



A guide to knowledge co-production in multifunctional landscapes

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Short Description

Guide to knowledge co-production in Living Labs with multifunctional landscapes. This is a preliminary version of the handbook and is a subject to possible change following feedback and review by CINEA.

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List of Acronyms and Abbreviation

KCP	Knowledge co-production
LL	Living Lab
3H	Three Horizons

Executive Summary

This guide provides methodological guidance for how to design a knowledge co-production process tailored to deliver actionable knowledge for managing landscapes and fresh water in line with the changing climate and strengthen the capacity of local actors to take action. It positions co-production of knowledge (i.e. processes that bring together diverse groups to iteratively create new knowledge and practices) as a key practice for collaboration and inclusive collective action. It follows the current understanding that co-creation processes can, and should, go beyond generating new knowledge and enable societal change and action.

The guide is written for anyone interested in running participatory place-based processes – researchers engaging with societal actors, bridging organizations facilitating change for sustainability, or civil servants with a mandate to strengthen collaboration across sectors. It can be useful as hands-on guidance for someone with limited experience with designing dialogues and as a structure to strengthen practice for someone who is already familiar with collaborative processes.

It provides a step-by-step guidance for process facilitators with recommendations for how to prepare for three sequential workshops and a detailed overview of the workshop designs. The process has been tested in four ALFAwetlands Living Labs, which serve as illustrations and the basis for reflection and further thoughts, practical considerations and tips for convening and facilitating interactive and engaging workshops.

1 Introduction

1.1 What is knowledge co-production?

Knowledge co-production (KCP) can be defined as “[i]terative and collaborative processes involving diverse types of expertise, knowledge and actors to produce context-specific knowledge and pathways towards a sustainable future” (Norström et al. 2020, p. 183). These processes can also enhance the capacity of societies to manage problems in the future. KCP can take place in structured dialogue series, which are a flexible, multi-purpose tool for bringing different knowledge holders together, whose expertise and perspectives might be overlooked otherwise for various reasons (Cornell et al. 2013; Seiferth et al. 2024; Tengö et al. 2014).

1.2 What is the ALFAwetlands approach to knowledge co-production?

This approach to KCP is centered around building a *coalition for change*—a committed, capable, and legitimate group of actors that can drive processes forward and ensure long-term positive impacts that ideally lead to action (Enfors-Kautsky et al., 2021). Intended participants are actors who “(1) represent different actor groups, (2) provide complementary knowledge about landscape and water management, and governance, (3) be [are] interested in and open to dialogue-based processes, collaborative projects, and willing to broaden their horizon, and (4) have links to other stakeholders to bridge different social and organizational contexts” (Seiferth et al., 2024, p. 5). The coalition for change also serves as a platform for connection, where actors can engage with other stakeholders across institutions, sectors, or associations. The idea is that the workshop participants embed the co-produced knowledge and strategic ideas into their own networks and draw on the skills and attitudes strengthened during the workshops in future collaborative governance processes. The workshop series can also inform other initiatives, to act as a bridge between projects, or serve as a starting point for broader engagement.

The goal with the guide is to support KCP facilitators (e.g. knowledge brokers, bridging organizations, network coordinators) establish and run collective learning processes that help actors mobilize, articulate, and connect diverse forms of knowledge to increase the inclusion of local, experiential, scientific, practitioner, tacit, as well as embodied ways of knowing in decision- and policy-making. There are multiple ways in which people attribute value to different functionalities and attributes of the landscape and thereby seek to enable just, transparent, and meaningful collaborations among diverse knowledge holders (Tengö et al., 2014). These diverse ways of knowing and attributing value feed into three types of knowledge: system knowledge, target knowledge, and operational knowledge, which are mobilized and

strengthened throughout the workshop series. These three types of knowledge can be used to conceptualize and frame challenges emerging within complex social-ecological systems and are relevant to nurturing collective action (Partelow & Winkler, 2016; Pohl & Hirsch Hadorn, 2007).

The approach to KCP presented here extends beyond co-producing knowledge and includes laying the foundation for collective action and engaging in change-making to improve water and landscape governance. This is done by co-producing strategies concerning water and landscape management as well as governance that can be carried forward and implemented beyond the workshop setting. To co-produce such strategies and not to push for a single agenda or predefined outcomes, the participating actors need to develop competencies to address complex sustainability challenges. Therefore, learning processes are a core part of the workshop series, which support a shift from individually held perceptions of problems and solutions to shared, collective understandings. Finally, a central theme of the workshop series is to foster such shared understandings while addressing misunderstandings and conflicts of interests. This enables participants to address sustainability challenges collaboratively and more effectively.

The dialogue-based KPC presented here was designed to do three things:

- How can a social-ecological systems framing change the problem formulation and the perceptions of solutions? (Workshop 1);
- How does attention to care and emotions (through place-based methods) change the perceptions of other actors and alternative solutions/management options? (Workshop 2);
- How does scenario work change problem formulation and the perception of solutions? Does a focus on motivation and emotional rationale for different choices help evoke agency? (Workshop 3).

Prior to the KCP, **especially new cases can benefit from a baseline study** establishing the social and environmental context of the case. The 'baseline' can serve as a material that will help, question, validate, complement, or position the information and knowledge generated during the workshops and their associated activities. The baseline needs to speak to the same points as the workshop series: System, target and operational/transformational knowledge (see below). The 'baselines' should provide sufficient contextual case information to adapt and start off the workshop series. The baseline also serves as a tool for identifying key actors who should be involved in the dialogue process, and make sure the participants are representative of the larger group of stakeholders/interests.

The details of the baseline, and how it is assembled, is specific to the case and the challenge it foregrounds, and to the decision-making context. An assessment process always reflects to some degree the expertise and style of the assessor. The baseline

assessment draws on expert skill, not an exact science or prescriptive format. Nonetheless, while the exact sources for different information may differ between Living Labs the general approach (targets and methods) applies to all, which ensures the integrity and comparability of the assessments. Not all stages or methods or sources will be required in every situation.

A detailed description of how a baseline can be compiled can be found in ALFAwetlands Deliverable 2.2. Summary report on baseline assessment, which has limited access because of the sensitive information it contains.

1.3 Why knowledge co-production for improved water and landscape governance?

In general, there is a need for carefully designed meeting spaces to be able to collectively govern and care for multifunctional landscapes while being inclusive of different worldviews, ways of knowing, and value systems. These spaces are important for exchanging viewpoints and making informed decisions through KCP (König, 2018). KCP facilitates the development and strengthening of sustainability competences and knowledge among actors through bringing together actors with different types of knowledge, fostering skills such as active listening and compassionate communication, and cultivating a positive attitude toward diversity. KCP promotes learning through various discussions and interactive activities, which lead to deeper shared understandings of complex problems and support the development of more nuanced strategies. Actors can draw on these experiences and their learnings during those processes to collaboratively work toward change. The process can serve as a starting point for broader engagement, feed into other projects, or act as a connection point between initiatives. The skills and experiences gained can be carried forward and applied in future collaborative governance processes.

A collective and collaborative approach also plays an important role in mediating tensions and conflicts regarding different interests of actors or actor groups. Through working actively with surfacing and deliberating diverse perspectives, effective collaboration among actors can improve. **As a result, decisions and strategies are more likely to be legitimate, since diverse actors are included in the decision-making process.**

1.4 The four Living Labs for knowledge co-production in ALFAwetlands

ALFAwetlands is a project funded by the European Union. Its aim is to contribute insights on the potential of wetland restoration as a strategy to mitigate the effects of climate change. After piloting a workshop series for co-producing knowledge with local actors on Öland, Sweden, three other Living Labs in Germany, Finland and Latvia adapted the design of the workshops to the local context and facilitated dialogues around water and landscape governance. **KCP plays a key role across the four case studies by enabling inclusive, collaborative, and learning-oriented processes.** These processes are designed to support improved water and landscape governance, to build long-term capacities, and foster change through coalition-building and shared understandings, and to ensure an inclusive, community-based approach to managing water in the landscape.

The Living Lab in southern Sweden is the island Öland, which is already experiencing the effects of climate change. The goal of the KCP process on the island is to improve water and landscape governance of its multifunctional landscapes to address the island's water scarcity issues. The Living Lab Upper Peene Valley is located in north-eastern Germany, right in the center of the federal state Mecklenburg Western-Pomerania. As a typical valley mire, it consists of spring fens at the margin, a river with adjoining flood mires at the base and extensive percolation mires in between. The region is therefore rich in mires and peatlands and has a complex system of drainage ditches with a history of large-scale drainage. The goal of KCP in the Upper Peene Valley is to facilitate the transformation towards wet peatland use. The Finnish Living Lab is a boreal forest and peatland area within the Sanginjoki Nature Reserve in the vicinity of the city of Oulu, which is located in the western coast of Finland. The goal of KCP in Sanginjoki is to enhance public involvement in restoration and nature conservation. The Living Lab Kaigu 14 is a former peat extraction site in central Latvia, now undergoing partial restoration, including afforestation, rewetting, and the development of paludiculture. The goal of KCP in Kaigu 14 is to promote a transformation toward paludiculture and berry cultivation in former peat extraction areas.

A detailed account of the four Living Lab KCPs can be found In ALFAwetlands Deliverable 2.4. Summary report on local co-creation processes, which has limited access because of the sensitive information it contains.

2 Guidance for facilitating knowledge co-production

One of the central tenets of knowledge co-production is that it should be meaningful to all the participants. This principle is central in the workshops outlined below, and in addition to the workshop events there is also a strong recommendation to discuss with the participants, before the process starts, what kind of documentation or final report that would be useful to them.

2.1 Workshop 1: Social-ecological systems mapping

The overarching goals of the first workshop are to **(1) get to know the other actors and lay the foundation for a good dialogue process, (2) establish a shared problem understanding, and (3) engage participants in social-ecological systems mapping exercises to probe and nurture systems thinking.**

Start with inviting the participants, either using stakeholder lists from a baseline assessment or drawing on the case knowledge held by the reference, via email or phone. Try to find an open, cross-actor relevant yet integrative framing for the sustainability challenge that the process sets out to address. The first workshop includes an exercise using photos taken by the participants so the invitation needs to include a request to bring photos or objects which represent their positive and negative associations with water/wetlands to the first workshop.

