EVOKED

Enhancing the value of climate data

Deliverable 1.1

Living Lab Co-Design Requirements Guiding Paper

Work Package 1: Co-design

Deliverable Work Package Leader:
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Summary

The goal of this document is to outline the first practical steps and tasks in the Co-design process. As such, it provides guidelines for the EVOKED partners to begin the first phase of the Living Lab Process. It consists of a brief literature review of Living Labs and we show how this has informed our own working definition of a Living Lab as well as our EVOKED conceptualisations and Living Lab Principles. We provide a description of the four Co-design tasks: Needs and visions analysis, Stakeholder analysis, Context/governance analysis, and Planning of next Living Lab actions. This deliverable also includes a "living" glossary of terms used within EVOKED and references. The deliverable has been widely discussed and grounded with all EVOKED partners.

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Appendix

Review and reference page

1 Developing the EVOKED definition of Living Labs for Climate Services

Living Labs have been emerging as a form of collective governance and experimentation to address societal challenges and opportunities on many subjects, for example urbanization, climate change, and health. Living Labs have different goals, they are initiated by various actors, and they form different types of partnerships. There is no uniform Living Lab definition. During the EVOKED Gothenburg meeting in November 2017 the project group stressed the importance of coming to a common understanding of what a Living Lab is and how it is bound in time and space.

Our current EVOKED definition is: "The general idea is to involve a range of committed stakeholders in real-life 'laboratory' settings to test and develop alternative solutions for complex challenges, such as climate adaptation or risk and uncertainty assessments" (EVOKED project application p. 5). This could be made more precise, but the project group decided that for the project operations it is more important that the EVOKED Living Labs will be operationalized in practice. The definition, however, is important for scientific purposes, but as the living labs progress the definition may crystalize.

An EVOKED Living Lab is an ongoing, iterative process. It is much more than just a workshop or observation of activities, but active participation of various stakeholders in a number of events and forums for testing and producing a climate service.

Each EVOKED Living Lab will look slightly different depending on the climate service that will be produced, the problem to be solved, the people involved and the context. However, it will be composed of a collection of activities including workshops, interviews, focus group activities, surveys, policy studies, etc. that test how concepts of risk, uncertainty and related concepts such as resilience, and vulnerability are operative in climate services.

1.1 Conceptualizations of Living Labs in the literature

To come to a common understanding within the project group and to develop a set of common principles for running each Living Lab process in the four different countries, we performed a brief literature review. As the Living Lab concept has recently exploded in use, we have not performed an exhaustive literature study, but rather a brief dip into relevant literature in fields related to the EVOKED work including environmental studies, climate adaptation, urban planning, spatial planning, institutional studies, and technology management. A more structured and extensive literature review may be included as a dissemination outcome as the project progresses and we learn more about how Living Labs are performed elsewhere.

Living Labs (LLs) have been emerging as a form of collective governance and experimentation to address societal challenges and opportunities on many subjects like for example urbanization, climate change and health (Voytenko et al., 2016, Pallot et al., 2010) or technology management (Westerlund and Leminen, 2011). LLs have different

goals, they are initiated by various actors, and they form different types of partnerships, thus it is difficult to pinpoint a specific definition or conceptualization.

A Living Lab is a modern concept but its roots can be "…traced back to Knight (1749), who was the first to use the term 'living laboratory'" (Leminen et al 2017). In the modern context, Westerlund and Leminen (2011) have defined Living Labs as: 'physical regions or virtual realities, or interaction spaces, in which stakeholders form public–private–people partnerships (PPPP) of companies, public agencies, universities, users, and other stakeholders, all collaborating for creation, prototyping, validating, and testing of new technologies, services, products, and systems in real-life contexts' (Westerlund and Leminen, 2011). The European Commission has also characterized a Living Lab as a real-life test and experimentation environment in which users and producers co-create innovations focusing on PPPP for user-driven open innovation.

As mentioned, there is no uniform LL definition. Some definitions of (Urban) Living Labs include:

- "Urban living labs usually represent a bounded geographical, organizational or institutional environment" … they "open up a forum of space for greater involvement of citizens and other stakeholders in urban planning and development" (GUST 2017)
- "Living Labs (LLs) are defined as user-centred, open innovation ecosystems based on systematic user co-creation approach, integrating research and innovation processes in real life communities and settings. LLs are both practice-driven organisations that facilitate and foster open, collaborative innovation, as well as real-life environments or arenas where both open-innovation and user-innovation processes can be studied and subject to experiments and where new solutions are developed. LLs operate as intermediaries among citizens, research organisations, companies, cities and regions for joint value co-creation, rapid prototyping, or validation to scale up innovation and businesses. LLs have common elements but multiple different implementations". ENoLL: www.openlivinglabs.eu/node/1429
- "Established at the boundaries between research, innovation and policy, ULL are intended to design, demonstrate and learn about the effects of urban interventions in real time. … What makes ULL distinct is their focus on knowledge and learning as a means through which such interventions can be successfully achieved" (Bulkeley et al., 2016)
- A living Lab is an open research and innovation ecosystem involving user communities (application pull), solution developers (technology push), research labs, local authorities and policy makers as well as investors (Pallot et al., 2010).

1.2 How do Living Labs differ from other innovation and participation processes?

According to Evans et al. (2015) LLs differ from other participation as they

- compromise a geographically or institutionally bounded space
- conduct intention experiments that make social and/or material alterations
- incorporate an explicit element of iterative learning

Brankaert (2016) describes that in the literature there are different attempts to compare Living Labs to other innovation methods. One example is the concept of Technology Experimentation Platforms or TEPs (Ballon et al., 2007), which discuss Living Labs among several other experimentation methods. According to this overview Living Labs are strong in both a real-life context and provide an active role for users. The overview shows that when research is performed in a non-real-life environment they are test beds, and when users have no active role in the research it is a field trial. Living Labs – and their variations – are therefore very suitable for a design-driven approach. Building on this, Pallot et al. (2010) constructed a methodology landscape for Living Labs. This work focuses on the methods that can be used in a Living Lab context. In this, the diversity of a Living Lab approach is emphasized as it allows for many different studies.

