TRANS
lighthouses

# MORE THAN GREEN

Lighthouses
of transformative
nature-based solutions
for inclusive communities

Guidelines for participatory and inclusive knowledge co-dissemination

Funded by
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# Guidelines for participatory and inclusive knowledge co-dissemination

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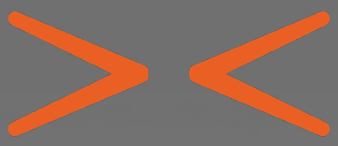
# Executive Summary

This report on "Guidelines for inclusive and participatory knowledge co-dissemination" is a deliverable of the TRANS-lighthouses project "More than green – Lighthouses of transformative nature-based solutions for inclusive communities". The report is a part of the work package 2 "Living knowledge co-creation and place-based research" aimed at expanding the conventional approaches to nature-based solutions (NBS) by developing reflexive and critical frameworks. The current deliverable is a part of the overall communication, dissemination, and exploitation plan of the TRANS-lighthouses project.

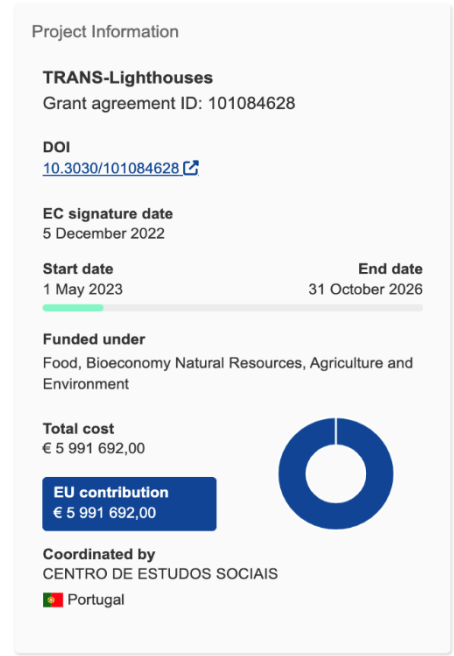
This report discusses what inclusive co-dissemination is, what it implies in terms of methodological and epistemological aspects of knowledge production and provides guidelines about main aspects to be considered to integrate co-dissemination into NBS projects. Co-dissemination in the report is approached, firstly, as an opportunity to go beyond traditional academic knowledge dissemination methods, which can often fail to reach diverse audiences for whom research results might be the most relevant. Secondly, the report emphasises the need to approach co-dissemination as an integral part of knowledge co-creation, where knowledge is not only shared with diverse target groups but is also co-produced by these groups. To illustrate methods and themes discussed, the report provides examples of case studies and methods, some of which are used in the TRANS-lighthouses project, and some exemplify other projects which can be used as an inspiration for the readers.

The report consists of three sections**.** *Section 1* positions the report within the overall project structure, introduces the objectives and main concepts of the report. *Section 2* goes into further details about key themes which need to be considered in the process of co-dissemination. In this section we discuss the methodological and epistemological considerations to take into account when knowledge is co-created and co-disseminated, pointing to the importance of rethinking our roles in knowledge production as researchers, citizens and public authorities. Other themes discussed in this section are ethical questions of co-dissemination; constraints of co-dissemination with the focus on insufficient recognition of non-traditional knowledge dissemination and co-creation methodologies in academic cultures and institutional frameworks; and the question of when in the project timeline co-dissemination activities should be approached. Finally, based on these diverse themes, *section 3* provides guidelines and actionable questions, which serve as points of reflection and guidance for researchers and practitioners to integrate co-dissemination activities in NBS implementation.



# Section 1: Description of the deliverable

## 1. 1. Project overview




https://cordis.europa.eu/project/id/101084628

Figure 1: *CORDIS profile*

The TRANS-lighthouses project aims to understand the strengths and limitations in the design and implementation of nature-based solutions (NBS) and to contribute to rethinking and reframing the main elements that compose the complexity of creating socially and ecologically just solutions.

The project is funded by the European Union under the Horizon Europe programme (grant agreement 101084628) lasting from May 2023 to October 2026 with a budget 5.9 million euros.

TRANS-lighthouses strengthens socio-politics as part of the public agenda for nature-based solutions towards systemic change. TRANS-lighthouses also integrates a network of "lighthouses" in urban, rural, coastal and forest areas. The "lighthouses" are a metaphor for a set of local governance arrangements and instruments, within multi-stakeholder networks and concerted groups. They are aimed at improving the contributions of nature-based solutions and achieving, in an integrated way, ecological, social and economic objectives. To this end, new governance models will be tested, as well as approaches and tools for co-creation in small scale but big picture projects that can be upscaled over time.

Accordingly, each lighthouse is composed of Living Knowledge(s) Labs, assessment cases, pilot cases and international associated partners. In these spaces, the interaction of different knowledge, experiences and roles will support the assessment of ongoing solutions and the testing of new ones. In this way, it is intended to prioritise the perspectives of citizens, in dialogue with other interested actors for their co-creation.

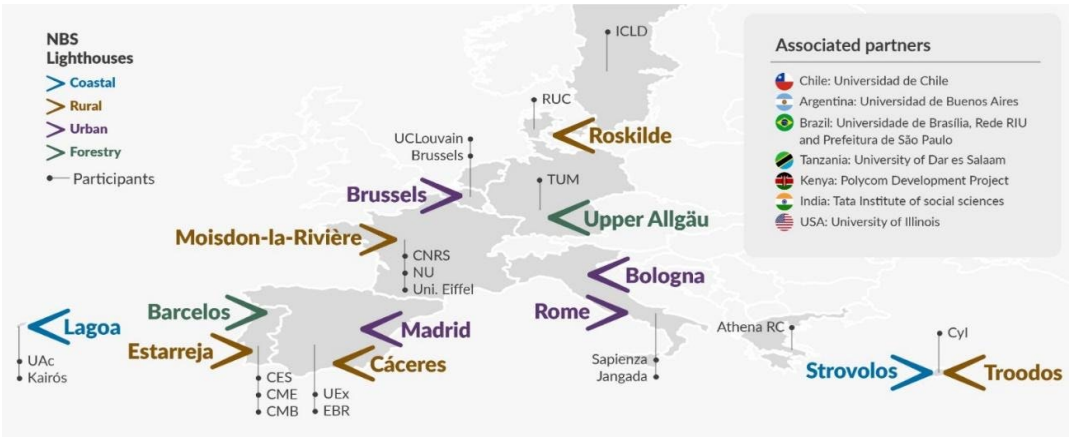



Figure 2: *Map of NBS lighthouses in the project.*

## 1.2 Objectives of the deliverable

This deliverable aims to provide guidelines for participatory and inclusive knowledge co-dissemination.

Traditional forms of academic knowledge dissemination such as journal articles, books, conferences or project deliverables can often fail to reach the target audiences which are the most affected by the project findings, especially when they are not in open access. TRANS-lighthouses project has a particular focus on knowledge co-creation and anchoring NBS in local communities aiming for developing citizen-driven nature-based solutions. Therefore, this deliverable focuses on ways to build inclusive and participatory knowledge co-dissemination strategies, working with diverse target groups.

The deliverable distinguishes two interrelated types and objectives of co-dissemination. Firstly, inclusive dissemination aimed at making knowledge sharing accessible to diverse groups, stakeholders, and beneficiaries. Secondly, knowledge co-dissemination approaches as a part of broader knowledge co-creation, where citizens play an integral role in co-defining project objectives, research questions and research design, and co-own the knowledge produced in the project. These objectives are not mutually exclusive, and both play an important role in the project timeline. Hence, this deliverable will provide guidance on how to work with these distinct objectives.

## 1.3 Positioning within the project

A number of different interrelated tasks in the TRANS-lighthouses project aim at describing and providing guidelines for knowledge co-creation and dissemination. This deliverable report is produced within the work package 2 of the project. Work package 2 dedicated to living knowledge co-creation naturally makes dissemination integral to its objective of expanding the conventional approaches to NBS by developing reflexive and critical frameworks.

The current deliverable is a part of the overall communication, dissemination, and exploitation plan of the TRANS-lighthouses project, detailed in Deliverable D1.1 (see Nunes & Gameiro 2024). TRANS-lighthouses' plan for communication, dissemination, and exploitation of results (deliverable D1.1) is strategically underpinned by the core of the project's objectives in terms of living knowledge co-construction, knowledge sharing and synergies building, being transversely operationalised across the work packages. The deliverable 1.1 describes general processes, methods and guidelines of communication, dissemination, and exploitation at the project-level, including communication procedures inside the consortium; tools for awareness raising of the project (website, etc), planned channels of project results dissemination (e.g. events, conferences, publications); as well as ethical guidelines for communication, including gender-sensitive communication.