2.1.1 Introduction

(Activity duration: 10 mins)

Welcome the participants to the workshop and introduce themselves. It is possible to also introduce the broader project, initiative or program that the knowledge co-production process is part of.

2.1.2 Commitment of conduct

(Activity duration: 10 mins)

At the beginning of the first workshop, first familiarise the participants with the principles for a good dialogue (Appendix 6.1), such as equality and the absence of coercive influences, listening with empathy, and bringing assumptions into the open. A key step towards creating a safer space is to inform your participants about how you are going to document and use the information and data generated during the workshop series (see Commitment of Conduct, Appendix 6.1). You also hand out Plain Language Statements (see Plain Language Statement, Appendix 6.2) and Informed Prior Consent Forms (see Prior Consent Form, Appendix 6.3). The latter document specifies interviewee rights and researcher obligations for interviews and surveys conducted within the dialogue process. **Typically, the participants are asked to sign the documents. However, some participants might feel uncomfortable**

signing a formal document because it can come across as very formal and official. In such cases, go through the documents together as a group and ask the participants to give their oral consent.

2.1.3 Survey 1

(Activity duration: 20 mins)

The survey assesses the participants' baseline understanding of the specific problem(s) that the series of three workshops aims to address. The survey also leads to an initial understanding of actors' systems, target, and transformation knowledge. You can find the survey conducted on Öland as an example in Appendix 6.4.

2.1.4 Aspiration cloud

(Activity duration: 10 mins)

This exercise is optional. At the beginning of the first workshop, you ask participants about their aspirations and expectations for the workshop series, thus the co-production process. As part of this exercise, participants write down their aspirations and expectations on post-its, which you collect in an aspiration cloud.

2.1.5 Round of introduction

(Activity duration: 15 mins)

* If time is limited it is possible to include the round of introduction in the next exercise and skip this introductory exercise.

Let all participants choose a pencil which color they associate with themselves. Ask them to write their name in that color on a map of the Living Lab area (tape it to a wall). Then, each participant explains in plenary why they have chosen their color and location on the map. The participants typically share personal insights and feelings they connect with peatlands, the landscape, and nature. This exercise helps to get to know each other better and to establish personal connections among each other.



Mood board from Öland

© Carolin Seiferth

2.1.6 Mood boards or Speed dating

(Activity duration: 40 mins)

Both exercises are designed to encourage participants to share their positive and negative associations with water and wetlands. Choose which exercise to do.

Mood boards

The mood board exercise helps the facilitators and the participants to get to know each other and respective perspectives on the issue better. Drawing on ideas of photo elicitation, ask the participants the photos or objects they brought to represent their positive and negative associations with (as per request in the invitation) water/wetlands to the first workshop. In combination with a round of introductions (if you skipped the previous exercise 5), you ask your participants to present themselves and their positive associations with water. In a second round, participants present their negative associations with water, which also prepares everyone for the next exercise: the shared problem formulation. This mood board exercise presents an opportunity to shed light on the different interests, experiences, knowledges, and perceptions of the problem present in the room.

Speed dating

This exercise has similar goals as the mood boards. Ask the participants to share their positive and negative associations as well as concerns regarding wetland restoration. This exercise consists of three rounds: in the first round, participants share their concerns; in the second, they explore opportunities; and in the final round, they exchange their personal motivations for participating in the workshop series. The Speed dating is a two-person conversation and participants switch partners after each round – ideally, participants who do not yet know each other should talk to each other.

2.1.7 Shared problem formulation

(Activity duration: 30 mins)

As part of this brainstorming exercise, ask the participants to think about the problem(s) to be addressed in the workshop series and how to formulate the issue(s) and most pressing concerns. Collect these problem statements on a whiteboard. Given the different interests, experiences, knowledges, and perceptions of the problem present in the room, it is not necessary to land on one joint problem understanding. **Instead, try to embrace plurality, which also reflects the underlying complexities of dealing with wicked social-ecological problems.**



Actors thinking about problems in Upper Peene Valley region

© Marie Lorenz

2.1.8 Brainstorming interventions

(Activity duration: 30 mins)

Think-Pair-Share! presents a useful way of brainstorming on an individual, pair, and group level. Make sure that the participants have a stack of post-its at their disposal to brainstorm and write down potential interventions to address the problems identified in the previous exercise. You have two options: either ask participants to focus on preventive as well as troubleshooting interventions, or ask the following three questions to guide the brainstorm intervention: What are we doing already? What are we planning to do? What do we need?

After the individual brainstorming part, the participants exchange their initial ideas with the person sitting next to them before moving into discussing ideas for interventions as a small group of around four people. Participants then present the results of their brainstorming activity. Collect the post-its and the facilitator team then clusters similar ideas for interventions. With the help of two stickers, participants mark two interventions they would like to discuss further in a next step to identify potential entry points for change-making. The interventions with the most stickers present the ones participants will work further on during the systems flowers exercise. Help the participants form groups of about 3-5 people. This exercise was highlighted as particularly beneficial for mutual sharing and learning because through this method participants recapitulated what they are already doing, what they are planning to do, and what they need to do in the future. It also prepared actors for the next exercise.



Actors discussing interventions in Sanginjoki

© Hanna Lempinen

2.1.9 Systems flowers or System map

Systems flowers

(Activity duration: 60 mins)

The systems flowers exercise presents the key exercise during the first workshop. As part of this exercise, participants (in groups of 3-5 people) identify, discuss, and connect actors' perceived agency as well as opportunities and challenges to a specific intervention (see Figure 1).

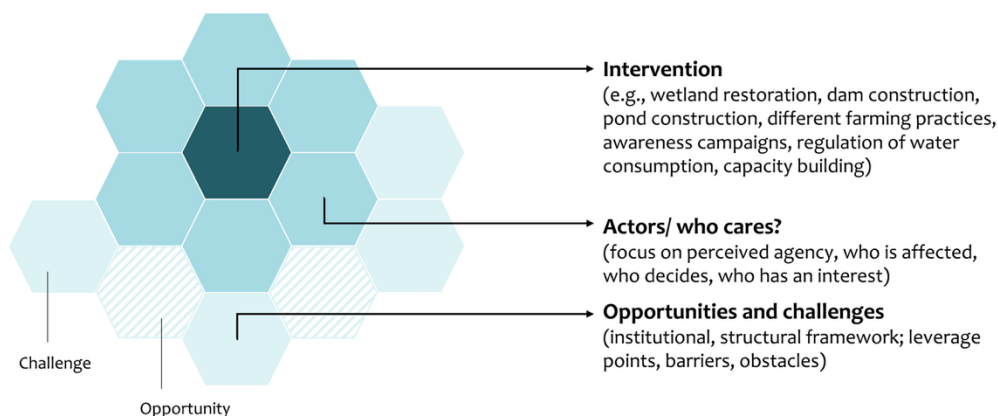


Figure 1: Visualization of a systems flower

Provide each group with an illustration (possibly printed) of the system's flowers exercise. The systems flowers visualize participants' system understanding and representation, which the individual groups also present to each other.

System map

(Activity duration: 120 mins)

* The Upper Peene Valley Living Lab conducted this activity instead of working with the Systems Flowers exercise.

In addition to the systems flowers, another output could be a system map created in collaboration with participants and the help of the graphic recording method, as was done in the Upper Peene Valley Living Lab. The graphic recording was carried out with the help of an external illustrator, who visualised the system map after the workshop (see Figure 2). Such a visualization can help to identify links as well as gaps between different system aspects included in the systems flowers and what is needed for overarching interventions. The system map is a further development of the systems flowers and visualises plans, options for action, and possible solutions. The content of the system map describes specific plans and next steps for the region. An advantage of doing this exercise is that the process will result in a visual 'end product', in addition to the **workshop report**, which can be shared and displayed in various settings after the workshop series.

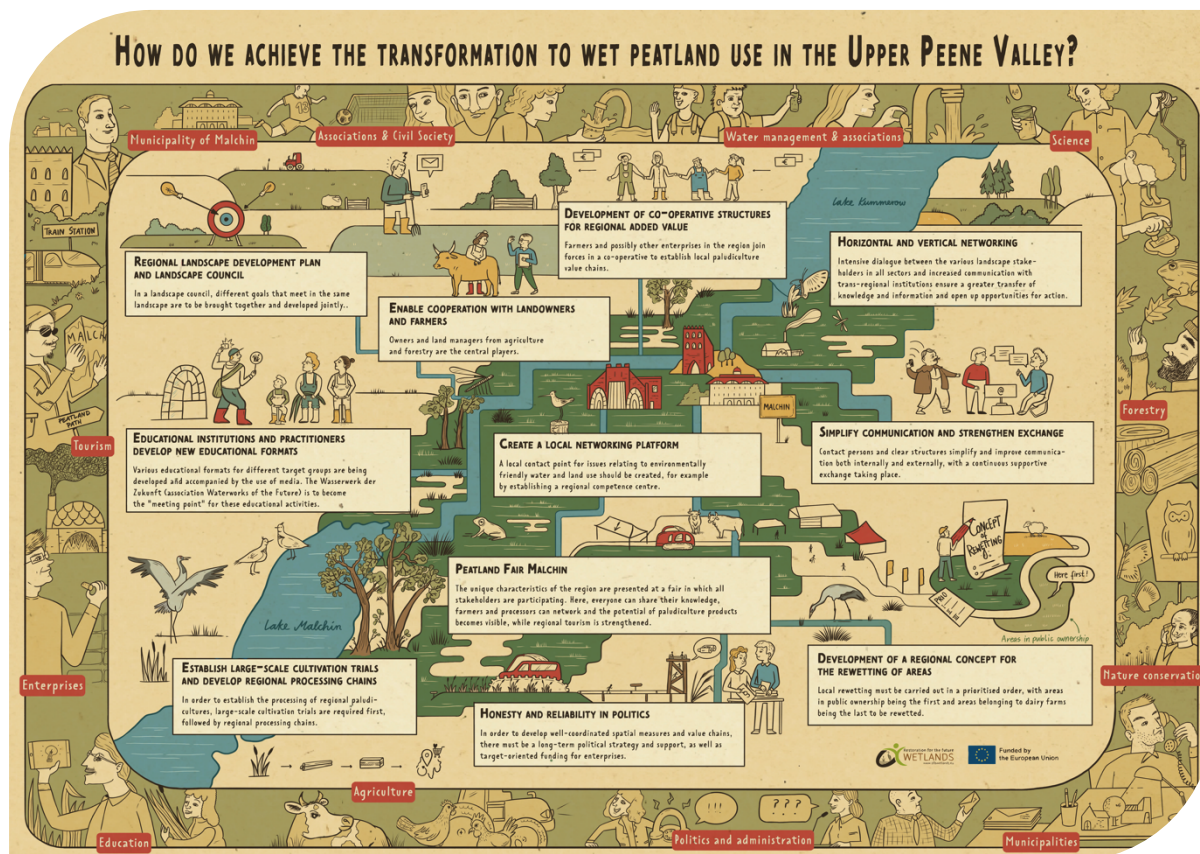


Figure 2: System map created in German Living Lab

2.1.10 Wrap up and evaluation

(Activity duration: 10 mins)

The first workshop finishes with a final round. Discuss and summarize conclusions and take-aways and provide a brief outlook of the second workshop. Facilitate a group evaluation to harvest the participants' key take-aways from the first workshop. Ask the participants to share their reflections on the workshop design and facilitation.