1.3 Why work in Living Labs?

The Governance of urban Sustainability Transitions Handbook on "the emerging Landscape of Urban Living Labs" gives several characteristics, practices and examples of how living labs can work (GUST 2017). It also delineates some justification of why researchers and practitioners should consider working within a Living Lab framework, including that Living Labs can:

- connect partners from various sectors and competences in real-life contexts
- facilitate sustainable innovations and tests in real settings
- transform governance by providing platforms for knowledge co-production
- act as high-level profile statements of intent for public attention and funding
- act as new communities of practices and social networks for future visions
- offer benefits for stakeholders, including new business opportunities, more effective innovation processes and savings in R&D costs

The GUST handbook (2017) also mentioned several characteristics of a Living lab, including, geographical embeddedness, experimentation and learning, participation and user involvement, leadership and ownership, and evaluation of actions and impacts. These characteristics have been inspirational in distilling our own EVOKED conceptualization in section 2 and the EVOKED Living Lab principles in section 3.

1.4 Literature informing the EVOKED Living Lab Principles

In addition to the definitions and conceptualizations of Living Labs in the literature, we sought guidance on distinguishing a set of principles that can characterize how the EVOKED Living lab process should be carried out. The resulting EVOKED principles were discussed extensively within the project group and with the stakeholders, and subsequently boiled down to those seen in section 3 of this document. However, our inspiration came from several literature sources as delineated below.

Bergvall-Kareborn et al. (2009) discern the following principles used in managing innovation processes

- Continuity: collaborations build on long-term learning and trust, which both take time
- Openness: sharing information and insight with parties.
- Realism: research in the natural context of the user.
- Influence: of users and stakeholders on the innovation process.
- Value: for the prospected end-user and stakeholders.
- Sustainability: The existing knowledge is captured and accumulated to build on further.

The following principles were inspired by Davoudi and Cowie (2016) on territorial governance and elaborated by the EVOKED project group:

Ensure transparency and accountability by:

- striving for political anchorage
- guaranteeing citizen anchorage
- accounting for all interests
- opening ownership of Living Lab
- clarifying roles of all participants (promoter/enabler/partner)
- describing governance capacity

Foster broad and meaningful participation by:

- identifying stakeholders on various levels and within the relevant sectors
- ensuring inclusion of all relevant stakeholders
- making stakeholder involvement cost-effective (avoiding workshop fatigue)
- making contingency plans for changes in stakeholder constellations

Put communication at the forefront by:

- setting up clear communication channels and structures
- determining when, how and by whom communication will be initiated
- reviewing communication plan as an ongoing process

Ensure societal relevance by:

- basing all actions on stakeholder/societal needs
- being sensitive to the institutional and contextual settings of stakeholders
- making clear the benefits of Living Lab participation
- attuning to the timing of stakeholder processes
- providing concrete outcomes
- working in local language as far as possible

Strive for adaptability and flexibility by:

- focusing on flexible arrangements in line with stakeholder needs and planning phases
- fine tuning management and coordination of Living Lab
- coordinating timing (phases) as much as possible among Living Labs

Facilitate the transfer of knowledge by:

- monitoring and on-going evaluation of processes and results
- promoting three-loop learning (Barquet et al 2016)
- promoting ways for institutionalization of Living lab outputs into broader strategies or activities after the end of the project (avoid pilot study paradox)

When conducting a living lab, also keep in mind ways to overcome the 'pilot paradox' (van Buuren et al., 2017) with conditions for successful pilots as presented in Table 1.

Table 1. The pilot paradox and conditions for successful pilots

Element	Conditions for successful pilots	Conditions for uptake
Position of the pilot	Freedom to explore novel ideas: degrees of independence (with regard to content, way of working, rules) of the principal organizations and flexible application of rules.	Keeping connected: conscious strategy to create normative congruence. Reporting to the own organisation on different levels (political, strategic, tactical and operational).
Resource distribution	Additional resources (budget, expertise, time) for the pilot to enable creativity and exploration. Political attention / pressure to 'score' with the pilot	Solutions fit within the existing system of resource-distribution and contribute to organizational aims of efficiency and risk reduction.
Participants	Coalition of (willing) boundary spanners. Easy communication and openness about interests, etc. Participants are	Representativeness of involved actors from all relevant disciplines and stakes of the future implementation arena. Potential criticasters from participating

Element	Conditions for successful pilots	Conditions for uptake
	willing/able to experiment take more vulnerable positions.	organizations are included in process and participants act as ambassadors.
Process design	Learning environment, tailor-made collaborative process design. Freedom to organize the own process and to get rid of traditional role distribution.	Results ready for mainstreaming and broader embedding. Potential future application areas are identified, outcomes are linked to relevant policy questions.
Project design	Limited scale to reduce risks and (financial) impacts, high quality (shared) monitoring and analysis	Sufficient system understanding; outcomes are trusted, considered as representative and relevant.

2 Conceptualizing the EVOKED Living Labs

The Living Lab is bounded in time and space, although to some extent these boundaries can be flexible (see figures 1 and 2). Our priority, however, is to work with the main areas specified by the case study partners. Figure 1 presents an example of Living Labs as a flexible space. Here three municipalities, a region and a country are affected in different ways by a river (blue line). The red dashed line represents the main Living Lab area and the yellow dashed line represents secondary areas that might be affected by climate service measures in the main area.