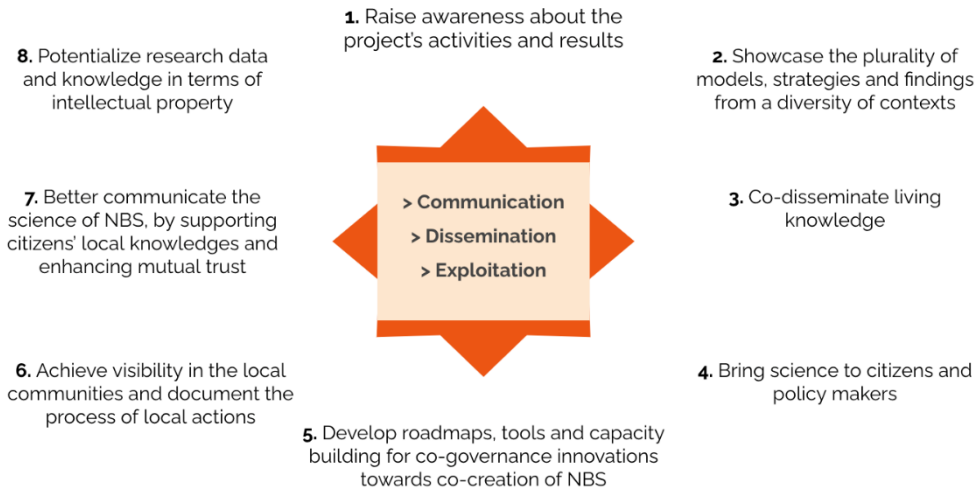



Figure 3: *Objectives of the project's communication, dissemination and exploitation plan (Nunes & Gameiro 2024).*

The guidelines for participatory and inclusive knowledge co-dissemination aims to provide theory- and practice-oriented guidelines that can guide and inspire pilot cases developed within the project to engage in processes of knowledge co-creation and co-dissemination with citizens and communities. The deliverable complements and partially builds on the work on *"Community-based communication and citizen science* (Work Package 6)*; "Communication and interaction with citizens in the deployment of NBS",* and the *"Living Framework for Social Mobilization and Citizen Engagement" (*deliverable 6.1*).* This deliverable discusses the building blocks of social mobilisation such as inclusive, context- and stakeholder- specific approaches. It analyses mobilisation challenges, as well as methodologies and participatory tools such as Affective Map, Photovoice, Walkthrough, Focus Group, Cultural Mapping and Bioblitz.

The guidelines and actionable questions provided in the present deliverable D2.6 are aimed at supporting the partners and stakeholders involved in pilot cases to disseminate their results and knowledge according to the local context and as a reflexive process. It is in line with the overarching approach of reflexive monitoring supported by work package 6, which enables the co-creation of living knowledge in frameworks, i.e. citizen science framework and resources on NBS. This approach is coupled with a critical analysis, namely in terms of inclusion and engagement of diverse groups.

## 1.4 Building on TRANS-lighthouses conceptual framework

The guidelines for co-dissemination build on the key dimensions of the TRANS-lighthouses conceptual framework (Egmose et al. 2024). The conceptual framework outlines four main dimensions to be taken into consideration in the TRANS-lighthouses project. These include: *Firstly,* to work with and strengthen the connections between participatory methods and participatory governance. This dimension of the project implies working with participatory methods at concrete local and community levels, as well as integrating participatory approaches in multi-level institutional governance and policy. *Secondly,* to work with the social dimension of NBS by including both marginalised groups and marginalised knowledge(s). This dimension implies working with epistemologies of the South and intersectional perspectives, addressing who and what is not present and might re-emerge in NBS. *Thirdly,* to work with the nature dimension of NBS, towards re-enabling reciprocal relations with nature. This dimension includes rethinking human relations with nature, and

learning from practitioners, local and indigenous knowledge. *Fourthly,* to work with the economic dimension of NBS, strengthening transformative economies beyond extractivism. This dimension implies working with plural notions of economy and how they can be integrated into NBS working with inclusive communities.

Together the combination of these four dimensions makes up key aspects of the TRANS-lighthouses conceptual framework, which can be approached both at conceptual level (theories and concepts of NBS); methodological level (participatory methods and approaches) and governance level (institutional and policy conditions for NBS). Moreover, learning across geographical contexts and participatory cultures is key to enabling NBS for inclusive communities more broadly.


Figure 4: *NBS lighthouses for inclusive communities. The four dimensions of the TRANS-lighthouses Conceptual Framework.*

The conceptual framework emphasises the need to deepen the participatory processes in NBS development and facilitate processes where communities become the drivers of participatory knowledge co-creation. Whilst participation is increasingly used in forms of "invited spaces" (Cornwall, 2004) in which government bodies and institutions invite and set the agenda for processes, including citizens in participatory processes, the TRANS-lighthouses project additionally aims to strengthen inclusive approaches by finding ways to further mature and anchor

participatory processes in and with the communities working with the particular NBS practices at stake. Citizens engaging in learning, understanding, and negotiating how their livelihoods are interconnected with their natural environment, and taking part in defining how this natural environment should be managed, can play a key role in anchoring greater democratic ownership and responsibility in the communities working with their particular practices.

Participatory methods in this sense are not merely tools for community engagement; they equally have implications for research epistemologies, ontologies, and methodologies, raising questions about who produces knowledge and how, and whose knowledge(s) are valid. These considerations have important implications for knowledge co-dissemination within NBS projects.

## 1.5 Main concepts of the report

**Research dissemination** is a "a planned process that involves consideration of target audiences and the settings in which research findings are to be received and, where appropriate, communicating and interacting with wider policy and service audiences in ways that will facilitate research uptake in decision-making processes and practice" (Wilson et al. 2010, p. 91). Dissemination attempts to connect knowledge to action and strategically communicate research results to targeted audiences, typically knowledge users who can apply the findings (Chapman et al. 2021).

**Co-dissemination** implies that the knowledge users and researchers collaborate in the process of knowledge sharing. When dissemination is co-created, "knowledge users and researchers work together to develop and execute dissemination plans according to the principles of co-creation" (McCutcheon 2022, p. 194).

**Participatory and inclusive knowledge co-dissemination** further implies that participatory and inclusive approaches must be part of identifying, including and enabling dissemination activities, and accordingly that dissemination activities must be seen as relevant and useful for these groups.

**Living Knowledge(s) labs**

These guidelines approach knowledge dissemination within a particular methodological set-up, namely Living Knowledge(s) Labs (LKLs). TRANS-lighthouse's project aims for participatory and inclusive approaches to nature-based solutions co-creation, rooted in community engagement and co-governance. To create the local co-creation environments the project works through 8 Living Knowledge(s) Labs across European countries.

Each pilot case will establish a Living Knowledge(s) Lab bringing together diverse local actors (formal and informal organisations, citizens, municipal actors, researchers) who will discuss, monitor, assess, design and plan the contribution of NBS to a just transition, including: (1) social benefits for that specific target group, (2) the social and ecological transformative capacity of specific NBS, according to the specificities of the geographical area, (3) capacity of introducing democratic innovations into the model of governance, including pathways towards co-decision and co-creation of solutions for a just transition, sustainable wealth generation and job creation, (4) specific contribution of the NBS and the NBS co-creation process for the perception of the value of nature, (5) co-creation in terms of designing material and immaterial NBS (source: TRANS-lighthouses Grant Agreement).

Commonly, Living Labs or Living Knowledge(s) Labs [1] can be defined as "an emerging open innovation approach that involves multiple stakeholders, including users, to co-create value that eventually leads to innovation" (Veeckman et al. 2013, p. 2). The Living Labs approach considers people not only as users or consumers, but as active co-creators in an innovation process (Puerari et al. 2018). The use of Living Labs encourages a shift from more traditional forms of collaboration, such as consultation, to more dialogue-oriented methods with deeper participation of relevant actors, such as citizens and public sector representatives (Lehmann et al. 2015).

## 1.6 Types of co-dissemination

Generally, co-dissemination activities can be divided into two main types, based on the objectives, types of target audiences and types of participatory approach. Firstly, dissemination aims to make different stakeholders aware of the project and project findings. But secondly, it can be argued that knowledge co-dissemination also needs to be considered in relation to and as a part of the wider knowledge co-creation process. In the following we will further discuss these two approaches to co-dissemination.

### Making stakeholders aware of the project and project findings

Traditional scientific knowledge dissemination normally includes scientific reports, and publications (books and journal articles) as well as presentations of research at scientific conferences. It focuses on disseminating the produced knowledge among the scientific community, and usually doesn't have a particular focus on including other stakeholders (e.g. study participants) in dissemination activities. Therefore, these methods often do not succeed in delivering research results to members of the public or practitioners in the field who might be amongst the most affected by the research project (Chen et al. 2010).