2.1.11 Postcard, optional

(Activity duration: 10 mins)

During this personal reflection exercise, participants share what they have learned on a small postcard. In addition, you can place an envelope with feedback cards on one table for participants who would like to leave anonymous feedback.

2.1.12 Reflection among team

After the first workshop, you, the facilitators, get together to jointly think about the workshop with a focus on content, design, and facilitation. **More information on reflexive evaluation can be found in ALFAwetlands Deliverable 2.4.**

2.1.13 List of materials needed for Workshop 1

Supplies	Material to prepare/ print out
Pens in many different colors, whiteboard markers, Eddings	Printed Commitments of conduct
Sticky notes (different colors)	Printed Plain Language Statements
Hexagonal sticky notes (for systems flowers)	Printed Prior Consent Forms
Round stickers	Printed photos (for mood boards)
Tape, Pritt Multi Tack	Printed postcards
Scissors	
Paper to work on (including a bigger one for the actors' map)	
Round stickers	
Name tags	
Magnets, pins, rubber bands	

2.1.14 Tips and tricks for Workshop 1

- Try out some of the exercises to see how they work!
- Be flexible—some activities might take longer or shorter for your group!
- Provide every group with an illustration (see Figure 1) of the systems flowers exercise as a handout.
- Encourage participants to think through concrete examples for the interventions exercise.
- Provide clear instructions for each exercise.

2.2 Workshop 2: Landscape walk

The second workshop is designed to make people rethink the ways they look at different landscapes/features and the positionality of different actors within these landscapes. The design is place-based and being in the landscape together is one of the key ingredients. To achieve the overarching goals of (1) weaving different knowledges, (2) mobilizing care, and (3) mobilizing (perceived) collective and individual agency (see Figure 3), the sites should be selected in conversation with the actors.

Workshop 2 requires a careful selection of sites to visit. The sites can represent different aspects of the problem or examples of interventions or collaboration between actor groups. Visiting one to three different sites as a group presents an opportunity for working towards a mutual understanding of different values and perspectives (e.g., about land use) through informal conversations and the joint experience of walking together. With the help of the reference group, identify one or two participants who can act as “hosts” at each site. The “hosts” guide the visits and share their personal stories and connections to the specific site. To help the presenters prepare their stories send them a couple of questions prior to the visit. No need to standardize, but the stories should ideally capture personal ties and meanings with a focus on people-place relationships:



Conversations while walking on Öland

© Carolin Seiferth

- What does this place mean to you?
- Which experiences do you connect with this place?
- What happens to you when you are here?
- Who has been involved in care and management practices here?

Site visits

(Activity duration: 1-2 hours per site)

One or all the site visits could start with a mindfulness exercise, where you encourage your participants to walk in silence to immerse themselves in their surroundings and to experience a place by attuning their senses.

Host presentations

(Activity duration: 10-15 mins per host)

At every site, participants have the chance to learn about a specific place through listening to stories. Being outside also holds a great potential for surfacing new discussion points by experiencing and hearing about places' multifunctional features first-hand.

Conversations while walking

Walking together presents an opportunity for participants to engage in conversations about how they experience different places. These informal conversations are important for building relationships, trust, and shared understandings.

Reflexive diaries

* If this exercise does not fit with the case context or the participants it may be skipped. In the Kaigu Living Lab the reflexive diary was filled out after the field visits, with a focus on possibilities and challenges associated with managing former peat extraction sites.

The idea of this exercise is that participants reflect about the different places and their stories guided by a reflective diary during the walking workshop. This diary could include the following questions which can be filled out at the sites:

- Before embarking on the walking workshop:
 - What do you associate with the places we visit today?
 - Do they have any special significance to you?
- Questions for each place:
 - Which thoughts and feelings does this place evoke in you?
 - What triggers these thoughts and feelings?
 - Is there something interesting, new, or surprising you have learned about this place?
 - What could you see yourself doing here?
- After the walking workshop:
 - What can we learn from those who take care of the different places?



Site visit in Kaigu
© Santa Kaleja

2.2.1 Photo elicitation

Taking pictures during the walking workshop

Ask your participants to take pictures with their cameras to capture the thoughts and feelings a particular place evokes in them. (This could be done with the help of the diary). After they have sent their pictures to you at the end of the walking workshop, you print them out and bring them to the second

part of Workshop 2, which starts with a reflection round based on the different photos taken.

Reflection round

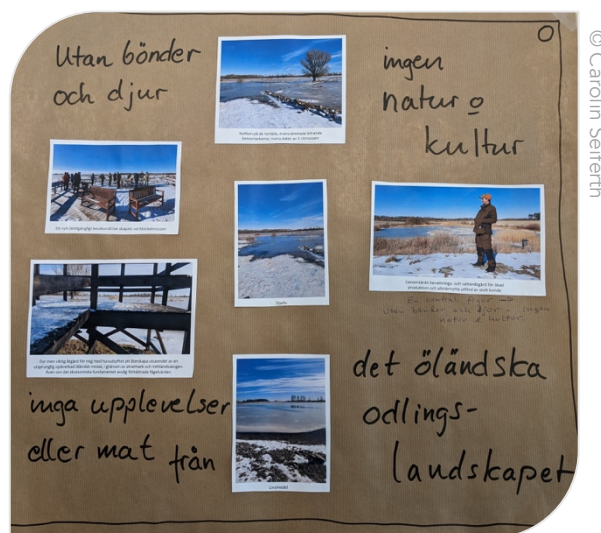
(Activity duration: 20 mins)

The second part of Workshop 2 starts with a reflection round for harvesting thoughts and impressions of the multifunctionality of different places with the help of the photos taken by the participants during the walking workshop and explain the reason behind taking this photo to the group.

Collage

(Activity duration: 20 mins)

As part of this exercise, participants use their photos taken during the walking workshop to create a collage. Groups of 3 to 4 people work together and arrange the photos with snippets of texts. This exercise also helps participants to talk about the thoughts and feelings a specific place evoked in them.



Collage about farming in balance with nature and culture from Öland

2.2.2 Seeds of good collaboration

(Activity duration: 60 mins)

* If there are time constraints ask participants to already incorporate synergies between different values and interests in their collage.

The exercise around mapping synergies presents a useful step in leveraging ideas about (perceived) agency. Working in the same groups as during the collage exercise, the participants use sticky notes of different colors to think through building or strengthening synergies between different interests and values. The primary focus is on synergies they have heard about when visiting the different sites as part of the walking workshop as examples of exercising collective agency given the places' multifunctionality features. To also leverage individual agency, participants write down examples on how to support initiatives and therefore build or strengthen certain synergies. In a last step, participants can freely brainstorm ideas and projects they would like to undertake to nurture creative, outside-the-box thinking.

In the final brainstorming exercise during the second workshop, the groups brainstorm and write down seeds of good collaboration. These seeds of good

collaboration represent positive aspects of collaboration which the different groups would like to see more of in the future. Finally, one member of each group presents a couple of seeds in plenary.

2.2.3 Group evaluation

* You either finish with this group evaluation or the following personal reflection exercise.

In a facilitated group evaluation and reflection round, harvest participants' key take-aways from the second workshop. Also, ask the participants to share their reflections on the workshop design and facilitation. Place an envelope with feedback cards on one table in case participants would like to leave anonymous feedback.

2.2.4 Circle, Square, Triangle

(Activity duration: 10 mins)

If there is time, the workshop can be concluded with a personal reflection exercise during which participants share what they fully understand, what still spins around in their heads, and what remains unclear after the second workshop 2.

2.2.5 Reflection among team

After the second workshop, you, the team of facilitators, get together to jointly think about the workshop with a focus on content, design, and facilitation (more information on reflexive evaluation to come).

2.2.6 List of materials needed for Workshop 2

Supplies	Material to prepare/ print out
Pens, whiteboard markers, Eddings	Printed Commitments of conduct
Sticky notes (different colors)	Printed Plain Language Statements
Tape, Pritt Multi Tack	Printed Circle, Square, Triangle cards
Scissors	
Glue	
Name tags	
Magnets, pins, rubber bands	

2.2.7 Tips and tricks for Workshop 2

- Start thinking about different sites to visit early on.
- Try to visit the sites before taking your group there to figure out logistics (parking, how long it takes to walk around, find out which type of footwear is required...)
- Think about how to capture the discussions following the host presentations. Consider distributing note-taking tasks.
- Try out some of the exercises yourself to see how they work!
- Be flexible - some activities might take longer or shorter for different groups!

2.3 Workshop 3: Strategy development

The overarching goal of the third workshop is to mobilize (perceived) collective and individual agency with the goal to move towards transformative change. Based on the acquired understanding of what the building blocks (ingredients) for different strategies might be (from Workshops 1 and 2) and what the strategies aim to achieve, Workshop 3 uses the 'Three Horizons' (3H) approach (Sharpe et al., 2016) to identify and discuss pathways forward.