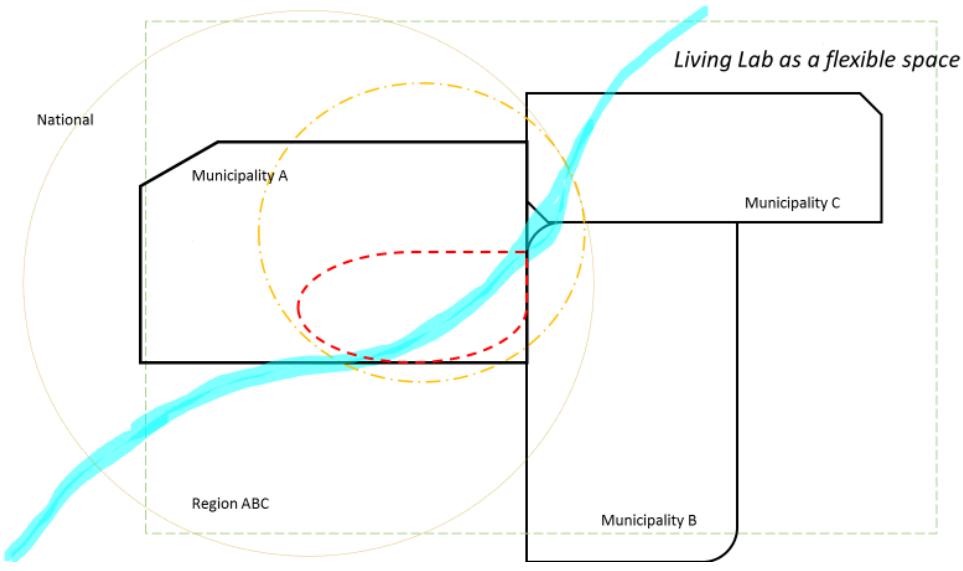

Figure 1: Example of Living Labs as a flexible space.

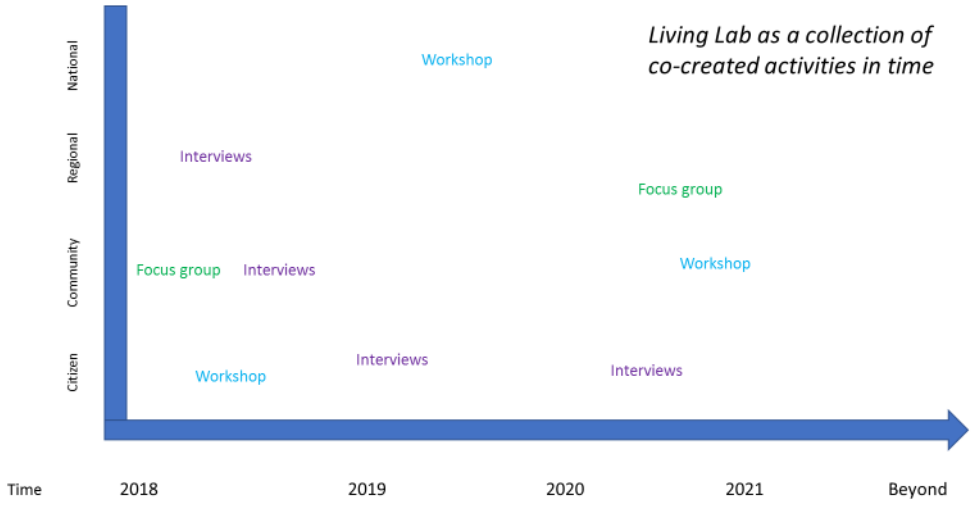

Figure 2: Example of Living lab as a collection of co-crated activities in time.

The distilled characteristics of the EVOKED Living Labs from the literature review are:

- Geographical embeddedness
- Bounded in time
- Experimentation and learning in real life setting
- Multi-method approach
- Participation and multi-stakeholder involvement
- Leadership and ownership
- Evaluation of actions and impacts
- And for EVOKED, progress towards the production of a climate service

3 EVOKED Living Lab Principles

This section provides the final set of EVOEKD Living Lab Principles as discussed, negotiated and distilled by the EVOEKD project group. It is based on the literature seen in section 1 of this document and on a number of revisions to make the EVOKED Living Lab Principles as concise and relevant for the project as possible. The EVOKED Living Lab Principles is an internal document to guide the project partners in "how" the living labs should be conducted. As part of the EVOKED tool box, they are to be "lived" or applied in all activities within the Living Lab (LL) process. They may be translated into case study languages (Norwegian, Swedish, Dutch, or German) and simplified if deemed appropriate.

The six EVOKED LL Principles are elaborated as follows:

Continuity: An EVOKED LL should

- build on existing networks and actions for climate services
- focus on long-term learning and trust as an output of the LL
- be willing to work in small steps, but realize the urgency that some end-users may have
- as far as possible, plan for the "institutionalization" or continuation of the climate service after the end of the project
- as far as possible, strive for resulting products and processes that can be transferrable to other cases and settings
- motivate stakeholders to continually share their knowledge

Openness: An EVOKED LL should

- create atmosphere of transparency
- involve all relevant stakeholder groups and strive for a balance among ages, gender, culture, socio-economic positions
- share information and insights with partners within the LL, among the partners, and outside of EVOKED
- help make sense of the uncertainty and risk associated with climate adaptation actions
- provide platforms for knowledge co-production and learning about the role of climate services

Realism: An EVOKED LL should

- be sensitive and link to the relevant policy, governance, environmental, and social-economic contexts of the LL area
- base climate service work on actual identified needs
- coordinate timing of LL actions with other relevant milestones in the area (elections, planning documents, etc.)
- take into consideration the available financial, human, and environmental resources (limitations and opportunities)
- facilitate sustainable innovations and test climate services in real settings
- strive for optimism, while maintaining realistic expectations