Hence, it is important to engage in more inclusive dissemination strategies in order to include communities, make sure that the citizens are engaged with the results of the learning, and to ensure that knowledge is utilised for actions (Harmsworth & Turpin 2000). In this sense, dissemination can be viewed as a process of communicating knowledge to target audiences so that it may lead to social change (Chen et al. 2010).

This type of dissemination aims at:

- **Inclusivity**

Ensuring awareness of different stakeholders about the research project and results. Involves brainstorming and listing all possible participants and stakeholders who are likely to be affected by program activities in the area, either positively, negatively, directly or indirectly. It requires inclusion of marginalised and minority groups (Harmsworth & Turpin 2000).

- **Accessibility**

Looking for the most accessible and inclusive ways to engage different stakeholders. The dissemination method is determined by the needs of audiences to which the information is directed. The fundings are communicated in a way that is credible and clear for particular audiences (Kumar 2023).

[1] Living Lab is a common term used in literature to describe this type of collaborative spaces. Building on this concept, TRANS-lighthouses project uses the term "Living Knowledge(s) Lab" to emphasise the focus on diversity of knowledge(s) as well as diversity of actors.

- **Engagement**

Ensuring the engagement of stakeholders with research results (preliminary or final) (Kumar 2023).

This type of dissemination allows for inclusive and participatory processes within research dissemination, even where the research itself is undertaken in a traditional (non- or less-participatory) manner (Valli 2021). This implies that communication and dissemination of research results can become participatory even when the research process has been conducted in a researcher-led way, for example, when it is the researcher who mainly identifies the problem formulation, objectives, methods, and data collection (Valli 2021).

At the same time, it is important to view inclusivity and diversity through a critical lens and reflect on whether inclusive co-dissemination is the best strategy for working towards transformative NBS. Despite a strong focus on benefits of participatory research, it has also been criticised for the danger of replacing critical reflexivity with obligatory focus on greater diversity, or for co-optation of political agendas through the banner of participation (Cooke & Kothari 2001). Hence, these guidelines encourage us to engage reflexively when thinking about the objectives and the potential pitfalls of co-creation.

## Knowledge co-dissemination as a part of knowledge co-creation

Another way to approach inclusive and participatory knowledge co-dissemination is viewing co-dissemination as one of the elements of participatory research where communities and citizens since the beginning of the project are an integral part of the research design, including problem formulation, identifying the study objectives and making decisions about conducting data collection and analysis (Woodall 2021).

While conventional research separates the researchers and the stakeholders, with firm distinction of roles in the research process, participatory research methods such as action research and citizen science blur these positions, placing both the researchers and stakeholders in co-creator roles (Bradbury 2015). Drawing from the methodology of participatory action research (PAR), research facilitators and various stakeholders can become co-researchers in all aspects of research from question formulation, through data collection and analysis to dissemination and ownership of the research findings as the research is intended to influence their community and situation (Ackerly & True 2010).

In this type of co-dissemination, the focus is not on particular methods of co-dissemination, but rather on the *process of knowledge production:* who produces knowledge and how, and whose knowledge counts. Knowledge co-dissemination is hence one element of participatory research and practice where participants and researchers reflect and act together through research planning to analysis and dissemination (Moletsane 2015).

Such knowledge co-creation and co-dissemination help to balance the control of content and process by both researchers and participants, encourages mutual learning among them (Moletsane, 2015), and ultimately, challenges epistemological boundaries of who owns the research process and whose knowledge counts.

Following Moletsane (2015), although emerging literature suggests a great variety of different methods and tools which could be helpful for participatory dissemination, for this type of co-dissemination it is not enough to use these tools in research. Rather what is needed is mutual reflection between researchers, participants and other actors involved in the project about the processes of knowledge

production itself, the power dynamics in this process, and discussing the ways of democratic decision-making in research processes needed for social change.

## 1.7 Timeline of inclusive co-dissemination: when to do what

In the framework of Horizon 2020 and Horizon Europe, EU-funded projects increase their results by means of specific dissemination activities, i.e., by sharing their research results with different targeted audiences, namely the scientific community, civil society and policymakers. In this context, 'dissemination' is understood as making knowledge and results publicly available free-of-charge, in scientific magazines, scientific and/or targeted conferences, and databases, while 'communication' is to inform, promote and communicate activities and results, and 'exploitation' is to make concrete use of results for commercial, societal and political purposes. The table below gives an overview of the differences between these three concepts, as defined by the EU guidelines.

| | Communication | Dissemination | Exploitation |
|---|---|---|---|
| What | Inform, promote and communicate activities and results | Make knowledge and results publicly available free-of-charge | Make concrete use of results for commercial, societal and political purposes |
| Whom | Citizens, stakeholders and the media | Who can learn and benefit from the results, such as: scientists, industry, public authorities, policymakers, civil society | Who can take the results forward or invest in them, such as: researchers, stakeholders, industry (also SMEs), public authorities, policymakers, civil society |
| How | > Having a well-designed strategy<br>> Conveying clear messages<br>> Using the right channels | Publishing results in:<br>> Scientific magazines;<br>> Scientific and/or targeted conferences<br>> Databases | > Creating roadmaps, prototypes, software<br>> Sharing knowledge, skills, data |
| When | From the start until the end of the action | > Anytime, as soon as results become available<br>> Up to four years after the end of the project | > Towards the end of the action and beyond, as soon as exploitable results are available<br>> Up to four years after the end of the project |

Table 1: *Communication, dissemination, exploitation of results in EU-funded projects*
*Adapted from (European Commission, 2023) and Horizon Results Platform.*

When is the right time to approach knowledge dissemination in the project timeline? Traditionally, dissemination activities are considered in mature stages of the project, when certain findings and results of the research are ready to be presented to the public (within or outside of academia). The above EU recommendations for the timeline of communication, dissemination and exploitation activities suggest that (co-)dissemination activities can be arranged at any time as soon as results become available, and will continue after the end of the project.

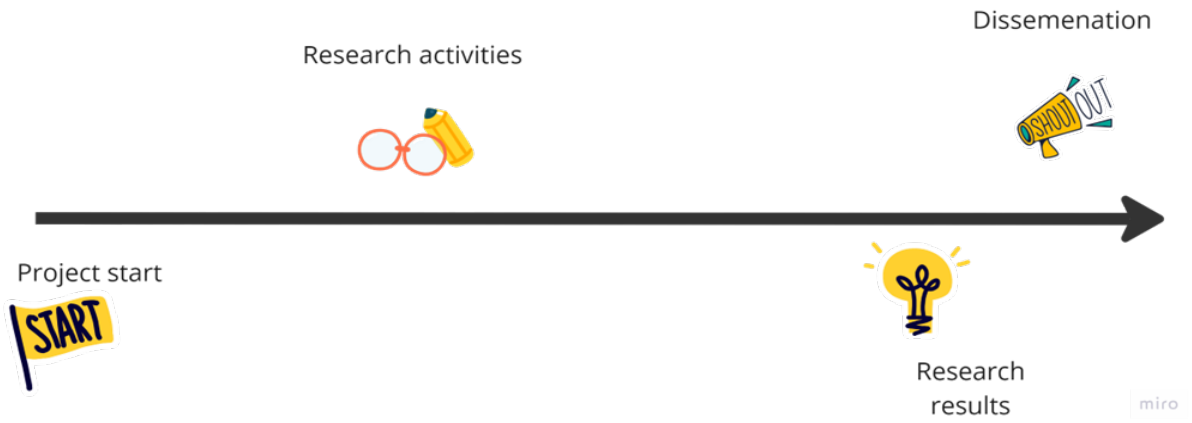



Figure 5. *Research project timeline, demonstrating how dissemination is commonly initiated after research results are available.*

At the same time, this suggested timeline invites for a critical reflection. In the TRANS-lighthouses project with a strong focus on participatory methodologies and knowledge co-creation anchored in citizens` living experiences, it is essential to start co-designing dissemination long before final research results are available. In the project, participatory and inclusive knowledge co-dissemination is intrinsically linked to the establishment of the Living Knowledge(s) Labs and the implementation of the pilot cases, interconnecting the research activities with real-world co-creation in the cases. In this respect, co-dissemination becomes an integral part of implementing *participatory activities.*