In preparation for the last workshop, try out the 3H framework. Working through the different points (see below) and brainstorm different strategies based on the outcomes from Workshops 1 and 2 is a good way to get familiar with the approach and to start to think. Since this is the last workshop in the dialogue process it is important to think about potential next steps as a team: When will the summary of the results from the dialogue process be presented back to the participants? How and to what extent could they be supported when implementing their ideas and strategies? How can the results be fed into other ongoing dialogue processes and initiatives?

Note: This workshop was carried out quite differently in the four ALFAwetlands Living Labs. While the Öland and Kaigu Living Labs both applied the 3H framework, they each adapted it in their own way. The Finnish Living Lab developed three future scenarios by employing Futures Thinking which was inspired by the 3H model. The Upper Peene Valley Living Lab used a different methodology and invited four guest speakers to provide thematic input. Their workshop led to profound understandings of the complexities of paludiculture (Agriculture and Forestry on Rewetted Peatlands), agriculture, and peatlands, and since one of the four guest speakers was knowledgeable about economic aspects of farming on rewetted peatlands, other farmers expressed that they felt respected, understood, and well represented. Due to the broad range of thematic inputs and the potential for emerging tensions, the research team chose to involve an external facilitator to guide the process. Because the third workshop was designed differently compared to the other three Living Labs, their approach will be outlined below, after we have explained the workshop design guided by the 3H approach.

2.3.1 3H

(Activity duration: 60 mins)

Start by presenting the 3H framework to the participants. Highlight three points in the framework that the participants will work with during Workshop 3 (see Figure 3):

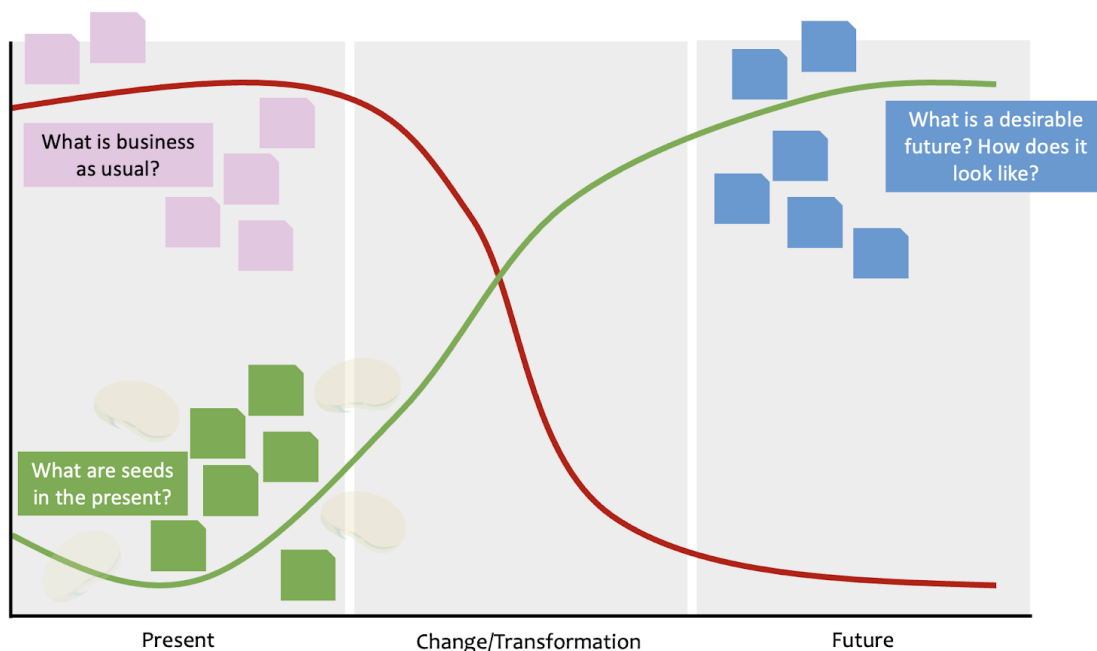


Figure 3: Overview of the 3H framework (based on Sharpe et al., 2016)

If possible, the facilitators divide participants into the same groups of 3 to 4 participants who worked together during the second part of Workshop 2.

Point 1 – A desirable future

Provide a quick recapitulation of the outcomes from Workshops 1 and 2 related to a desirable future, and ask the different groups to brainstorm desirable future visions (blue sticky notes). In a next step, they come up with creative future newspaper headlines which capture their ideas of desirable future visions.

Point 2 – Seeds in the present

The next step is to summarize results from Workshops 1 and 2 related to current activities or practices that help start a movement toward the desired future and hand out the seeds for good collaboration. Ask the groups to identify, discuss, and formulate additional ideas (green sticky notes) they would like to see growing in the future to move towards desirable future visions. Ask the groups to add their sticky notes and the seeds from Workshop 2 to their 3H frameworks.

Point 3 – Business as usual

Now summarize points from Workshops 1 and 2 related to the problem formulations and ask the groups to identify, discuss, and formulate additional things which need to change to enable the emergence of desirable future visions (red sticky notes).

Group presentation

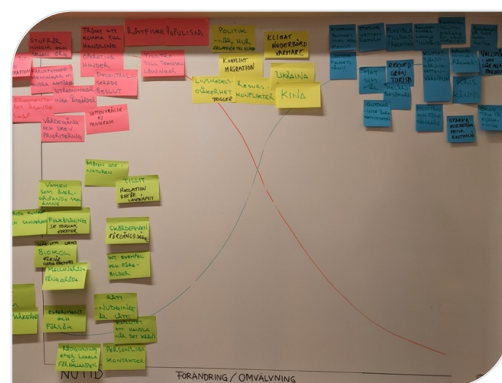
In the next step, all groups are to present 2 to 3 key insights for each point, which the facilitators collect and use to create a shared 3H framework with the help of the participants. To make sure that also future uncertainties are discussed, ask the participants to brainstorm positive and negative things which could happen in the future (yellow sticky notes).

Note: The Kaigu Living Lab adapted the workshop format by changing the order. They first covered business as usual, then desirable futures, followed by seeds in the present and by conducting an analysis of future uncertainties. The design of the third workshop of the Sanginjoki Living Lab was inspired by the 3H framework. After a summary of the first and second workshop, they developed a first alternative future scenario through brainstorming how Sanginjoki could be mentioned in the headlines in 2040. Their second future scenario focused on current good developments and the third future scenario centered around threats on the horizon.

2.3.2 Visiting the 3H exhibition

(Activity duration: 20 mins)

To familiarize themselves with other groups' 3H frameworks, all participants visit the 3H exhibition. Encourage the participants to pay special attention to Points 2 and 3 in all 3H frameworks. Equipped with a little sheet of paper with three reflective questions, the participants reflect upon what they could change individually (individual agency), how they could influence others who have the knowledge and means to act on their behalf (proxy agency), and what they could change collectively with the help of other actors (collective agency).



3H framework from Öland

2.3.3 Available action options

(Activity duration: 90 mins)

Assemble groups of actors with similar interests/ roles/ professions to work together on identifying available action options (60 minutes).

Examples of groups:

- Farmers/ landowners
- Local authorities
- Associations and interest organizations
- ...

Ask these new group constellations to focus on the middle part of the 3H framework to answer the questions on what needs to change to move towards a desirable future. If needed, use the prompts below to nudge the discussions forward (drawing on Falardeau et al., 2019).

What needs to change/ what do we need to see less of? Why is this important?	What are barriers for change?	How can we overcome these barriers?	Which actors are needed?
What needs to grow/ what do we need to see more of? Why is this important?		Which innovations would be needed?	

With the help of colorful sticky notes, participating actors simultaneously think about changes in the landscape (green sticky notes), changes in values, norms, and attitudes (yellow sticky notes), as well as changes in the way we work (pink sticky notes). After working with the questions, the different groups are to present (30 minutes) what needs to change with a focus on barriers and actors involved. Collect and use participants' ideas to complement the center part of the shared 3H framework. During a break, cluster the ideas into >>rough strategies<<. In the next step, the participants use two stickers to mark two >>rough strategies<< which they would like to discuss further.



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What needs to change in Kaigu?

2.3.4 Strategies

(Activity duration: 90 mins)

* A possible adaptation is to combine exercise 3 "Available action options" and this exercise (4. Strategies)

Select the 'rough strategies' with many votes to be translated into concrete strategies. Based on actors' voting, identify 4 to 5 'rough strategies' for further work and then ask the participants to form a group around a strategy they find most interesting.

Make sure group size is about 3 to 5 people each. If a certain strategy is very popular, two groups can work on it in parallel.

With the help of a mind-map and some prompting questions, participants work out strategies for navigating change and moving towards desirable future visions (60 mins):

- Describe the strategy!
- How does this strategy help us to move towards desirable future visions?
- Which preconditions are necessary?
- What are barriers?
- What are opportunities?
- How to work in practice?
- Who needs to be part?
- Which innovations are needed? Which new ideas are needed?



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Strategy presentation from Öland

Ask the different groups to present their strategies in plenary (30 mins), whereby each group presentation is followed by a short discussion where other participants are invited to share their thoughts about a specific strategy.

2.3.5 Personal action step

(Activity duration: 5 mins)

Ask the participants to write down a first step they would like to take on a sheet of paper.

2.3.6 Survey 2

(Activity duration: 20 mins)

The second survey will help capture the learning and knowledge exchange that occurred during the three workshops. It will capture to what extent the workshop series enabled relationship building and laid the foundation for future collaborations. The survey conducted on Öland (as an example) can be found in Appendix 6.5.

2.3.7 Group evaluation

Ask the participants (whole group setting) about their key take-aways from the three workshops. Also ask participants to share their reflections on the workshop design and facilitation. Place an envelope with feedback cards on one table if participants would like to leave anonymous feedback.

2.3.8 Discussion about next step

* The order of activities 2.3.6 and 2.3.7 can be reversed.

To conclude the workshop series, the group discusses next steps such as future meetings, joint presentations, when and how to present back the material from the three workshops, and how to support participants in implementing different strategies.

The design of workshop 3, alternative design

Welcome and overview

(Activity duration: 10 mins)

You start the workshop by welcoming the participants and giving an overview of the planned activities for the day.

Round of introduction, mini-dialogues

(Activity duration: 25 mins)

You begin the introductory round with all participants standing in a circle and introducing themselves by stating their name, role, and the place they are coming from/ working at. This introduction is followed by two rounds of mini-dialogues. In the first round, participants discuss the question: "When was the last time I have been to a wetland?" In the second round, the focus shifts to: "How do I currently perceive the region of Malchin?". The Mini-dialogues is a two-person conversation and participants switch partners after each round – ideally, participants who do not yet know each other should talk to each other.