Influence: An EVOKED LL should

- encourage ownership of the process and climate service produced
- connect stakeholders from various sectors and competences to work towards societal resilience
- set up clear communication channels
- find ways to make the LL and climate services attractive to politicians and citizens
- ensure that actions and learning are two-way, and that stakeholders can contribute to the development of climate services

Value: An EVOKED LL should

- clarify the added value of the climate service for the prospected end-user and stakeholders – provide incentives to participate
- make involvement of stakeholders cost-effective, attractive and fun
- avoid the need for stakeholders to commit long hours and travel for workshops
- provide concrete and measurable outcomes
- ensure outcomes are framed simply and in non-academic language to be usable for stakeholders
- find innovative communication channels other than reports (videos, other media, arts, etc.)
- raise awareness of climate services for politicians and citizens

Sustainability: An EVOKED LL should

- build on existing local and epistemic knowledge of risk and uncertainty
- ensure that climate services produced are ecologically, socially, and environmentally sustainable
- strive for sustainability in project operations (avoid unnecessary travels, choose sustainable alternatives)

4 Living Lab Co-design tasks

The Co-design phase is the first step in the Living Lab process. During this phase, each Living Lab will be designed according to its own preconditions. But certain actions and tasks will be common in the co-design phase for each of the four Living Labs of EVOKED, to compare processes and to learn from one another. These include, as a dashboard:

i. Needs and visions analysis
ii. Stakeholder analysis
iii. Context/ governance analysis
iv. Planning of next living lab actions (in connection with WP2 and WP3)

These tasks are to be done by the researchers in collaboration with the relevant partners and stakeholders in each Living Lab (LL). The process needs to be performed iteratively, especially the steps *i* and *ii*. Templates and guidance for each task will be provided by WP1. Goals, objectives, methods to be applied, and desired outputs for the four common actions and tasks are presented in the subsequent subsections.

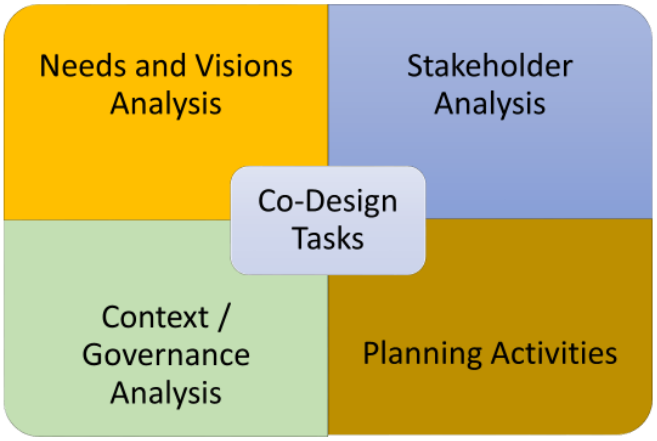

Figure 3: Co-design Dashboard and Tasks (own elaboration)

4.1 Needs and visions analysis

Goal: To characterize the need for the climate service from the stakeholder point of view.

Objective: To specifically define the climate service and how it contributes to visions of a sustainable and resilient community. Includes incorporation of:

- Needs of various stakeholder groups
- Visions of a sustainable, resilient community
- Various understandings of climate adaptation and risk
- Expected benefit /added value to the community of the climate service

Method: Interviews or use of focus groups with municipal/regional representatives, visioning workshop. In March 2018 we had a methods workshop (via Skype) for EVOKED partners to learn from each other about innovative participation methods.

Output: Analysis of stakeholder needs, visions, and expected impact, as well as a discussion of how the living lab process and climate service can help to fill the needs. See **Appendix A: Needs and Vision Analysis**

4.2 Stakeholder analysis

Goal: To identify and categorize all relevant stakeholders.

Objective: To ensure that all relevant stakeholder groups are identified and mobilized in accordance with their needs (stakes), interest, and influence (see Glossary below and Figure 4).

Method: Discussions with municipal representatives, interviews (snowballing method).

Output: Complete identified stakeholder template (can be updated with new stakeholders as LL process continues) See **Appendix B Stakeholder Identification**.

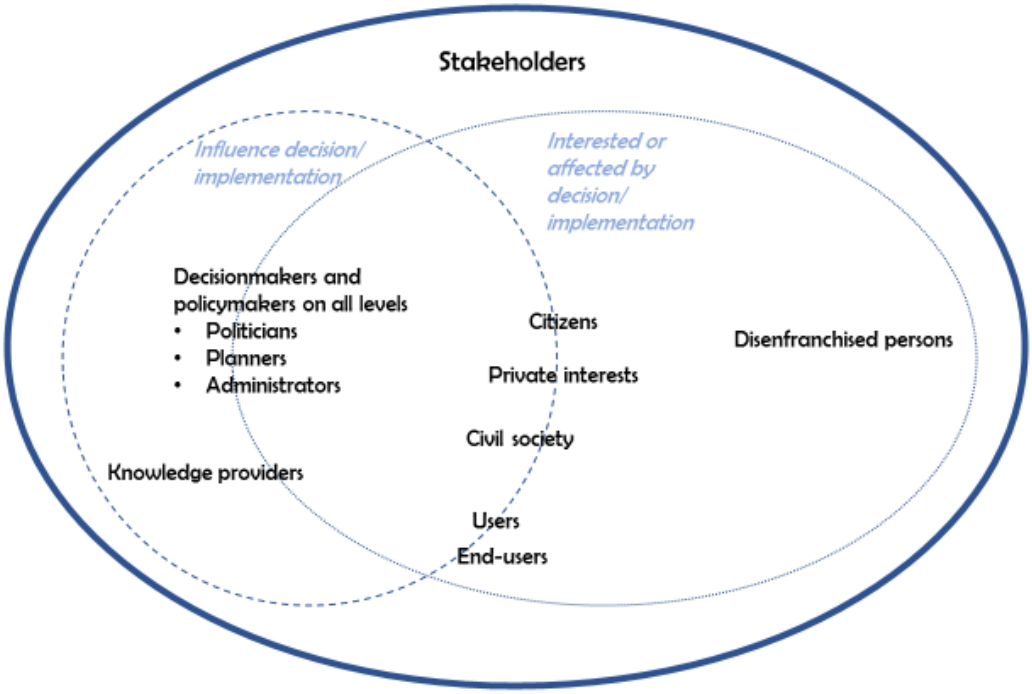

Figure 4: Different types of Stakeholders (own elaboration)

