult for everyone to agree on one single desired future. Typically, these divergent values and preferences manifest in difficult trade-offs that need to be weighted. Such trade-offs create critical branching points, where a choice of a particular option results in alternative pathways. For example, developing large scale water infrastructure vs. small scale nature-based solutions may lead to alternative pathways.

STEP 4.1: Connecting the future to the present (Narratives)

This step will build on the results from the previous workshop, e.g., initial identification of actions to be included in the pathways. Based on the desired future (vision), each group will work under a different exploratory scenario. This means that the participants should know that in the defined time frame (e.g. 2050), the objective has been reached (e.g., groundwater levels and dependent wetlands have been recovered). Then, based on the scenario they are working on, they need to propose what political and private initiatives should have taken place along time, to reach the objective. A timeline shall be used to facilitate this process. For example, participants can propose that in the first years, the government has to provide incentives like subsidies to change to a new particular technology, and in the last years the government has to set fines to all those that do not use the particular technology. The objective of this step is to define a set of practical interventions, that can be used to define a roadmap of interventions along time.



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If there is enough time, each group should present their results to the other groups, in a plenary session. Time should be devoted to allow discussion and question and answer from participants of different groups. Each group can define a representative (a speaker) to present their results.

STEP 4.2: Connecting the future to the present (Simulations)

In order to analyse the feasibility of the visions and linked pathways, LENSES is exploring a novel approach that integrates this visioning approach with the development of PSDM for pilot areas. To test the robustness of the selected pathways, it is beneficial to contrast them against quantitative data to be produced by the model as well as contrasting external circumstances (e.g. extreme versus moderate climate change scenarios). Probably in this workshop some simulations using the PSDM can be represented in real time, to better illustrate the results of applying the interventions included in the pathways. The development of the serious game can be also particularly helpful in this direction. This exercise would allow to analyse whether the main proposed actions are expected to move the system towards the desired vision or whether there are key barriers or large trade-offs that may jeopardise the achievement of the defined vision.

This methodology is still under development but has a high potential to produce pathways that integrate the visions from the local and regional stakeholders (i.e., norms, perceptions, beliefs, and values) and are validated and tuned up with quantitative data that explore the feasibility of these pathways based on the PSDM specifically developed for the pilot.

STEP 4.3: Drafting the strategic roadmap

After the workshop, the LENSES team will collect and analyse all the information with the aim of producing a **strategic roadmap** for the pilot area. This strategic roadmap shall entail the common interventions proposed by the different groups (each of them working in a different future scenario) and will strongly take into consideration the results from the Political Economy Analysis (PEA) to be undertaken within the frame of WP2. Moreover, these pathways will be completed and/or adapted based on the simulations performed through the PSDM for the pilot.

This integration of methods shall enable to produce a) feasible pathways with a high internal coherence, since potential tradeoffs will be clearly elucidated; and b) pathways defining a set of selected interventions presenting higher levels or resilience, because they are supposed to be useful under the different possible futures.

These strategic roadmaps will be synthesized in document format and circulated to the workshops' participants to be further evaluated by all the relevant actors. In this way, the participants will have a second opportunity to propose new measures or interventions, and present unknown difficulties (barriers) for their implementation and positive or negative consequences.



3. How to use the guidelines for the design of the strategic roadmaps

These guidelines set the ground for the application of the visioning approach by the LENSES pilots by explaining the key concepts of the process and defining the steps to be considered.

It is necessary to apply this methodology through participatory workshops where several stakeholders representing all the WEF Nexus sectors are properly represented. Ideally, the process shall take place through three dedicated workshops although the activities could be accommodated into two or four workshops.

The guidelines provide basic information, and the pilot leaders need to bear in mind that a more detailed design is required for the organisation of the workshops and related participatory activities. The process is flexible and can be adapted to the specific needs and objectives of each pilot. To this aim, specific support can be provided by WP2 leader (Ecoadapta) and possibly by WP4 leader (IRSA) to define the concrete activities to be conducted in each workshop and help to analyse the information and reflect about the process.



D2.4. Report on LENSES strategic roadmaps for Nexus future



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