Thematic inputs

(Activity duration: 60 mins)

The four guest speakers each give a short presentation on different topics (e.g., about environmental protection, economic opportunities in biomass utilization, and instruments and incentives for promoting paludiculture). After the first two presentations as well as at the end of the session, you give participants a few minutes to reflect on what they have heard and to discuss with their neighbors what they found surprising and what remained unclear. These discussions in pairs are followed by a plenary session where the participants have the opportunity to ask questions to the speakers.

Transition to thematic tables

(Activity duration: 10 mins)

After a short overview of challenges regarding rewetting and paludiculture in the region, you introduce the thematic tables.

Thematic tables: strategy development

(Activity duration: 75 mins)

You organise five thematic tables, each focusing on a specific topic (e.g., collection points for paludiculture products and related supply chains, potential areas for rewetting and paludiculture, free choice of topic). Each table focuses on developing a strategy related to its theme. You divide the participants into small groups, with each group working on one of the thematic tables. At each table, two non-participants are present, one is the thematic expert, and the other one has the role of the moderator. At the end of the session, you summarise and collect key results from each group on pin boards for everyone to review.

Interview of thematic tables

(Activity duration: 25 mins)

You conduct brief five-minute interviews with the leaders of each thematic table. The interviews focus on four guiding questions: (1) What was the most positive or memorable moment at your table? (2) What are the three main outcomes? (3) What topics remain unaddressed? (4) What are the next necessary steps? At the end of each interview, you ask participants to indicate whether they would like to continue to work on this theme.

Discussion round: how do we continue as a group?

(Activity duration: 25 mins)

You begin the round with a presentation of suggestions for potential next steps of the working groups to ensure continuation. Afterwards, participants gather in a circle to share their reflections on how their views on rewetting and paludiculture evolved as a result of the workshop. You also invite them to consider whether they could imagine continuing their involvement in a working group, to indicate which thematic area interests them most, and to share what support or resources they would need to stay engaged.

Final round of reflections (activity duration: 10 minutes)

(Activity duration: 10 mins)

During the closing round, you ask participants to share what impressions, insights, or emotions they take with them from the workshop.

2.3.9 Reflection among team

After the third workshop, you as the team of facilitators get together to jointly think about the workshop with a focus on content, design, and facilitation. You also reflect on the entire workshop series.

2.3.10 List and materials needed for Workshop 3

Supplies	Material to prepare/ print out
Pens, whiteboard markers, Eddings	Printed Commitments of conduct
Sticky notes (different colors)	Printed Plain Language Statements
Tape, Pritt Multi Tack	Printed surveys (Survey 2)
Scissors	3H frameworks to work with
Glue	3H exhibition handout
Magnets, pins, rubber bands	Tables for available action options
Paper to work with	Mind maps for strategies
Round stickers	Action step cards
	Seeds from Workshop 2

2.3.11 Tips and Tricks for Workshop 3

- Try out some of the exercises yourself to see how they work!
- Be flexible—some activities might take longer or shorter for your group!
- Encourage participants to be as precise and concrete as possible when thinking about the available action options and the strategies.
- Assign secretaries or join different groups in your role as facilitators to take care of writing down notes.

3 Capturing the insight and knowledge produced

One option to evaluate KCP processes is to conduct surveys before and after the workshop series to explore changes in participants' perspectives. It will also help to understand the learning and knowledge exchange which occurred during the three workshops and capture to what extent the workshop series enabled relationship building and laid the foundation for future collaborations.

Conducting interviews after Workshop 1 and Workshop 3 can help to capture actors' systems, target, and operational knowledge and shifts in individual perspectives but also to trace actors' learning journey over the course of the workshop series.

Another approach is to reflect on and analyze the co-produced materials during the workshop series using the three types of knowledge, system, target, and operational knowledge, as an analytical lens, following the example of Seiferth et al. (2024).

In addition, the facilitators' self-reflections offer valuable insights into the facilitation process, challenges encountered, and adaptations made, as well as the co-produced content throughout the workshop series. It helps to identify implicit power dynamics between the facilitators and participants but also among participants, and to refine facilitation methods. Reflective practices support critical self-awareness of the facilitators' own roles, assumptions, and positionalities.

3.1 Reflections from the ALFAwetlands

3.1.1 Methods

Employing participatory and interactive approaches throughout the workshop series was important for creating an inclusive and engaging process. Joint system mapping and the creation of system flowers allowed the identification of key actor groups, challenges, opportunities, and possible entry points for change-making. Strategy development exercises helped further develop these entry points, but also identify challenges which present barriers to successful implementation, such as the unsustainable management of former peat extraction sites. Exchange rounds, reflection exercises, and brainstorming sessions allowed diverse perspectives to come together, supported the identification of next steps, and ensured that everyone had the opportunity to be heard and listened to.

In general, a mix of discussion and interaction formats further encouraged mutual learning among actors. Small group work formats like think-pair-share, mini-dialogues, and thematic tables created safe spaces and allowed actors to exchange perspectives and deepen their understanding. These smaller group settings, followed by reporting back to the plenary, helped to ensure that all voices had the chance to be heard and listened to, supported co-learning, and contributed to clarifying shared goals. Working across different group compositions, both with like-minded actors and those holding different perspectives, contributed to broadening and deepening

mutual understanding, as well as strengthening collaborations. Group work presentations were particularly important to foster a deeper understanding of each other's viewpoints, aspirations, and values, which provided the foundation for mutual learning and collaboration.

Creative and experiential methods, such as place-based landscape walks, mood boards, and photo exercises, enabled emotional and embodied engagement with the places and the landscape. These methods revealed a diversity of values and viewpoints connected to multifunctional landscapes, fostered reflection, and nurtured shared understanding. Over time, we noticed less polarized views and an increased understanding of different perspectives. Sharing personal stories, particularly during walks, increased empathy and understanding among stakeholders.

Reflection was an important component throughout the workshops. Reflection exercises were embedded in all three workshops to harvest personal insights and summarize and synthesize diverse perspectives. Reflection rounds gave everyone the opportunity to share personal reflections with the entire group.

3.1.2 Setting

Creating a safe, open, and welcoming environment was important to encourage participation and dialogue and make sure that actors feel comfortable sharing their perspectives. Introduction rounds at the beginning and speed dating helped to create this atmosphere as well as providing opportunities for informal interactions such as coffee breaks. The workshop environment also contributed to trust- and relationship-building and nurtured a positive attitude toward collaboration and joint learning. Group dynamics benefited from alternating between small group work and plenary presentations. This structure supported deeper understanding and helped to ensure that everyone could be heard and listened to. Repeated interactions over the three workshops strengthened trust and relationships and created a space for the (gradual) development of conversations. Over time, both actors and researchers became more comfortable with each other and the process.

3.1.3 Facilitation

Establishing dialogue norms was important for creating a respectful and open dialogue space. The use of a Commitment of Conduct helped to promote honest and open communication, including voicing disagreements, while encouraging a willingness to listen and take others seriously. Activities like landscape walks and photo sharing were particularly useful in dealing with conflicting perspectives. In one case, it was the deliberate choice of researchers to not visit a contested site because they did not want to threaten the safe space and felt they were lacking mediation skills to handle a potential conflict situation.

Adapting the design of the workshops to the local context and specific requests, interests, and needs of actors was important to ensure relevance and keep actors on

board throughout the workshop series. This approach also contributed to building trust and strengthening cooperation with key actor groups (e.g., with farmers in the German case). Adapting the variety of formats such as presentations, photos, and discussion rounds helped to maintain engagement and co-learning of actors, make them feel comfortable with the workshop design and setting, and avoid repetitions of activities.

Time management was a recurring challenge throughout the workshop series. It was seen as important by researchers to prioritize key activities and to leave enough time for discussions and reflections. It was valuable for researchers to use clear language to facilitate mutual understanding and effective communication, for example when introducing activities or discussing problems and solutions to avoid confusion, misinterpretation, or getting lost in the complexity of issues.

3.1.4 Stakeholder participation and outcomes

It was sometimes challenging to engage people from all targeted actor groups. Participating in a series of three workshops can be a large commitment for some. It is important to recognize that some actors are able to participate during their paid working hours, whereas others have to take time off from their work or participate in their free time. Despite these challenges, actors expressed interest in continuing collaboration after the workshop series ended. Across all four Living Labs, the workshop series served as a new platform for dialogue across sectors and viewpoints and enabled conversations that likely would not have taken place otherwise. The iterative development of outcomes was supported by smaller feedback loops, which were integrated into the workshops in some Living Labs, and by sending a draft of the final report to the actors and integrating their comments before finalizing the report.

3.1.5 Challenges

The researchers encountered several challenges while facilitating the workshops. It could be helpful to be mindful of these when designing and planning future workshops:

Workshop design and facilitation

- Conducting all activities in the amount of time available is challenging.
 - Being flexible and ready to adapt certain activities on the spot while facilitating the workshop is important.
- Concepts and words can be interpreted differently by various actors.
 - Keep this in mind when trying to communicate clearly.
- It can be challenging to make a topic interesting for all actors.
 - Choose a topic that is relevant for all actors, based on for example your baseline assessment.
- It can be challenging to handle people's agendas.

- Make use of the commitment of conduct, ensure equal talking time and space during the workshops, and train your moderation and interpersonal skills as a facilitator.
- Encouraging actors to be open to different views can be challenging
 - Use the commitment of conduct, and design different activities that make it easier to understand different perspectives.
- Micro-managing social interactions during the workshops can be tiring as a researcher and/or facilitator.
 - Strengthen your interpersonal skills, plan in breaks, and divide tasks among the facilitator/ researcher team.
- It can be stressful and strenuous to do many things at the same time as a researcher and/or a facilitator
 - Divide the tasks among the facilitator/ researcher team, prepare for the workshops, and set enough time for preparation.
- One aim of the workshops is to not only co-produce knowledge but also to lead to action by co-producing strategies that can be implemented, which sometimes can be challenging to achieve.
 - Here it can help to manage expectations and to hand over ownership to the actors early on in process.