4.3 Context analysis / governance analysis

Goal: To understand the context in which the Living Lab/provision of climate service takes place.

Objective: To chart out and analyse the governance factors that can influence the LL or the climate services (CS) and understand the current situation of the LL space.

Method: Interviews within the LL space, desk research. Using a framework such as the territorial governance framework (Appendix C) in addition to general information about physical setting, demographic and socio-economic data. Questions to be addressed:

- Which governance levels include resilience/climate adaptation questions and how are they coordinated?
- Which sectors are involved and how are they integrated?
- Which stakeholders can be mobilized and how has mobilization been managed in related issues?

- What is the room for manoeuver or scope of flexibility for the stakeholders to work with innovative solutions? What climate adaptation projects and actions are already in place? What strategic activities and documents are planned (i.e. Comprehensive plans, elections)? How does learning usually occur?
- What types of epistemic/technical and consensual/local knowledge exist on risk, uncertainty, and climate adaptation? What types of knowledge are further needed to provide or improve the climate service or a better understanding of risk and uncertainty?

Output: Governance template completed (4-5 pages). See Appendix C Context and Governance Analysis

4.4 Planning activities

Goal: To determine a rough plan for future LL activities with the stakeholders as a brief preparation for WP2 and WP3.

Objective: To come to a clear understanding about how the living lab will take place in time and space, including:

- Resources committed
- Key Partners
- Communication channels (who contacts who, how often, what technical means or platforms?)
- What, when, where, WHY, and how of the Living Lab

Method: Workshops, interviews and focus group discussions with municipal and regional partners and other stakeholders.

Output: Plan for the next three Living Lab steps in WP2 and WP3.

5 EVOKED Glossary

For each of these terms there are multiple definitions and conceptualizations. The following serves as a starting point so that the project team has a more or less common understanding. The conceptualization of the terms will differ from case to case in each Living Lab. In fact, part of the work of the Living Labs is to clarify how concepts of risk and uncertainty play out within climate services.

Climate Service:

"'Climate services' has a broad meaning: transforming climate-related data and other information into customised products such as projections, trends, economic analysis, advice on best practices, development and evaluation of solutions, and any other climate-related service liable to benefit that may be of use for the society". These services include

data, information and knowledge that support adaptation, mitigation, and disaster risk management (European Union Climate Services http://ec.europa.eu/research/environment/index.cfm?pg=climate_services).

Living Lab:

The general idea is to involve a range of committed stakeholders in real-life 'laboratory' settings to test and develop alternative solutions for complex challenges, such as climate adaptation or risk and uncertainty assessments (EVOKED project application p. 5).

Risk:

To be described within each Living Lab case. IPCC (2014) defines risk as: "Risk is the potential for consequences where something of value is at stake and where the outcome is uncertain, recognizing the diversity of values". Another definition is presented by ISO (2009): "Risk is the effect of uncertainty on objectives".

There are different constellations of risk variables including:

- Risk = Severity of harm x likelihood of occurrence
- Risk = Hazard x Consequence
- Risk = Hazard x Vulnerability
- Risk = Hazard x Exposure x Vulnerability
- Risk = Hazard x Exposure x Sensitivity x Resilience
- Risk = Probability of harm x Consequences of harm (if exposed)

Uncertainty:

"Denotes a cognitive state of incomplete knowledge that results from a lack of information and/or from disagreement about what is known or even knowable" (IPCC 2014, Synthesis Report p. 36).

Epistemic uncertainty:

"Arises from a lack of knowledge, due to processes that are unknown or inadequately understood, or the poor characterisation of variability" (Cornell and Jackson 2013:516)

Aleatory uncertainty:

"…is related to the inherent variability of systems, including their nonlinearity, randomness and contingency" (Carnell and Jackson 2013:517)

Vulnerability:

"The propensity or predisposition to be adversely affected. Vulnerability encompasses a variety of concepts and elements including sensitivity or susceptibility to harm and lack of capacity to cope and adapt."
http://www.ipccdata.org/guidelines/pages/glossary/glossary_uv.html

Stakeholder:

The more pertinent question is "who is a stakeholder?", rather than "what is a stakeholder?". In general, a stakeholder is any person who has a "stake" or interest in a policy question. This is a very broad category and includes both persons involved in making a decision and those affected by it. This includes politicians, planners, administrators, home owners, knowledge providers, users, and end-users of a service, as well as private interests, civil society, citizens of all ages that are affected by a decision. See figure 4.

Decisionmaker:

A person whose decisions and the actions that follow from them, can influence a condition, process, or issue under consideration (Millennium Ecosystem Assessment).

Policymaker:

A person with power to influence or determine policies and practices at an international, national, regional, or local level (Millennium Ecosystem Assessment).

User:

A person who uses an intermediate product or service in order to provide a final product or service.

End user:

A person who directly or indirectly uses a final product or a service, such as a municipal planner using a flood map.