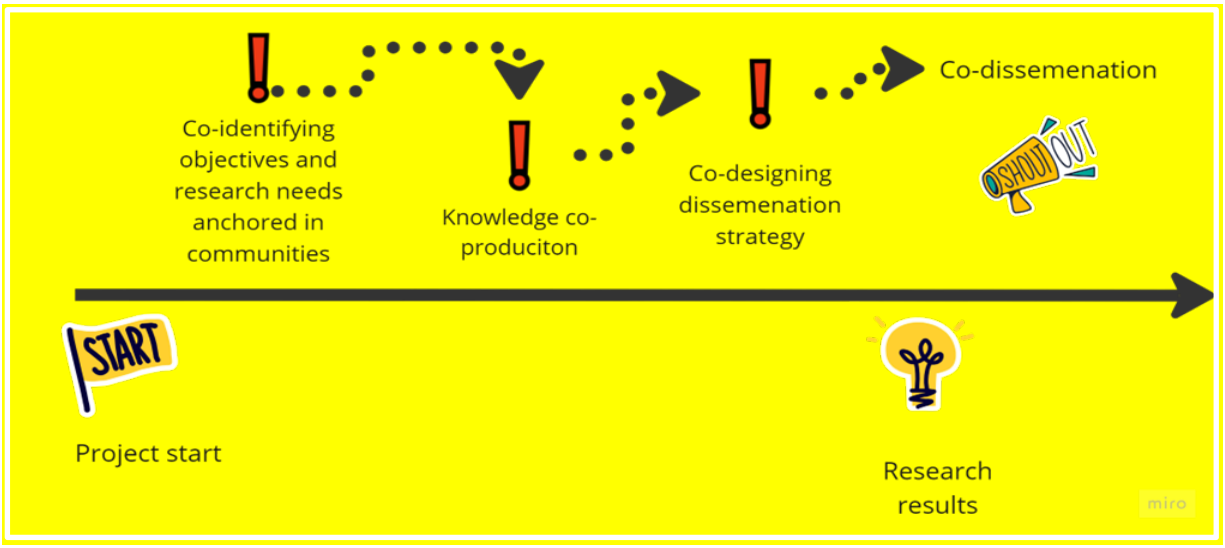
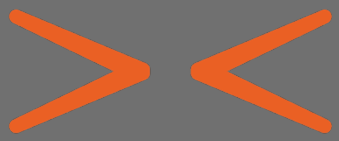



Figure 6. *Research project timeline, demonstrating co-creation activities necessary at early stages to strengthen co-dissemination.*

The above timeline suggests that for inclusive co-dissemination that focuses on engagement of diverse groups and makes co-dissemination part of knowledge co-creation, the work on co-dissemination starts early in the project. Such activities as establishing a collaborative process with community stakeholders; co-identifying needs and objectives anchored in community's living experiences; knowledge co-creation; and mutual identification of activities for co-dissemination based on shared knowledge needs are essential for implementing co-dissemination, and need to be considered throughout the project timeline, even before research results are available for dissemination.



# Section 2: Key themes in inclusive and participatory knowledge co-dissemination

## “Co” in Co-dissemination emerges from how you collaborate

Effective knowledge co-dissemination in Living Knowledge(s) Labs cannot be viewed as an isolated step to be added at the final stages of the collaborative process. Rather, the manner in which collaboration is initiated and structured inherently shapes the potential for meaningful and impactful co-dissemination of knowledge. What might this entail? In the following we will elaborate on the following aspects of collaboration which are key for developing inclusive knowledge co-dissemination practices for nature-based solutions:

- Epistemologies of co-creation and co-dissemination: Who creates knowledge(s) and how
- Transparency, reflexivity and the 'common third' in knowledge co-creation
- Ethics, risks and consent in co-produced research
- Constraints to inclusive research co-dissemination

## 2.1 Epistemologies of co-creation and co-dissemination: Who creates knowledge(s) and how?

**Inclusion of marginalised and underrepresented groups and knowledge(s)**

Dissemination of knowledge is often thought of as occurring at an advanced stage of the project (or sometimes even after the project funding ends) because it implies that certain activities have already been carried out which produced products or information which can be disseminated. However, we suggest that inclusive knowledge co-dissemination starts early in the project, perhaps at the stage of the project planning addressing the with the question who will be included in the project. The TRANS-lighthouses project focuses on learning from marginalised groups and knowledges, aiming to re-think NBS in direction of more inclusivity and community-orientation. Hence, inclusive co-dissemination of knowledge requires considering what knowledge is relevant for marginalised groups and produces positive impacts for them. Inclusive co-dissemination of knowledge implies making marginalised and underrepresented groups and knowledges heard and potentially legitimised within the broader scientific and political landscape.

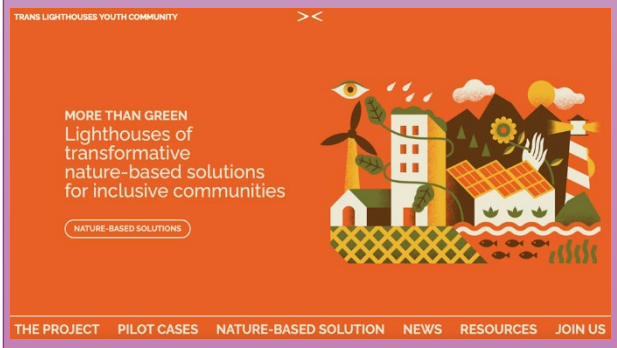
**Example: Engaging and empowering youth for co-creation and co-dissemination of inclusive nature-based solutions**

The TRANS-lighthouses project has a focus on engaging and empowering diverse groups and knowledge(s) in NBS, aiming for inclusive participatory processes and integrating a plurality of knowledge(s). Engaging young people in co-producing and co-disseminating concerns, inspirations and ideas about nature-based solutions is an important dimension of the project, with all pilot cases working on identifying and engaging youth in their activities. Engaging young people in sustainability initiatives is especially valuable because it allows them to become active participants in shaping their societies' futures and engage in intergenerational dialogues (Rana et al. 2020). Task 6.4 “Design of community-driven communication process based on youth protagonism” develops an innovative methodology to bring together young people from the project's diverse pilot cases and engage them in participatory and interactive co-creation and co-dissemination of local nature-based solutions.

To operationalise community-driven communication focused on youth protagonism, a communication website has been developed. This site acts as the primary channel for content production and information sharing about pilot cases. Each pilot case will be represented by a group of youths who actively create and disseminate various types of content that reflect their local realities. These types of content include articles, photographs, interviews, and podcasts, all produced in the local language of the youths involved.

Content production is based on the methodology of educommunication, an approach that integrates educational and communicative principles to foster inclusive and dynamic communicative ecosystems. Educommunication involves not just the transmission of information but also empowers young people to become effective and critical communicators, capable of interacting with media in a conscious and responsible manner. This pedagogical approach promotes the development of communicative skills, critical reflection on the media and its impacts, and active civic and democratic participation.

To ensure that the youths are well-prepared for these tasks, they will receive specialised training. This training will begin online, offering initial flexibility and accessibility, and will conclude in person. This hybrid training model aims not only to impart necessary technical and theoretical knowledge but also to strengthen bonds, promote the exchange of experiences, and consolidate learning in a practical and interactive manner. With this structure, the communication website is not just a content distribution platform but also a tool for youth empowerment, allowing young people to express themselves, engage their communities, and positively influence their localities.




Website link: https://translighthouse.testproduzione.it/

**Who defines the problems and the solutions?**
Often Living Knowledge(s) Labs have a strong focus on implementing participatory methodologies, and considering not only who is involved in a project development, but also in what role (Dell'Era & Landoi 2014). Creating an environment where citizens exercise the role of driver of the LKL processes is a focus of many LKLs across Europe (Dell'Era & Landoi 2014).

However, the labels of participatory and co-produced research do not necessarily mean that power imbalances and assumptions of whose knowledge is more valid, are easily overcome. In multi-stakeholder collaborations, often actors, traditionally viewed as more legitimate knowledge producers, such as academics or public authorities, can consciously or unconsciously re-produce the conventional leading roles, which can affect what knowledge is disseminated and how. When research is co-produced, it is important for knowledge users to exercise significant influence in shaping crucial decisions during the planning as well as the later phases of the dissemination (McCutcheon et al. 2022). Hence, it is important to create an environment for case participants to be the drivers of the action plan in the LKLs.

Action research further implies an epistemological dimension – knowing not about people but knowing with them (Bradbury 2015). Through co-creation researchers and participants co-define the project, and the epistemological basis implies that participants become subjects in the research process rather than research objects. Actors who have a coordinating role (e.g. research institutions or public sector actors) in the collaboration might intentionally or unintentionally be exercising more agency in defining the direction of the actions, and, hence, more control of what knowledge is produced and disseminated. This also implies reflecting on and challenging own objectives and pre-conceptions. Below we will address challenges of co-creation and dissemination relevant for different actors in the NBS processes and discuss possible ways of creating collaborative processes.