Actors' participation and engagement

- Getting actors to participate, to sustain their participation, to keep them motivated, and to maintain the same group can be difficult.
 - Start early to reach out to participants, to have enough time to follow up, design activities and choose topics that are interesting for all actor groups.
- Engaging politicians was particularly challenging.
 - Plan in advance and leave enough time to invite politicians in advance and to follow up on invitations.
- It can be difficult to maintain connections with Living Lab actors after the workshop series is over.
 - Hand over responsibility to local partners early on, and plan for follow-up activities or strategies that allow continued engagement.

Researchers' role

- Entering this knowledge co-production process as a researcher can be challenging because it involves balancing your research agenda with interests and priorities of local actors, for whom the process might be primarily about addressing local concerns rather than contributing to your research.
 - Clarify and negotiate roles and expectations with actors early on and reflect on your positionality as a researcher throughout the processes.

- If you are new to transdisciplinary approaches and KCP processes, it may take some time to familiarize yourself with these methods and it often also happens while you are facilitating the workshops.
 - Participate in trainings, peer exchanges, or mentoring opportunities if possible, and embrace a learning-by-doing mindset during the process.
- It can be helpful for the research team to remain consistent throughout the workshop series, as it may be challenging for researchers who join later, without having been involved in the proposal development, to fully get familiar with the context quickly and feel comfortable with the process.
 - Ensure good documentation, provide onboarding sessions for new team members, plan enough time for the transition period.
- It can be challenging if none of the team members are local and/or live far away.
 - It can be helpful if the researchers have a local connection to the area, and plan for travel time, if you live far away.
- It can be challenging to explain this process to other researchers within your own institution who are less familiar with participatory research processes.
 - Think about how you want to communicate participatory research to your colleagues, and look for “allies” within your institution who can support you and broader understanding.

4 Conclusion

This guide introduces a targeted KPC design, explains the ideas behind it and provides a hands-on guide for knowledge brokers and other potential facilitators interested in trying it. The design of the KCP process is important, as is getting the “right” actors on board. As shown throughout this handbook, adapting your design to the local context, the needs and capacities of your participants, and your own strengths as a facilitator team is key. To do this well, a nuanced understanding of each situation and its institutional, social, and ecological dimensions is needed. This understanding also helps in selecting topics that are interesting to all actor groups, which is an important foundation for meaningful engagement.

Facilitation plays a central role in KCP processes. Good KCP facilitation depends on a well-functioning team that embraces a learning-by-doing attitude. The willingness to learn from your experiences and not being afraid of mistakes is important, since KCP processes are never the same. Reflexive practices and adopting a positive attitude towards learning will support you in thinking through your methods, facilitation practice, and power dynamics at play. It includes asking: Who is being heard and listened to? What knowledge is being co-produced? Why, for whom, and for what purpose?

Long-term engagement matters for building trust and relationships and for laying the foundation for action.

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6 Appendix

6.1 Commitment of Conduct

Commitment of conduct for knowledge-sharing in a dialogue process

The purpose of dialogues and workshops are to be useful for all involved, invited participants as well as the convening researchers and organizations. The intention is to create a safe space, where all actors feel free to share knowledge, perspectives and concerns with each other, and for learning and hopefully action to follow. The dialogue process depends on respect for each participant's knowledge, expertise, and lived experience as essential and complementary components to identify ways forward. To ensure this, **the process will start with talking through principles for a good dialogue, such as equality and the absence of coercive influences, listening with empathy and bringing assumptions into the open.**

Beyond agreeing on these principles, a key step towards creating a safe space is that all involved are informed and aware of how the documentation and information generated during the workshop will be used and how it may "travel" and spread. This is important for each person to decide if there is any information that could be sensitive and that they do not want documented or shared. It is the responsibility of the researchers to explain and seek consent for the different uses of the material.

A second step is that all participants agree on and commit to follow a code of conduct or ground rules of the event. As knowledge is shared and new emergent understanding is developed, it is the responsibility of each participant to respect the agreements, including how to share knowledge, insights and private documentation (i.e. photos or videos) from the workshops.

1. Documentation and how it will be used

Workshops will be documented using photos, video clips, materials created during the workshop (flip chart notes etc.), and notes. The dialogue process also includes surveys and conversation before and after workshops. There might be information shared during the dialogue which certain groups or individuals considers sensitive, private, or holding value for themselves and which they do not want to share with the public. You have the right to "Free Prior and Informed Consent" throughout the full dialogue process. At any point during the meeting and the process afterwards (until publication), anyone can decide that they do not want particular information to be documented or shared outside the group.

A report will be developed that will include a list of participants (if participants agree) and summarize the content of the discussions. As a general rule, the report will not specify who said what. But in situations it may be useful to mention the position of the person making a statement – for example if it is about rules that apply and the participant is representing the authority. In such cases, the statement will approve by

the person involved. All participants will have a chance to see a digital version of the report with photos for review, comments and approval. Once approved (no response within two weeks will be taken as consent), the report will be shared with all participants and used for different purposes, as described below.

The documentation from the workshops will be part of scientific articles and other products such as project reports, news articles etc., to inform decision making at national or regional or international level. If material that was not part of the workshop report is used, consent will be sought from all concerned participants. It is important to us that no information is used or interpreted in a way that differs from how it was intended when shared or discussed in the dialogue.

2. Commitment of conduct – information sharing

We, who are visiting or getting access to documentation from the dialogues (videos, notes, quotes, photos, etc.) are committed to respect the above in the following ways:

- **The documentation of the dialogue process.** After each workshop report is approved, other people will be able to use parts or all of the report for non-commercial purposes, provided they acknowledge the source. Use of other material will require approval, unless it is agreed differently by the group.
- **Other sharing of information.** In case there might be other kind of sharing of information and outcomes after the dialogue, such as through social media, blog posts etc., no photos will be shared without the consent of the persons featuring in these photos. In the same way, any naming or direct quotation of people must always be approved by the person in question before it is made public or shared with people outside the dialogue process.

3. Informed Prior Consent

Interviews and surveys conducted within the dialogue process but outside workshops will be guided by a separate prior consent form specifying interviewee rights and researcher obligations.

Signature of commitment of conduct:

I hereby commit to follow the agreed upon conduct for the workshop:

_____ Date: _____

6.2 Plain language statement, example from ALFAwetlands

You are invited to participate in the interlinked research project ALFAwetlands. One of the project's aims is to build shared knowledge for wetland restoration, water management and climate adaptation, with a particular focus on how different actors, individually and in collaboration, can address ongoing and emerging local to regional challenges related to wetland restoration and water management. By inviting different actors to a "knowledge co-creation" process where different perspectives and types of knowledge (both scientific, practical and local) are brought together and discussed, this task aims to enable a common problem formulation and vision addressing for locally relevant water- and landscape governance challenges. It also aims to develop and evaluate methods for co-creation across different European contexts.

Climate change exacerbates the already difficult task of balancing and managing different values in the same landscape - such as food production, biodiversity, recreation and cultural heritage. At the same time, there is a lot of potential for water management, not least if we can find ways of working together. Collective, more comprehensive approaches based on deliberation and cooperation between different actors could strengthen landscape management as a tool to maintain different qualities and support different interests, ranging from producing food and nature experiences to regulating water flows.

The ALFAwetlands project is led the Natural Resources Institute Finland Environment Institute (Luke) and funded by the European Union through Horizon Europe. The purpose, mandate and mission of the project are thus based on an assessment of research and knowledge needs nationally and internationally. The activities will be carried out in agreement and cooperation with local partners [specify] and will bring together a broad group of stakeholders with different understandings and priorities regarding landscape management and use. The aim is to create a multi-faceted understanding of the challenges and opportunities for improving climate adaptation capacity and landscape management through dialogue.

You are invited to participate in the dialogue as we believe that your perspective and knowledge of water and landscape management is an important for ensuring an informed dialogue and gaining and actionable understanding of how to tackle the issue. Accepting to participate may mean the following:

- Agreeing to one or more interviews on the themes above
- Participating in one or more workshops
- Participating in study visits to different parts of the landscape

As a participant, you will have the opportunity to learn and share your experience and knowledge, have opportunities for discussion and networking with other local and regional actors, and gain an insight into ongoing climate change adaptation work in the EU.

Information shared and discussed in interviews, questionnaires and dialogues will be used as a basis for reports, scientific articles and possibly in other contexts such as websites or exhibitions. Workshops and study visits will be documented by photography, possibly even filmed. Data in the form of interview material and workshop notes will be stored by the research team and may be used as a basis for future studies. Your personal data will be handled in accordance with the Personal Data Act (PUL) and the EU Data Protection Regulation (GDPR). You will receive a detailed description of the task for your approval before work begins.

6.3 Prior consent form, interviews

*Make case specific by replacing from "blue" text with case relevant information.
Remove this section before handing out.*

Whom to Contact about this study:

Principal Investigators: XXX

Department: XXX

Email addresses: XXX

Multi-actor perspectives on water management and wetland restoration

This is a consent form for participation in a research project, carried out through XXX. It contains important information about this study and what to expect if you decide to participate. Please consider the information carefully. Feel free to ask questions before making your decision on whether or not to participate. Your participation in this research study is voluntary.

I. PURPOSE OF THE RESEARCH:

The purpose of this study is to build common knowledge for wetland management and restoration, to maximize climate change mitigation and adaptation as well as biodiversity. By inviting different actors to a process for "co-creation of knowledge" where different perspectives and types of knowledge (both scientific, practical and local knowledge) are brought together and discussed, this project aims to enable the formulation of the solution for a common problem and of joint visions for wetland restoration, water management and climate change adaptation. It also aims to develop and evaluate methods for co-creation in similar contexts across the EU.

II. PROCEDURES:

As a participant interviewee in this study, you will be asked to be part of one or more interviews on the themes above. Participation in this research study is voluntary and you are free to withdraw or discontinue your participation at any time.

III. RECORDING OF INTERVIEWS

The audio recording of my interview(s) is confidential and will not have any identifying information associated with it. It will only have a study identification number on it for later identification by the research team. The content of the recording might be transcribed into writing by a staff person or transcriber.

Please initial:

_____ I give permission to record my voice or image

_____ I do not give permission to record my voice or image

IV. RISKS AND BENEFITS OF BEING IN THE STUDY:

The study involves no foreseeable risks of harm. However, loss of confidentiality, especially within a small group or community, is always possible and it may have consequences for individuals.