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Appendix A

Living Lab Needs and Visions Template

Contents

A1 Visions of a sustainable, resilient community and risk perception

There are several methods to ascertain visions of a sustainable, resilient future and various perceptions of risk, together with stakeholders. The visions will serve as a first step towards an analysis of needs and set the tone for the work with the Living Labs and the production of the climate service. You are welcome to use any method you feel appropriate to get a good picture of the different visions of sustainability and resilience for the community. The questions to be addressed are:

- What are the (different) long-term and short-term visions of a sustainable, resilient society?
- How are these different from the situation today?
- How is risk perceived and understood within these visions?
- Are the visions desirable for everyone? Are there any concerns about them?
- What types of development paths would be useful to achieve the visions? How are the visions linked to actions?
- What is the expected benefit /added value to the community of the vision?

Below are just two examples of methods to gather visions, but we will discuss further the relative advantages and disadvantages of each.

A1.1 Visions of sustainability using CIMULACT Visioning Workshop Method

The CIMULACT Visioning Workshop method was used in 30 European countries in November 2015- January 2016 to gain input into citizens' visions of a desirable future. Over 1000 citizens were involved and 179 visions of a desirable future were produced. For more info see www.cimulact.eu. The workshop process was done over an entire day.

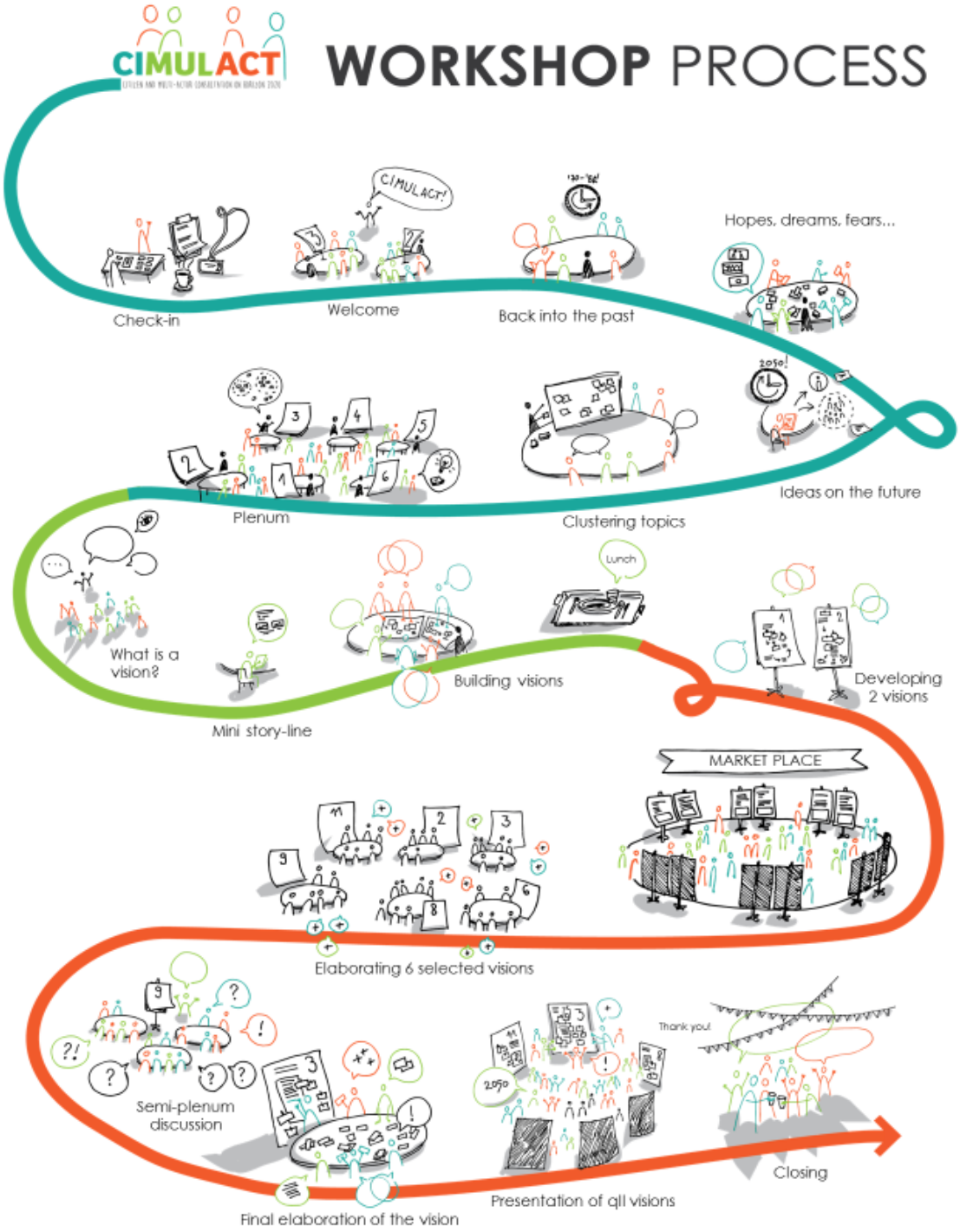

Figure 1: CIMULACT process

A1.2 Visions of sustainable development path using Backcasting method

Backcasting is a wide collection of methods used to produce development paths from a vision of a desirable future. It is more based on defining a stakeholder's or an end-user's own criteria for visions and then comparing to the situation today. One simple representation of Backcasting is seen below:

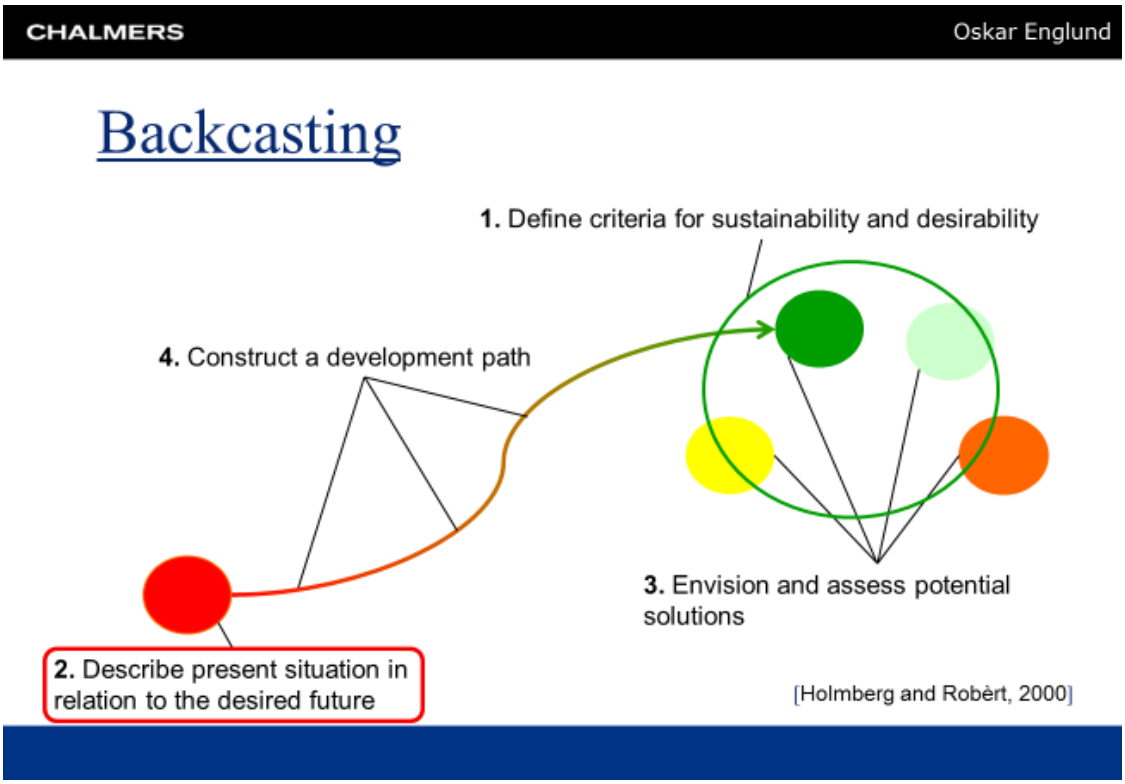

Figure 2: Example of Backcasting method (Holmberg and Robért, 2000)

A2 Needs of various stakeholder groups

Assessing the needs of stakeholders associated with the production of the climate service is related to the visioning exercises and to some extent can be incorporated into this Visioning. But stakeholder needs can also be gathered by other methods (interviews, surveys, etc). The main goal is to determine the different types of needs, using a table like that below (adjustments can be made, categories added or deleted according to what is relevant in the Living Lab and the climate service to be produced).

Needs / *Stakeholder*	Imple-mentation	Know-ledge	Capacity building	Awareness raising	Resources	Guidance	Com-munication	Coordi-nation	Learning
A. City Planner									
B. Politician									
C. Regional authority									
D. Citizen									
E.NGO									
F. Com-munity group									
G. xxx									

Figure 2: Example of Needs matrix

Appendix B

Stakeholder Identification and Analysis

Contents

B1 EVOKED Template Stakeholder Identification and Analysis

EVOKED Template Stakeholder Analysis: *(cast study name)*

Fill out the table below based on your initial assessment of who the stakeholders are for your case study site. The goal is to identify as many stakeholders as possible, preferably being able to identify each stakeholder (or individual/ group/ organization) by name. Several general stakeholder categories are provided as a guide. Feel free to add more categories as needed. If no stakeholder exists for a particular category at your case study site, then leave that category blank; however, please keep the category title in the table. The stakeholder analysis should be seen as a living document and may need to be kept up-to-date throughout the EVOKED project.

Once each stakeholder is identified, describe their key interest in the case. Then, conduct a preliminary mapping of each stakeholder by providing a value for their **influence** and their **interest**. **Influence**: the amount of power, in any form that a stakeholder can mobilize. For example in the case of an interest group or non-governmental organisation, if they are able to mobilize media, use resources (money or otherwise), or organize a lobby to exert pressure at the political level, they can have a high level of influence. **Interest**: how interested is the stakeholder in the issue at the particular cast study site? A very interested stakeholder may have a lot to gain or lose (potentially) with a particular issue/project at the case study site. Alternatively, the stakeholder may be very interested in an issue reasons that are not personal, but that refer to a collective or societal good. The type of interest can be very diverse in nature. For example, money can be a point of interest when it concerns a company. Safety and security can also be of interest when it concerns local inhabitants.

STAKEHOLDER (name and role/position)	**CONTACT INFO** (telephone and/or e-mail)	**KEY INTEREST**	**INFLUENCE** Very high = 4 High = 3 Low = 2 Very low = 1	**INTEREST** Very high = 4 High = 3 Low = 2 Very low = 1
Government: local-regional				
Government: national				
Business/Industry				
(i.e. developers, insurance agencies, tourism)				
Interest groups: local-regional				
(i.e. fishing org., landowner org.)				
Interest groups: national				

STAKEHOLDER (name and role/position)	**CONTACT INFO** (telephone and/or e-mail)	**KEY INTEREST**	**INFLUENCE** Very high = 4 High = 3 Low = 2 Very low = 1	**INTEREST** Very high = 4 High = 3 Low = 2 Very low = 1
Citizens				
(i.e. individuals, users of the lagoon)				
Research Institutes and Initiatives				
Politicians: local-regional				
Politicians: national				
Media				
(i.e. journalists, newspapers, television broadcasts)				
Other (tourists, visitors etc.)				