- **Researchers: Challenging roles of researchers' and participants' knowledge through inclusive methodologies**

Knowledge co-creation and co-dissemination can often be limited by power imbalances (Turnhout et al. 2020). Historically, academic knowledge has been viewed as privileged due to the "status of academics as authoritative knowers and in the historically greater truth-value ascribed to academic knowledge over other knowledge forms" (Phillips et al. 2021, p.3). Hence, despite the ideal of knowledge democratisation, conventional knowledge hierarchies often persist in participatory research (ibid). Action research and participatory research seek to produce research that strives for different ways of knowing. This includes trying to diversify what kind of knowledge is viewed as valid (embodied, experienced, informal etc.) or seeking for democratisation of knowledge by challenging who is considered a valid knowledge producer and owner (Fox 2015). To do so, researchers have been engaging in practices which go beyond traditional production and dissemination of knowledge through academic texts in order to challenge mechanisms of exclusion and power imbalances often reproduced through this kind of knowledge interpretation and presentation.

Some examples of attempting to work with more inclusive methodologies are involving practitioners in defining or criticising the research process (Naples 2007; Phillips et al. 2021) or by using non-traditional academic formats for presenting research outputs such as auto- ethnography (Phillips et al. 2022) or co-writing (Manning 2018).

Phillips et al. (2021) suggest three broad umbrella approaches that can be used to address power imbalances between researchers and participants. One approach involves engaging community members right from the outset of the research process. The aim is to establish equal partnerships through mutual learning. Another method involves tailoring the research process to accommodate the needs of vulnerable and marginalised groups. A third approach recognizes the inherent power imbalances in social relationships but suggests that these imbalances can be addressed through critical, reflexive analysis of power dynamics.

**Examples of inclusive methodologies**

**Critical Utopian Action Research** *(Egmose, Gleerup, & Nielsen 2020).*
Critical Utopian Action Research (CUAR) aims to foster inclusive spaces where individuals collectively address and act upon critical experiences and ideas rooted in their everyday lives within local communities. The role of the Critical Utopian Action researcher is to facilitate these spaces and processes of social learning, using tangible lived experiences as a foundation for identifying societal dimensions of specific issues. While diverse questions and themes are explored in workshops, the basic question "how we want to live" serves as an underlying orientation for participants to build on the shared experience to critically identify problems faced, working with utopian ideas and aspirations, and maturing collective action. The goal is not universal answers but finding common ground for social and ecological well-being. Providing citizens the opportunity to contemplate such questions is the first step in shaping present and future communities democratically. CUAR employs various methodologies, such as the Future Creating Workshop, to embed citizens´ and practitioners´ lived experience into the process and democratise research and knowledge creation. Workshops typically involve participants seated in a semi-circle, progressing through critique, utopian and realisation phases. This structure encourages participants to articulate critiques, explore utopian ideals, and bridge them with practical realities.

**Co-operative inquiry**
Co-operative inquiry that can sometimes be referred to as co-writing is a research methodology that encourages inclusive research and writing with community, facilitates connections between practice and theory, and values people's lived experiences (Short & Healy 2016). The methodology allows researching 'with' people, not 'about' people or 'on' people. Co-operative Inquiry is a part of Participatory Action Research (PAR) and aims at research design that benefits the participants and is co-created by the participants, allowing them to have a say in how knowledge is produced about them and the decisions that might have implications for them (ibid).

In a Co-operative Inquiry researchers and participants form an Inquiry group about a mutual interest, concern or practice. All members in the process are the co-researchers, co-subjects, co-inquirers, and co-authors. One of the outcomes of this process can be co-writing a co-authored journal article together (ibid).

- **Public actors: Going beyond citizen consultation in co-creation processes**

Public actors, especially municipal structures, often play a leading role in defining and implementing local nature-based solutions. Despite a strong discursive focus on participatory processes and citizen-engagement in implementation of nature-based solutions, citizen engagement and processes of co-creation in municipally led projects often remain limited (Wamsler 2020).

Due to the way the projects are initiated and implemented, citizen engagement is often limited to a role of consultation, for example, a municipality conducting surveys about the relevance of a certain project under implementation. This leads to citizens' detachment from the matter of concern, and lack of the sense of engagement and ownership. This also might lead to a dynamic where citizens who have strong opinions against the project implementation are overrepresented in the consultation processes, resulting in a conflictual and unproductive process (Wamsler 2020).

There are a number of reasons why this is the case. On the one hand, current conditions and regulations do not provide adequate mechanisms and incentives for more active citizen involvement. This includes a lack of political support, policies, working conditions and financial and human resources (ibid).

On the other hand, a more critical point can be made about why more active citizen engagement and involvement of citizens as drivers of nature-based solutions is limited. NBS are often framed and promoted as a "benign way to address environmental and societal challenges; they are referred to as low-cost, no regrets approaches with few side effects" (Woroniecki et al. 2020, p. 12). Hence, it can be approached by public actors as cost-effective fixes to urban and regional planning which can simultaneously tap into positive social and environmental discourses. This might lead to municipal actors designing and implementing NBS without really addressing structural issues and dealing with the question of changing practices, behaviours and attitudes towards nature and peoples' relations to nature, which requires working together with citizens and communities.

**Case example: PIAZZA ROSSINI, BOLOGNA (ITALY)**

This case example describes one of the assessment cases in the TRANS-lighthouses project - an already implemented project providing good practices and lessons learnt for emerging pilot cases. This example demonstrates the collaborative process between researchers, the municipality and civil society, that employed unconventional methods of sharing information and engaging citizens.

**The transformation process**

Despite its historical and iconic value, the Piazza Rossini square in Bologna city centre, had so far been used as a parking lot for cars, and therefore did not represent a place for socialising. Pedestrians could walk along the edges of the square, in a space shared with cars. Furthermore, the presence of cars in the centre of the square interfered with the view of the important architectural heritage of historical and artistic value that overlooks it.

The transformation of Piazza Rossini arises from a series of experimental and demonstrative actions on the cultural heritage of via Zamboni provided by the European H2020 research-action project ROCK. The project monitors its outcomes through a system of sensors detecting flows, environmental parameters, and perceptual changes in the use of spaces.

The discussion about Piazza Rossini was initiated during the U-Lab 2018 Laboratory conducted by the Foundation for Urban Innovation. Over 250 people participated in the engagement process, and the need to restore a social dimension of the square was established, emphasising the collaboration of all stakeholders in the area (institutions, associations, students, etc.), with particular attention to vegetation and lighting as design elements. The first action was the experimental installation of a temporary lawn in September 2019 during the event "Le Cinque Piazze," as part of the Bologna Design Week and Researchers' Night, curated by the Foundation for Urban Innovation and the University of Bologna - Department of Architecture.

The idea of a temporary lawn instead of the parking lot was born during the co-design workshop, a shared design process: "Green Please: the unexpected lawn". The project was conceived through a workshop of co-design and co-construction involving students from the Department of Architecture at the University of Bologna, coordinated by the Urban Innovation Foundation in collaboration with the Rusconi Foundation and inspired by a suggestion obtained by consulting historical archival material where a portion of the ancient churchyard intended for a lawn is clearly visible.

*Photo: Leonardo Tedeschi, Fondazione Innovazione Urbana, Bologna*

**Opportunity**
The goal was to test (in an unexpected way for users) new uses of a public space, previously denied in the heart of the university area. After the positive feedback from this experience, the Municipality of Bologna decided to definitively pedestrianise the square, in line with the direction already indicated by the Urban Plan for Sustainable Mobility, which aims to increase pedestrian traffic, especially in areas of remarkable architectural value.

The potential for interaction with the city is a significant factor to be considered. The Urban Innovation Foundation worked to enhance and disseminate the results of this experimental project to ensure that the knowledge gained is shared with a wider audience by four different actions:

- Megaphone: Tools for extensive and understandable communication of the project
- Antennas: Tools of needs analysis (meetings, interviews, surveys…)
- Factory: Tools for co-production (prototyping, co-design, trainings…)
- Arena: Tools for dialogue and debate (assemblies…)

The temporary experiment was successfully embraced by citizens, with a weekly presence of approximately 200,000 visitors – monitored through crowd analysis sensors installed in the area – who not only passed through but also spent some time in the square. The installation was widely visible on social media platforms.

Furthermore, a large number of local associations and social entrepreneurial activities, professional intermediaries, and ad hoc initiatives enthusiastically supported the initiative as a first step towards a vision and future action for the city. These events quickly led to the Municipality's decision to transform it into a permanent solution for pedestrianising the space. For more information https://creativesunite.eu/article/piazza-rossini-transformed-from-a-parking-lot-to-a-pedestrian-green-space.