The benefits to participation are: As a participant, you will have the opportunity to get access to and share knowledge and experiences, opportunities for conversation and networking with other local and regional actors. You will also gain insights into ongoing wetland management and restoration work within the EU. This study may help the researchers, and the participants involved, learn more about obstacles and enabling factors for collaborative, effective actions. It may also inform policy and governance of landscapes and water.

V. COMPENSATION/COSTS:

My participation in this study will involve no cost to me beyond time and transportation to and from meetings.

VI. CONFIDENTIALITY:

Consenting to participate in this research means that all information collected from me individually may be used by current and future researchers. Nonetheless, it will be used in a fashion that my personal identity will be protected. Such uses will include presentations at scientific or professional meetings, publishing in scientific journals, sharing anonymous information with other researchers for checking the accuracy of

study findings and for future approved research that has the potential for improving human knowledge. Any information learned and collected from this study in which I might be identified will remain confidential. It will be disclosed to an external audience (outside the research team) ONLY if I give permission. By signing this form, however, I allow the research study investigator to make the anonymized records of the interview(s) available to the [XXX](#) internal ethics committee.

VII. SPONSOR OF THE RESEARCH:

[XXX](#)

VIII. CONTACTS AND QUESTIONS:

The principal investigator(s), [XXX](#), have offered to and have answered any and all questions regarding my participation in this research study. If I have any further questions, I can contact [XXX](#).

If I have any questions about my rights as a participant in this research study or the procedures for data management, I can contact the project coordinator [XXX](#). All reports or correspondence will be kept confidential.

I will be given a copy of this consent form to keep.

IX. SIGNATURE FOR CONSENT

I have read (or someone has read to me) this form, and I am aware that I am being asked to participate in a research study. I have had the opportunity to ask questions and have had them answered to my satisfaction. I voluntarily agree to participate in this study.

Printed Participant's Name: _____

Participant's Signature: _____ Date: _____

Person Obtaining Consent: _____

Signature: _____ Date: _____

6.4 Survey 1, example, adapt to fit the case.

This survey is part of a newly launched collaborative project (Horizon Europe ALFAwetlands, GA N° 101056844) on Öland's landscape and water management. The intention is to jointly build knowledge about how climate adaptation can be woven into ongoing land use and freshwater management in the landscape. The research task is led by researchers from the Stockholm Resilience Centre at Stockholm University.

Your personal data will be handled in accordance with the Personal Data Act (PUL) and the EU's General Data Protection Regulation (GDPR). All information will be treated anonymously and confidentially and not shared outside the project.

If you have any questions, please contact [XXX](#).

PART 1: Your interest in the project

1. Where does your interest in water and landscape issues come from? **You can tick several options.**

- ☐ I am a user of the landscape (land, forest, hunting, fishing, or other resources).
- ☐ I am employed by a municipality, county council or other local authority.
Which one? _____
- ☐ I am employed by another authority (regional, national).
Which one? _____
- ☐ It is part of my work in the private sector.
- ☐ I work in communication, education or research.
- ☐ I work in tourism or recreation.
- ☐ I am an active member of an association related to animals, nature or local history.
- ☐ Personal interest
- ☐ Other. What?

Comments:

2. What made you decide to participate in the project and the dialogue it entails?

3. What are your hopes for the project?

a) For yourself (your work or your interests)

b) What the project could do for water and landscape management in practice

4. Have you been involved in and/or have practical experience of collaboration or co-operation projects run by municipalities, county administrative boards or other authorities (concerning water, landscape management/conservation or other environmental issues)? If so, in what form? **You can tick several options.**
- ☐ No
 - ☐ LONA project
 - ☐ LOVA project
 - ☐ LEVA or other government funded project (e.g. the Swedish Forest Agency)
 - ☐ Nature reserve or other nature conservation project
 - ☐ LIFE project or other EU funded project
 - ☐ Dialogue meetings (such as the Mittland project or around acute water shortages)
 - ☐ Southern Öland's World Heritage Site
 - ☐ Other:

Comments:

5. Have you been involved in or have practical experience of locally driven co-operation (with limited or no involvement from authorities)? **You can tick several options.**
- ☐ No
 - ☐ Common land
 - ☐ Local council
 - ☐ Öland's Water Council
 - ☐ Drainage company
 - ☐ Project run by a local organisation with a connection to nature (e.g. the Nature Conservation Society)
 - ☐ Project run by a local organisation with a connection to local history and culture (e.g. by a local history association)
 - ☐ Projects run by companies or other private actors
 - ☐ Other:

Comments:

6. Are you a member of one or more local associations or organisations on Öland? Tick the ones you are a member of.

Association linked to nature on Öland.

- ☐ The Nature Conservation Society
- ☐ The Botanical Society
- ☐ The Southeastern Entomologists
- ☐ Öland's Anglers Society
- ☐ Öland's Ornithological Society
- ☐ Other: _____

Association with links to cultural heritage and Öland's local communities.

- ☐ Kalmar County's local history association
- ☐ Öland's local history association
- ☐ Local history association or community centre association
- ☐ Local council
- ☐ Annan: _____

Other relevant organisation on Öland:

- ☐ Öland's Water Council
- ☐ Station Linné
- ☐ Himmelsberga Öland's Museum
- ☐ Öland Coast to Coast
- ☐ Other: _____

Comments:

PART 2: Current situation on Öland

7. Which description(s) of Öland do you find most accurate? Rank the **three most important** with 1, 2 and 3. 1 is the most important.

- ☐ Öland is a unique and important production landscape - agriculture should be prioritised
- ☐ Öland is a unique and important natural and cultural landscape - world heritage and other values must be protected
- ☐ Öland is Sweden's Provence - more room for tourism, recreation, a feel-good landscape
- ☐ Öland must be allowed to grow and develop economically and in terms of population - retain and develop businesses, workplaces and services.
- ☐ Öland should be a living landscape - good quality of life for the year-round residents of Öland
- ☐ Öland must change to achieve the SDGs - prioritise environment and climate adaptation

Comments:

8. The landscape on Öland is influenced by many factors. Which of these do you feel you are familiar with? Put a tick in the column you think is most appropriate.

	Good Knowledge	Some knowledge	Limited knowledge
Ecology, about life in the landscape, at sea and in water on Öland.			
History - how life and society have developed over time on Öland			
Geology and the landscape's history			
User knowledge - how to use and manage landscape resources: land, forest, water, hunting and fishing			
Knowledge of local and family history			
Climate and the impact of climate change on Öland			
Nature conservation, what is needed, how nature conservation projects work			

Cultural conservation, what is needed, how cultural conservation projects work			
Laws and regulations concerning landscape use (e.g. how permits for water measures work, what different types of protection status mean)			
Knowledge of management and administration (e.g. how ownership of land and water resources works)			

Several summers over the last ten years have been characterised by low water levels on Öland. Here are some questions about how you perceive the water situation on Öland.

9. What are the main challenges for water management on Öland? Rank the **three most important** with 1, 2 and 3. 1 is the most important.

- ☐ High demand for drinking water, especially in summer
- ☐ Climate change has changed conditions
- ☐ We have put ecosystems out of balance with drainage, loss of wetlands, etc.
- ☐ Low awareness of the need to conserve water
- ☐ Animal husbandry requires a lot of water
- ☐ Certain industries require a lot of water
- ☐ Nutrient leakage degrades water quality
- ☐ Too little water in streams and natural water bodies
- ☐ Rules and authorisations are poorly adapted to the conditions on Öland
- ☐ Other:

Comments:

10. Which concrete measures to secure water supply for different needs are most important? Rank the **three most important** with 1, 2 and 3. 1 is the most important.

- ☐ Information campaigns about saving water
- ☐ Restoration of wetlands and lakes
- ☐ Construction of irrigation ponds
- ☐ Agricultural practices that reduce and delay water run-off
- ☐ Regulation of irrigation
- ☐ Desalination plants
- ☐ New or re-examined drainage companies

☐ Other: _____

Comments: _____

11. Which actors are the **most active or have the most influence** when it comes to water management issues in the landscape (wetlands, drainage, dams, etc.)? **You can tick several options.**

- ☐ Municipalities
- ☐ The County Administrative Board
- ☐ Farmers
- ☐ The tourism industry
- ☐ Researchers
- ☐ Local associations for nature and environment
- ☐ Local history associations
- ☐ Anglers
- ☐ Residents of Öland
- ☐ Other: _____

Comment: _____

12. What actions are missing, or what is there more need for? Rank the **three most important ones** with 1, 2 and 3. 1 is the most important.

- ☐ Better monitoring of flows and water levels
- ☐ Better regulations
- ☐ Co-operation between municipalities
- ☐ Knowledge of surface and groundwater
- ☐ Dialogue between different stakeholders (e.g. between farmers and nature conservation)
- ☐ Government subsidies
- ☐ Knowledge of climate change adaptation
- ☐ Resources for damming and creating wetlands
- ☐ Less regulation around land and water
- ☐ Other: _____

Comments: _____

13. What are the main obstacles to the sustainable development of Öland's landscape and water management? Rank the **three most important** with 1, 2 and 3. 1 is the most important.

- ☐ Lack of knowledge about ecology and water in the landscape (hydrology)
- ☐ Conflicts of interest between different actors
- ☐ Lack of a common platform to address issues
- ☐ Shortcomings in the issuing of permits for water-related measures and drainage
- ☐ Climate change adaptation is not prioritised
- ☐ The difficulty of working with old water-rights court rulings
- ☐ Too much focus on nature conservation and biodiversity
- ☐ Lack of money to implement changes
- ☐ Other:

Comments:

PART 3: The future of Öland

Here are some questions about how you think Öland will develop - and what you want to see happen.