Appendix C

Context and Governance Analysis Template

Contents

C1 Context and governance aspects analysis for EVOKED Living Labs

This template is to document the context and governance aspects in which the Living Lab/provision of climate service takes place. In doing so, we will better be able to identify the challenges and opportunities associated with providing the living lab, and help to ensure that our actions are sensitive to the specific contexts within each case study.

This is also a living document and may be updated as contexts and circumstances change within the case study area. The questions below should be seen as suggestions for understanding the five main dimensions of territorial governance and what they mean for climate services. As such, they do not necessarily all have to be answered, and they may give rise to other more relevant questions. Some of the questions can be answered in the beginning of the Living Lab (LL) process while others might be answered later in the process.

C2 The Physical Context

- Geography
- Water courses
- Main soil types
- Climate service to be produced
- Critical infrastructure
- Other relevant physical factors

C3 The Socio-economic Context

- Area of the Living Lab main space
- Population
- Age structure
- GPD/capita
- Other relevant socio-economic factors

C4 The Territorial Governance Context

Below follow questions meant to help understanding the five main dimensions of territorial governance and what they mean for climate services.

C4.1 Coordinating the actions of actors and institutions

- Which governance levels (local, regional, national macro-regional) are involved in climate adaptation policy, risk and vulnerability analysis, dealing with natural hazards and promoting community resilience?
- How are their efforts coordinated? Does it work well? What are the challenges in such co-ordination?
- Are there any power conflicts involved in implementing climate service measures? Other challenges?
- Which level has main responsibility for implementing the measures?
- Who bears the financial responsibility?
- How are they coordinated?

C4.2 Integrating policy sectors

- Which sectors are involved in climate adaptation policy, risk and vulnerability analysis, dealing with natural hazards and promoting community resilience?
- How are these actions integrated? What works well? What are the challenges?

C4.3 Mobilizing stakeholders

- Which stakeholders are currently involved in climate adaptation policy, risk and vulnerability analysis, dealing with natural hazards and promoting community resilience?
- How have stakeholders already been identified and mobilized by decisionmakers and others within the stakeholder area?
- What problems and possibilities exist in getting a stakeholder mobilized?
- How are risk and uncertainty communicated to stakeholders?

C4.4 Being adaptive to changing contexts

- What is the room for manoeuver or scope of flexibility to work with innovative climate services?
- What climate adaption projects, actions and strategies are already in place and how can EVOKED build on these?
- How do those involved in determining risk and uncertainty learn from one another?

C4.5 Realizing place-based / territorial specificities and impacts

- What types of epistemic/technical and consensual/local knowledge exist on risk, uncertainty and climate adaptation?
- Who provides the knowledge and is it currently seen as sufficient?

- How is this knowledge gathered and managed?
- What types of knowledge are further needed to provide the climate service?

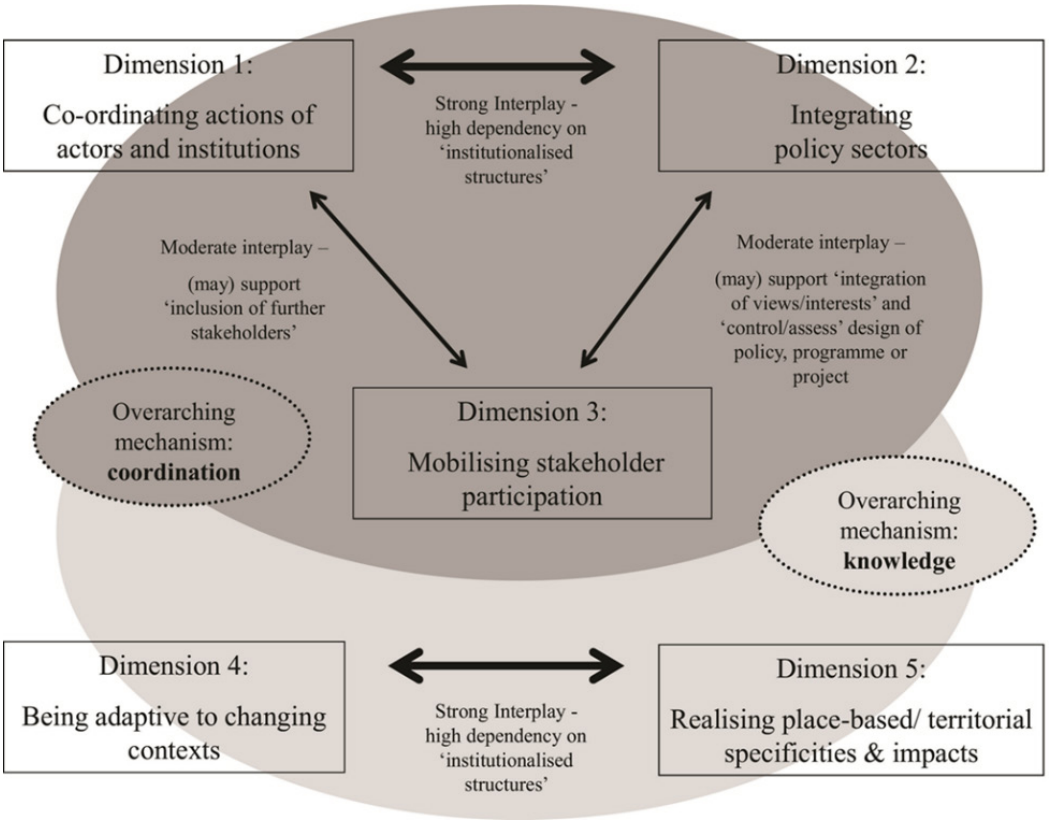

Figure 1: The Territorial Governance Framework (Schmitt and Van Well, 2016)

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