## 2.2 Transparency, reflexivity and the 'common third' in knowledge co-creation

**Discussing roles in a collaboration: what knowledge is relevant for whom and when?**
Living Knowledge(s) Labs are places for collaboration and inclusion of different voices, opinions and needs. Moreover, LKLs can become spaces for creating dialogues within the diversity of knowledge(s). Striving to anchor the nature-based solutions in communities and take a point of departure from communities' practices and knowledge(s), particular attention should be paid to different kinds of knowledge(s). Besides, it is important to reflect upon and discuss what kinds of knowledge(s) are meaningful for the citizens engaged in the projects to disseminate.

Inspired by Epistemologies of the South idea of monoculture of knowledge(s) that is opposed to ecology of knowledge(s), it is important to view knowledge in the processes of co-dissemination not limited to only scientific knowledge (Santos 2014). At the same time, it is important to understand the idea of ecology of knowledge(s) not as replacing one knowledge with another, nor should it be understood as the need to strive for uncritical diversity. Santos (2014) illustrates this point with the example of a dialogue between non-scientific and scientific knowledge. For example, in the case of traditional medicine, prevalent in many cultures over biomedicine, the former cannot be considered an alternative to the latter. Rather, ecology of knowledge(s) suggests recognising practices and contexts where each of these types of knowledge functions, as well as different ways they conceive illness, cure, human body, health, etc. Hence, ecology of knowledge(s) seeks to focus on "concrete relations among knowledge(s) and on the hierarchies and powers generated among them" (Santos 2014, p. 190).

Different forms of knowledge can have different roles. The question is not to make everything equal but be clear about the different roles knowledge and experience can have in the co-creation process. In the process of co-dissemination this means that there is a need for continuous discussion within the LKLs about what knowledge and in which form should be disseminated to achieve specific objectives.

Co-identifying *a common third* (Tofteng & Husted 2006) among the participants of the Living Knowledge(s) Lab, can be one way to approach this by mutually identifying and maturing *an agreement on what we would like concretely to collaborate about taking into account diversities across actors, r*esearchers, *practitioners*, and other partners in the collaboration who can have different specific needs of what kind of knowledge is important for them, based on a variety of factors, such as personal interests and objectives, requirements related to institutional affiliations, etc. Identifying these needs, how and where they overlap and differ, and what can be considered as mutually genuine and shared aims, activities and outcomes of the collaboration is highly relevant for co-creating the scope of Living Knowledge Lab activities. This also concerns the degree of knowledge co-creation and co-dissemination: to what extent it is relevant and meaningful for participants to produce collectively in some activities and to what degree they also require focusing on their separate objectives in other activities? Being transparent about this and discussing the common third can help to collaboratively plan and negotiate what relevant knowledge needs to be produced and disseminated at different stages of the process to make the collaboration fruitful for different stakeholders.

**Transparency about ownership, authorship and joint effort in knowledge co-production**
Engaging in methodologies for co-creation of knowledge and consequent co-dissemination can be a rewarding process that challenges established roles of whose knowledge counts, and therefore making knowledge(s) creation more inclusive and democratic. At the same time, it can also make it complicated to negotiate the questions of research ownership, authorship and the workload. The dynamics of participatory research, on the one hand, encourages joint and dialogical process of dissemination of knowledge produced in the project. On the other hand, it doesn't mean that collaboration is always free of conflict of interest. On the contrary, when the roles are blurred this might open up space for misunderstanding and tensions. This includes possible issues regarding distribution of roles and responsibilities, ownership, and access of produced knowledge, as well as ethical considerations.

For example, co-producing scientific outputs could entail a joint effort in crafting research papers where both researchers and practitioners engage in data collection, analysis, and writing, fostering a sense of shared ownership. However, such a setup may not suit all team members equally. While practitioners acknowledge the significance of data collection and scientific analysis, they might prefer a more limited role due to time constraints or other reasons. Consequently, they may opt for a reduced involvement, such as providing feedback on a press release for their website instead of actively participating in research output production.

Failure to address such preferences at the outset can lead to misunderstandings and tensions. For instance, researchers may dispute the sharing of authorship, while practitioners might be taken aback if expected to contribute extensively to data collection. It is vital to collectively decide the significance of various planned activities within the LKLs, recognising that different participants may attribute varying degrees of importance to different tasks. This collaborative and negotiated approach ensure alignment of expectations and minimises potential conflicts, fostering a conducive environment for effective knowledge co-dissemination.

**Balance between project requirements and exploring the voices of participants**

For participants to show interest and commitment for co-dissemination activities, they need to play a key role in defining the problems and solutions and feel as co-owners of the process. This can often be tricky in large-scale international projects where research aims are to a varying extent already defined from the beginning. This might require starting the establishment of the LKLs from a quite broad, open-ended, exploratory phase where the communities have a space for collectively identifying common needs and preferred steps for the course of action. This implies looking for balance between open-ended exploration and pre-defined project objectives, which is often not easy.

**Reflexive monitoring: continuous learning and mutual goal (re)-defining**

Inclusive knowledge co-creation and co-dissemination requires continuous cycles of mutual goal setting, and (re)identification of (knowledge) needs where citizens' voices are central. Within the project-level methodologies of the TRANS-lighthouses project, we adopt the processes of Reflexive Monitoring (Van Mierlo et al. 2010) which allows for thinking in terms of continuous learning making sure that participants can impact the goals set within the project. In the TRANS-lighthouses project Reflexive Monitoring is organised in the form of recurring workshop sessions, as well as an online platform for sharing, revising, and discussing the learnings of the teams. These tools aim for mutual discussions about what was learnt through the activities implemented, and what needs to be revised.

**Case example: Regenerative Farming Network, Denmark:**

**Co-creation anchored in knowledges, practices and needs of practitioners**

One of the pilot cases in the TRANS-lighthouses project is a collaboration with the Regenerative Farming Association in Denmark. Establishment of inclusive processes of knowledge co-creation anchored in living experiences of citizens is key for identifying co-dissemination needs of diverse actors and establishing co-dissemination strategy. In the below example, we detail the initial stage of the establishment of knowledge co-creation between researchers and practitioners in the LKL.

The aim of the pilot case is working together with regenerative farmers to find ways to reinforce farming practices embedded in reciprocal and caring relations with nature. The Regenerative Farming Association (https://regenerativ.dk/jordbrugsliste/) in Denmark builds a network of farmers who are interested in regenerative practices. The collaboration with the association was initiated by Roskilde University to create a Living Knowledge(s) Lab anchored in practitioner's knowledge, practices and needs. Some of the objectives are to learn from small-scale farmers' lived experience in farming practices, work across social, ecological and economic dimensions of transitions; support regenerative practitioners; and to identify barriers and strategies to overcome these in broader societal transformations of agricultural practices.

**Open and fluid process of co-identifying aims and needs**

Building a collaborative process anchored in interests, activities and needs of the practitioners was a key objective. This required approaching the consolidation of the LKL as an open space for discussion, without pre-defining objectives and agendas, allowing for mutual co-creation.

A Pilot Coordination Group has been established consisting of RUC researchers and a representative from the association to coordinate the activities. In the initial phases of the collaboration, we as researchers were not making propositions of a specific nature-based solution to collaborate on, rather we engaged in the process of co-identifying the possible vectors of action based on the needs and activities of the association. The first meetings were dedicated to brainstorming and exploring mutual interests.

It is important to note that such an open and fluid approach of mutual exploration of interests and needs and co-creation of objectives can be a rather vulnerable process for both researchers and practitioners. Focusing

on the co-creation *process* without already predefined ideas about the concrete output can trigger uncertainty and ambiguity, besides being significantly time- and effort-intensive. Nevertheless, although this process can be sensitive for all actors involved, ultimately it aims at going beyond citizen engagement in projects already defined by either researchers or municipalities, where citizens play a role of informants or consultants (Wamsler, 2020). Instead, this process of working on co-creation in an open-ended manner is aimed at enabling social imagination (Mills, 1959) and addressing in a democratic way the question 'how we want to live and organize ourselves' by identifying problems to be addressed; visions to work towards; and action points to initiate social change (Egmose et al. 2020, 2022).

**Action research: working with practitioners' practices and knowledge(s)**
The methodology in the case is inspired by action research – a cyclical process with several cycles of joint problem identification and vision making (often in the form of workshops); experimental practice development (practitioner-driven activities inspired by problems and visions identified); evaluation and capacity building (research) (Egmose et al. 2022; Egmose et al. 2020). To initiate the collaboration a workshop was held for the association hosted by Roskilde University to identify challenges, visions and potential action points relevant for the association in furthering regenerative practices. The workshop was organised with the overall theme *'Regenerative Agriculture 2024: What have we learned - where are we going?'* The workshop was structured in three phases: First, a critique phase with the aim of identifying the problems we face in regenerative agriculture. Next, an utopia phase with the aim of developing visions for where regenerative agriculture should go towards 2030, followed by a realisation phase, where it was discussed how to follow up and act on the many ideas. The ideas and themes generated in the workshop served as the basis for co-developing a plan of action for the project; and were also presented to the association to inform and support their activities.