14. Which description best describes what you **think** Öland will look like in 2050? **You can tick several options.**

- a) The water shortage is
 - ☐ No longer a problem
 - ☐ Worse than it is now
 - ☐ Greatly aggravated
- b) More
 - ☐ Housing
 - ☐ Tourist facilities
 - ☐ Agricultural facilities
 - ☐ Industries
 - ☐ Protected natural areas
- c) Fewer
 - ☐ Housing
 - ☐ Tourist facilities
 - ☐ Agricultural facilities
 - ☐ Industries

- ☐ Protected natural areas
- d) Water management is characterised by
 - ☐ Conflicts between stakeholders and different water needs
 - ☐ Synergies between nature conservation and agriculture
 - ☐ New regulations
 - ☐ Action packages with several alternative measures
 - ☐ New forums for decision-making around water

15. What do you **want** Öland to look like in 2050? Start from the question above and feel free to include the water and landscape issue. Also, feel free to tell us how plausible you think your vision is!

16. What do you think needs to happen to achieve more sustainable water and landscape management? Rank the **three most important** with 1, 2 and 3. 1 is the most important.

- ☐ Water must be better retained in the landscape, for example through more wetlands
- ☐ Water consumption needs to be reduced through behavioural changes
- ☐ Water consumption needs to be reduced by limiting the number of users
- ☐ Water consumption needs to be reduced by regulating industrial water use
- ☐ New regulations and laws needed to prioritise different water users during droughts
- ☐ Agriculture needs to change, e.g. with smaller herds of animals
- ☐ New permits for water-related measures (water-rights court rulings) adapted to climate change
- ☐ Other:

Comments:

17. Which actors do you think are important to include in a discussion about water in future landscape management on Öland? Rank the **three** most important with 1, 2 and 3. 1 is the most important.

- ☐ Municipalities
- ☐ The County Administrative Board
- ☐ Farmers
- ☐ The tourism industry
- ☐ Researchers
- ☐ Local associations for nature and environment
- ☐ Local history associations
- ☐ Anglers
- ☐ Residents of Öland
- ☐ Other:

Comments:

18. Do you have examples of successful collaborations that have improved water and landscape management on Öland? Which one(s)? What was the co-operation about?

19. Is there anything else you think is relevant for us to know?

Thank you very much for answering our questions!

6.5 Survey 2, example, adapt to fit the case

This survey is a follow-up to the questions we asked at the first workshop. Your personal data will be handled in accordance with the Personal Data Act (PUL) and the EU's General Data Protection Regulation (GDPR). All information will be treated anonymously and confidentially and will not be shared outside the project.

If you have any questions, please contact [XXX](#).

PART 1: The future of Öland

1. Which vision(s) for Öland do you think are most accurate? Rank the **three most important** with 1, 2 and 3 (1 is most important).

- ☐ Öland is a unique and important production landscape - agriculture should be prioritised
- ☐ Öland is a unique and important natural and cultural landscape - world heritage and other values must be protected
- ☐ Öland is Sweden's Provence - more room for tourism, recreation, a feel-good landscape
- ☐ Öland must be allowed to grow and develop economically and in terms of population - retain and develop businesses, workplaces and services.
- ☐ Öland should be a living landscape- good quality of life for the year-round residents of Öland
- ☐ Öland must change to achieve the SDGs - prioritise environment and climate adaptation
- ☐ Other: _____

Comments:

2. Which concrete measures to secure future water supply for different needs are most important? Rank the **three most important** with 1, 2 and 3 (1 being the most important).

- ☐ Information campaigns about saving water
- ☐ Restoration of wetlands and lakes
- ☐ Construction of irrigation ponds
- ☐ Farming practices that reduce and delay water run-off
- ☐ Regulation of irrigation
- ☐ Desalination plants
- ☐ New or re-examined drainage companies
- ☐ Other: _____

Comments:

3. What actions are missing, or what more is needed to implement the measures you listed in question 3? Rank the **three most important** with 1, 2 and 3 (1 being the most important).

- ☐ Better monitoring of flows and water levels
- ☐ Better regulations
- ☐ Co-operation between municipalities
- ☐ Knowledge of surface and groundwater
- ☐ dialogue between different stakeholders (e.g. between farmers and nature conservation)
- ☐ Government subsidies
- ☐ Knowledge of climate change adaptation
- ☐ Resources for damming and creating wetlands
- ☐ Less regulation of land and water
- ☐ Other: _____

Comments:

4. What are the main obstacles to the sustainable development of Öland's water and landscape management? Rank the **three most important ones** with 1, 2 and 3 (1 is the most important).

- ☐ Lack of knowledge about ecology and water in the landscape (hydrology)
- ☐ Conflicts of interest between different actors
- ☐ Lack of a common platform to address the issues
- ☐ Shortcomings in the issuing of permits for water-related measures and drainage
- ☐ Climate change adaptation is not prioritised
- ☐ The difficulty of working with old water-rights court rulings
- ☐ Too much focus on nature conservation and biodiversity
- ☐ Lack of money to implement changes
- ☐ Other: _____

Comments:

5. What do you think needs to happen to achieve more sustainable water and landscape management? Rank the **three most important** with 1, 2 and 3 (1 is the most important).

- ☐ Water must be better retained in the landscape, for example through more wetlands

- ☐ Water consumption needs to be reduced through behavioural changes
- ☐ Water consumption needs to be reduced by limiting the number of users
- ☐ Water consumption needs to be reduced by regulating industrial water use
- ☐ New rules and laws needed to prioritise different water users during droughts
- ☐ Agriculture needs to change, e.g. with smaller herds of animals
- ☐ New permits for water-related measures (water-rights court rulings) adapted to climate change
- ☐ Other:

Comments:

PART 2: Reflections on learning and knowledge sharing

INDIVIDUAL LEARNING

6. The workshops changed my view on what is important in terms of water and landscape management on Öland.

- ☐ Yes
☐ No
☐ Don't know

Justify your answer:

7. To what extent do you agree or disagree with the following statements?

- 7.1. I feel that I was able to contribute my skills, knowledge and experience to the group discussions during the three workshops.

☐ ☐ ☐ ☐ ☐ ☐

No, not at all Yes, completely Don't know

- 7.2. The workshops changed how I see my own ability to act.

☐ ☐ ☐ ☐ ☐ ☐

No, not at all Yes, completely Don't know

Justify your answer:

RELATIONAL LEARNING

8. To what extent do you agree or disagree with the following statements?

8.1. The workshops changed my understanding of other actors.

☐	☐	☐	☐	☐	☐
No, not at all				Yes, completely	Don't know

8.2. The workshops changed the way I see the ability of the participants in the group to contribute to change.

☐	☐	☐	☐	☐	☐
No, not at all				Yes, completely	Don't know

8.3. Conversations with other participants changed my view on who is doing what and why in the landscape.

☐	☐	☐	☐	☐	☐
No, not at all				Yes, completely	Don't know

8.4. I learnt something from the other participants during the three workshops on **different measures**.

☐	☐	☐	☐	☐	☐
No, not at all				Yes, completely	Don't know

8.5. I learnt something from the other participants during the three workshops about **different challenges regarding** the water and landscape management of Öland.

☐	☐	☐	☐	☐	☐
No, not at all				Yes, completely	Don't know

8.6. I learnt something from the other participants during the three workshops about **different strategies to move forward**.

☐	☐	☐	☐	☐	☐
No, not at all				Yes, completely	Don't know

GROUP LEARNING

9. To what extent do you agree or disagree with the following statements?

As part of our workshops, as a group we managed to...

9.1. ... create a common understanding of the problems facing Öland's water and landscape management.

☐ ☐ ☐ ☐ ☐ ☐
 No, not at all Yes, completely Don't know

9.2. ... identify actors, challenges and opportunities related to specific actions.

☐ ☐ ☐ ☐ ☐ ☐
 No, not at all Yes, completely Don't know

9.3. ... understand how many different values can interact in one place.

☐ ☐ ☐ ☐ ☐ ☐
 No, not at all Yes, completely Don't know

9.4. ... understand the relationship between people and place.

☐ ☐ ☐ ☐ ☐ ☐
 No, not at all Yes, completely Don't know

9.5. ... identify available options for taking action.

☐ ☐ ☐ ☐ ☐ ☐
 No, not at all Yes, completely Don't know

9.6. ... think about strategies to create change.

☐ ☐ ☐ ☐ ☐ ☐
 No, not at all Yes, completely Don't know

PART 4: Relationships and collaboration

10. I have built relationships with other participating actors during the workshops.

- ☐ Yes
- ☐ No
- ☐ Don't know

If you have answered YES, answer questions 11 to 18.

11. With which of the following stakeholder groups did you build relationships during the workshops? You can tick several options.

- ☐ Those working for municipalities
- ☐ Those working at the County Administrative Board
- ☐ Farmers
- ☐ Those working in tourism
- ☐ Local associations for nature and environment
- ☐ Local history associations
- ☐ Anglers
- ☐ Residents of Öland
- ☐ Others:

Comments:

12. Do you see opportunities for new forms of co-operation **with one or more of the participants in this group in the future?**

- | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| No, not at all | | | | Yes, completely | Don't know |

13. How likely is it that you will collaborate **with one or more of the participants in this group in the future?**

- | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| Very unlikely | | | | Very likely | Don't know |

14. Do you see opportunities for new forms of collaboration in the future **with actors outside this group** on Öland's water and landscape management?

☐ ☐ ☐ ☐ ☐ ☐
 No, not at all Yes, completely Don't know

15. How likely is it that you will co-operate in the **with actors outside this group** in the future on Öland's water and landscape management?

☐ ☐ ☐ ☐ ☐ ☐
 Not at all Very likely Don't know
likely

16. How likely do you think it is that **others in our stakeholder group will continue to co-operate?**

☐ ☐ ☐ ☐ ☐ ☐
 Not at all Very likely Don't know
likely

17. How would you rate the level of trust in each other **in our stakeholder group?**

☐ ☐ ☐ ☐ ☐ ☐
 No trust High level of trust Don't know

18. Do you feel that you know who to turn to if you need help in dealing with challenges related to Öland's water and landscape management?

☐ ☐ ☐ ☐ ☐ ☐
 No, not at all Yes, completely Don't know
all

If not, what contacts are you lacking?

19. If you compare before the workshops with today, is there any difference in your attitude towards approaching other actors?

20. What do you feel is most important for the future of co-operation and engagement for Öland's landscape? Why?

21. How would you describe the conversations that took place during the three workshops? What did you take with you?

22. What is needed to create a solid ground for future collaborations and engagement around Öland's water and landscape management in the future?

23. What kind of context or platform would be needed for good dialogue?

Thank you very much for answering our questions!