**Reflecting on roles and mutually identifying knowledge needs**
One of the priorities in setting up participatory action research is discussing and clarifying the roles different actors have in the LKL. Engaging in participatory action research, the intention was to communicate that we as researchers are not doing research about the practitioners (positioning them as study objects), and not for the practitioners (producing data on their needs) but rather with them – balancing and aligning the ongoing work and interests of the practitioners, university research interests as well as requirements of the TRANS-lighthouse framework. Hence, the Living Knowledge(s) Lab in this case is positioned as a space where different activities initiated and led by the association or by the researchers can strengthen each other, initiate mutual discussion, reflection and reinforcement.

## 2.3 Ethics, risks and consent in co-created research

The process of planning the co-dissemination of knowledge requires discussions about the ethics of research related to objectives, risks and benefits of the research. Written informed consent is usually the most wide-spread form that addresses ethical issues to make sure that participants are fully aware of their rights, such as the participants' right to anonymity and their right to withdraw their consent to participation (Birger and Schoham 2023).

The question of informed consent can be evasive in the context of Living Knowledge(s) Labs that involves participatory research and co-creation. In this case, participation involves an often-inherent contradiction between confidentiality and consent due to the dual roles of being participants and co-researchers (Birger and Schoham 2023). Consenting to the co-produced research project becomes challenging, since the methods, the goals and the outcomes are co-produced and are hence unclear at the beginning of the project.

Moreover, when representatives of the civil society take upon them a co-researcher role they, knowingly or unknowingly, take up the position of representing and speaking for the communities the groups are part of. They, hence, become recognisable in the community and anonymity becomes a rather impossible endeavour (ibid). Hence, it becomes especially important to discuss the ethical

issues and carefully co-design the informed consent that takes into account particular risks, which are specific for the co-creation process.

At the same time, written informed consent signed at the beginning of the project is a rather simplistic tool that needs to be approached with caution. Firstly, it often doesn't account for potential power imbalances among collaborators which can impact on participants agreeing to something, even if in doubt. Research projects building on co-creation are often a fluid and developing process, for which reason participants might not have enough knowledge about what this implies, or feel grateful to be considered for the project. Hence, it might not be not enough to ask for informed consent at the beginning of the study. There is a need to develop iterative processes of reconfirming consent that are embedded within the context of the research itself. This can include cycles of discussions repeatedly coming back to reflecting about changed research design or focus, and about competing interests and unforeseen risks which might emerge.

All these considerations point to the fact that co-creation and co-dissemination processes have to be co-designed in open and flexible processes, within LKLs as spaces for negotiation and clarification of power relations.

## 2.4 Constraints to inclusive research co-dissemination

Engaging in inclusive knowledge co-dissemination can be a complex process with multiple constraints along the way. Some of the possible obstacles include resource constraints, such as time and funding; differing priorities and interests (stakeholders may have varying priorities, interests, and communication preferences); inequitable power dynamics (power imbalances among stakeholders, where certain groups have disproportionate control or influence over decision-making and the dissemination agenda); or maintaining long-term engagement and commitment from stakeholders.

Besides, non-traditional practices of knowledge dissemination as well as research designs which aim for co-creation of knowledge and challenging epistemological assumptions are still not given sufficient recognition in academic careers and, consequently, too little time is devoted to it (Agate et al. 2020). Academic careers are still evaluated on the basis of the number of single-authored publications in international h-index journals, and research funding often allocated to holders of this type of Curriculum Vitae. In a context of job-insecurity of young researchers, this does not provide sufficient incentives for this type of research and more reflection at this level must also be carried out within universities.

Following Dupret et al. (2022), who engaged in exploring what responsible research means and how it is practised by researchers in Universities across Europe, inclusive and accessible research dissemination is highly important for researchers who are passionate about contributing to societal engagement and social innovation through their research. For many researchers it is crucial to go beyond traditional academic methods of dissemination and engage in sharing knowledge with wider audiences in a way that is accessible and useful to non-academic stakeholders. Employing more inclusive and engaged research methodologies which create reciprocal dialogue between researchers and societal actors, making research processes open to critique of their own academic frames and assumptions and being open to collective knowledge production, challenging epistemological assumptions, are also dimensions highly important for many researchers.

At the same time, the study demonstrates that these aspirations are often constrained by institutional frames and academic cultures. Although it depends on different situated academic environments, often there are barriers such as pressure to publish in academic journals, workload in academia, precarity of careers, and difficulties to obtain funding. The study argues that there is little institutional

support for non-traditional dissemination and knowledge production practices, and often researchers engaging in dissemination outside academic channels do so in their free time with no to minimal institutional support. In the case of early career researchers whose employment conditions are often precarious, engaging in non-traditional research dissemination practices can be an additional burden that can threaten their career perspectives. These constraints lead to challenges when researchers aim for engaging in "caring" research that implies reflexivity, transparency, attention and inclusion (ibid).

**Example: Manifestos in science and research: a dissemination tool for transdisciplinary research**

Manifestos have been used in research dissemination (e.g. Donna Haraway's Cyborg Manifesto (1985) and several publications explore the methodological implications of developing manifestos as a tool for knowledge sharing (Hanna 2020; Barker et al. 2023).

Broadly speaking, a manifesto is "a document publicly declaring the position or program of its issuer, advancing a set of ideas, opinions, or views, but it can also lay out a plan of action" (source Britannica). As formulated by Rachel Brett, a manifesto is "a unique way of communicating which addresses an audience and asks them to unite to take action and change something" (source: https://blogs.bl.uk/socialscience/2019/07/manifesto.html).

In the TRANS-lighthouses project working with manifestos can be a way of emphasising that NBS is an essentially contested concept, something that is illustrated by the call "No to Nature-Based ~~Solutions~~ Dispossessions!" or the campaign "#OurNatureIsNotYourSolution". A manifesto can be "a common reference", "a commitment", "an intention of action", "a political action", "a way to specify a series of principles". Hence, a manifesto with a tentative title "NBS yes? Under what conditions?" is under development in the TRANS-lighthouses project as a tool to collaboratively formulate and disseminate the role of transformative economies for NBS. There are various examples of manifestos in the realm of science and research. We present below two examples.

**Slow Science Manifestos**

The Slow Science movement emerged as a part of a wider Slow movement, which advocates a transition towards slowing down and tackling harmful pressures of our growth-oriented industrialised modern societies, and in particular neo-liberal management pressures since the 1980s. The Slow Science movement was born as a call to rethink the way academia works, marked by the strong pressures of an extremely competitive science on a globalised market. This threatens the quality of research (Alleva, 2006) and its ability to innovate and respond to the major crises facing our societies. The movement has grown and gained momentum, influenced by activist figures such as Isabelle Stengers (2018) and Uta Frith (2019). The manifesto has been successful in terms of appropriation by local collectives and wide dissemination. In many places, groups of scientists have formed to defend and practise Slow Science, such as in Belgium where a Slow Science interuniversity platform "*for discussion on academia's future*" has produced a manifesto whose first statement is "Science is not a business", advocating also for principles such as "Science at the service of society as a whole" (the slow science manifesto – slow science in Belgium). Another example is the German "Slow Science Academy", which produced a pioneer Slow Science manifesto in 2010.

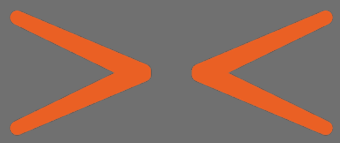
**The TSI manifesto on Transformative Social Innovation**

The manifesto is a major output of the EU-funded project on Transformative Social Innovation Theory (TRANSIT 2014-2017 [2]). Similar to NBS, social innovation is an essentially contested concept which is recognised in the preamble of the manifesto: "More and more people globally are taking their future and the planet's into their own hands and developing ways to shape radically more sustainable, just and resilient societies. We are writing this manifesto as people who participate, study, and support such movements" (TSI manifesto).

The manifesto is a collaborative product of the researchers and the practitioners from the 20 transnational networks of social innovations involved in the project (e.g. community energy initiatives, basic income experiments, cooperative banks and participatory budgeting, ecovillages, etc).

[2] https://cordis.europa.eu/project/id/613169/reporting/fr

The manifesto https://tsimanifesto.org/manifesto/ consists of 13 principles, starting with the statement of access to spaces for learning and experimentation as a necessary condition for enabling freedom to think and act in unconventional ways. The manifesto concludes by specific calls to action to different audiences: "activists and social entrepreneurs", "policymakers and politicians", "critical intellectuals (e.g., researchers, journalists, writers)", and "everyone".



# Section 3: Guidelines and actionable questions

## Guidelines and actionable questions for participatory and inclusive knowledge co-dissemination

Working with participatory and inclusive knowledge co-creation and co-dissemination implies multiple steps and reflections considering the way both research and community engagement is conducted. Ultimately this implies that researchers and participants are jointly making objectives and roles in co-dissemination clear; taking part in designing co-dissemination aiming for inclusivity, awareness and engagement of diverse groups; considering how co-dissemination can best be included and integrated in approaches of community engagement and participative methods; and work with co-dissemination as an integral part of knowledge co-creation. This section summarises key considerations and actionable questions to be considered in this process.

**Participatory and inclusive knowledge co-dissemination guidelines**

1. Making objectives and roles in co-dissemination clear.
2. Designing co-dissemination for inclusivity, awareness, and engagement of diverse groups.
3. Including co-dissemination in community engagement and participative methods.
4. Making co-dissemination an integral part of knowledge co-creation.

## 3.1 Making objectives and roles in co-dissemination clear

It is important to consider what role co-dissemination plays in the project. If the objective of co-dissemination is part of participatory processes in the communities, participatory co-identification of what and how should be disseminated is crucial. Sharing knowledge in an inclusive and accessible manner and making the knowledge dissemination more democratic and inclusive implies working together with relevant groups and stakeholders which should be a part of knowledge co-creation and co-dissemination. Making co-dissemination a part of knowledge co-creation implies a process where citizens play a key role in knowledge co-creation, including collectively identifying research questions and objectives. Hence, knowledge co-dissemination does not only target diverse stakeholder groups, but also includes them in the knowledge co-creation. Thus, reflecting on the role and objectives of co-dissemination early in the project has implications for defining the roles of communities in knowledge creation.

**Actionable questions:**

- ***What** are the objectives of co-dissemination in the project?*
- ***When** in the project timeline do you start discussing, planning and implementing co-dissemination?*
- ***Who** is involved in the co-dissemination and with what roles of researchers and participants?*

## 3.2 Designing co-dissemination for awareness and engagement of diverse groups

Depending on specific context of the project and co-dissemination needs, the following focal points should be taken into consideration:

**Focus on inclusivity and diversity.** This implies planning and implementing dissemination with particular attention to diversity of the audience groups, e.g. gender, underrepresented minorities, and people from diverse socio-economic backgrounds. Inclusivity means making sure the disseminated material reaches diverse groups, as well as ensuring that the methods of dissemination are accessible and respectful for diverse groups (Ross-Hellauer, 2020).

**Focus on reaching groups affected by research**. Following (Chu et al., 2014), in general, research processes are often extractive, meaning that interactions with participants and local communities are often passive (data collection) and the outputs of data are rarely shared in a meaningful manner with participants. Focus on reaching groups affected by research implies ensuring that research is communicated to those who can be affected by research.

**Focus on engagement and participation.** Participatory inclusive dissemination, firstly, means working *with* communities to produce innovative and accessible forms of dissemination, and secondly, approaching dissemination as a mechanism of community engagement rather than only disseminating outputs.

The below list, based on existing research and co-dissemination practice (Chen et al. 2010; One Voice n.d.; Kumar 2023), is aimed to guide NBS Living Knowledge(s) Labs in planning and implementing inclusive co-dissemination:

- Plan dissemination activities early and engage the community early in the project (making the community aware of the project, its objectives, questions, etc).
- Identify target groups by conducting community assessment with particular attention to those usually not reached by dissemination activities.
- Develop strategies for dissemination to local authorities, policymakers, elected representatives, and other decision makers.
- Engage community members and groups to identify actors who might be interested in co-developing, disseminating, and/or receiving project results.

- Define dissemination strategies and methods based on the needs and possibilities of the target audiences. Ensure dissemination materials are accessible and tailored to diverse audiences (e.g. cultural relevance, relatability, language, convenience, and power dynamics).
- Build on existing community strengths and resources when creating dissemination products (e.g. employing community artists). Reach out to local media and social media outlets (e.g., invite to events, send press releases) .
- Engage with and build on pre-existing platforms for dissemination (e.g. public meetings and events, community festivals).

**Actionable questions:**

- ***What** are the target groups for co-dissemination? **Who** are missing in terms of actors?*
- ***How** can community target groups be engaged in developing the co- dissemination strategy and channels of co-dissemination, depending on their needs and opportunities?*

## 3.3 Including co-dissemination in community engagement and participatory methods

**Integrating co-dissemination in participatory methods**
Activities related to inclusive dissemination should start early in the project and be integrated in the methods of participatory knowledge co-creation. Approaching the main role of participatory methods as a way to position community's needs, voices and experiences as the driver of research activities, we suggest that participatory methods can allow for discussions about diverse dissemination needs and opportunities of participants, and mutual co-creation of research goals and activities that can lead to inclusive co-dissemination.

**Alternative methods for inclusive and participatory co-dissemination**
Following Ross-Hellauer (2020) there is a paradox in the current research dissemination strategies. On the one hand, there have never been more tools and platforms for innovative dissemination of research as now. On the other hand, research dissemination is still largely carried out through traditional outputs: journal articles, books, and conference presentations. To create inclusive knowledge co-dissemination, different channels and tools of dissemination should be considered. Besides the traditional academic dissemination practices (publications and academic articles in peer-reviewed journals, conferences with presentations, etc.), alternative ways of dissemination have the potential to reach a wider audience and create a more inclusive knowledge sharing process through both face to face, online and offline platforms. Including social media platforms, projects' own website, digital and printed magazines, blogs, newsletters, mailing lists and local media channels allows easier accessibility to various groups.

**Real-time dissemination** platforms can provide the knowledge users with information at multiple stages to promote the project within their organisations or assist with decision-making (McCutcheon et al., 2022). Presenting the research findings and the work in small, informal settings or sharing them in a form of reports, they can be swiftly disseminated rather than placing primary emphasis on

scholarly publication in peer-reviewed journals which usually involves longer dissemination timelines (Ackerly & True, 2010).

**Interactive ways of dissemination** can provide more complex and remarkable ways of knowledge sharing such as participating in community, local and global events, festivals, demonstrations and creating workshops with/for practitioners and students, etc. There are many opportunities for engaging and innovative live platforms for research dissemination, such as in science festivals, science slams, TEDx talks or road shows. In addition to more traditional science conferences, these events can provide space for more participatory dissemination opportunities for wider audiences (Ross-Hellauer 2020).

**Visual forms** consider methods and strategies which can effectively reach and engage diverse target audiences within and outside the community, for example, creative ways – photo-exhibitions that can facilitate storytelling, posters, dissemination of digital infographics, videos, podcasts, board games, etc. (Krishnan, 2020). Visual methods can also assist in making traditional research outputs more accessible by, for example, accompanying them with press-releases or visual/video summaries (Ross-Hellauer, 2020).

**Actionable questions:**

- ***How*** *can co-dissemination activities be integrated in methods of participatory knowledge co-creation?*
- ***What*** *methods for inclusive co-dissemination are the most relevant in the chosen context?*
- ***How*** *can inclusive co-dissemination methods be a way for engaging community in reflection and action?*

## 3.4 Making co-dissemination and integral part of knowledge co-creation

When co-dissemination is approached as a part of knowledge co-creation, different groups who jointly drive the project work together on identifying knowledge needs, research questions, conducting and disseminating research.

It is possible that co-dissemination in this context does not mean joint dissemination per se, where researchers, participants and other actors in the project all engage in a co-dissemination activity. Co-dissemination can equally mean joint identification of knowledge needs for different groups of stakeholders and as well as co-identification and co-creation of dissemination channels based on these needs.

Co-identifying different knowledge and dissemination needs can already be integrated in the initial parts of the project where the communities and researchers are co-creating together the research problems. This stage is crucial for knowledge co-dissemination to strengthen that research objectives

are co-owned by the community, are perceived as relevant by them, and that they can actively participate in identifying the possible channels of dissemination, engage in planning and implementing dissemination of knowledge.

In this way participatory and inclusive knowledge co-dissemination can imply multiple steps making objectives and roles in co-dissemination clear; designing co-dissemination for inclusivity, awareness and engagement of diverse groups; including co-dissemination in community engagement and participative methods; and making co-dissemination and integral part of knowledge co-creation.

**Actionable questions:**

- ***Who** defines knowledge and research needs in the project and how?*
- *Are research participants engaged in co-dissemination also jointly defining aspects of knowledge co-creation?*
- ***What** are the methodological implications of working with participative and inclusive knowledge co-dissemination as an integral part of the project?*

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