



TRansition paths to sUustainable  
legume-based systems in Europe



UNIVERSITY OF  
HOHENHEIM

200  
1818  
2018  
YEARS

# The TRUE Toolbox for Transdisciplinary Research

---

Maria Gerster-Bentaya, Andrea Knierim  
Rural Sociology, University of Hohenheim  
March 2018



This Project has received funding from the European Union's Horizon 2020  
research and innovation programme under grant agreement No 727973





---

## Content

<b>1. Introduction.....</b>	<b>3</b>
1.1 Why a toolbox?.....	3
1.2 What is different? .....	3
1.3 Methods – instruments – techniques: clarification of the terms used.....	4
<b>2. The transdisciplinary research toolbox .....</b>	<b>5</b>
2.1 The transdisciplinary research process .....	5
2.2 Overview of methods and instruments to address the specificities of inter- and transdisciplinary research.....	7
<b>3. Description of selected methods, instruments and processes .....</b>	<b>9</b>
3.1 Instruments for preparing and planning an event .....	9
3.2 Stakeholder analysis.....	12
3.3 Interactive techniques, methods and instruments for face-to-face meetings.....	13
3.4 Methods and instruments for personal / individual reflections.....	19
3.5 Instruments for structuring ideas .....	20
3.6 Methods and instruments for presenting results (dissemination) .....	21
3.7 Methods and tools for the “field” .....	22
<b>4. Establishing and working with networks.....</b>	<b>25</b>
4.1 What is an (innovation) network? .....	25
4.2 Prerequisites for establishing networks .....	26
4.3 Pros and cons of working within network arrangements .....	26
4.4 How to start a network? .....	27
4.5 Good practice considerations for continuous work with networks .....	29
4.6 Community of Practice .....	29
<b>5. Conclusion and recommendations.....</b>	<b>30</b>
<b>6. Bibliography .....</b>	<b>31</b>
<b>Disclaimer .....</b>	<b>32</b>
<b>Copyright .....</b>	<b>32</b>
<b>Citation.....</b>	<b>32</b>

---



---

## 1. Introduction

### 1.1 Why a toolbox?

Inter- and transdisciplinary work refers to working and exchanging between different types of actors in a research process with the aim of (co-)creating knowledge and networks that last beyond the research process. There is need to thoroughly pay attention to the working process in order to:

- identify suitable / right stakeholders, their interests and needs;
- get to know each other and create a favourable atmosphere for exchange;
- present appropriate information timely and in an understandable way;
- structure exchange and learning processes so that real participation is possible;
- ensure documentation of results; and,
- establish longer lasting processes of cooperation (e.g. through networking).

Here, we consider ‘tools’ as instruments that are indispensable for a successful inter- and transdisciplinary research cooperation.

### 1.2 What is different?

There are many toolboxes available – including for transdisciplinary work. Specifically during the past years, many have been developed as a response to the request for ways to include different kinds of stakeholders in a research and exchange process (see Hoffmann et al. 2009<sup>1</sup>, Bergmann et al. 2010<sup>2</sup>, Durham et al., 2014<sup>3</sup>; Giseke et al. 2015<sup>4</sup>, including the GAIA’s Toolkits for Transdisciplinary series as compiled by Bammer, 2017<sup>5</sup>). **We will not copy them.** Rather, as much as possible, we will include them in linking up with available resources. **We provide a structure and suggest tools and methods along a transdisciplinary research process providing guidance for researchers and practitioners in selecting suitable ones from the “ocean of methods”.**

---

<sup>1</sup> Hoffmann V., Thomas A., Gerber A. (Hrsg.), 2009: Transdisziplinäre Umweltforschung. Methodenhandbuch. Oekom Verlag, München.

<sup>2</sup> Bergmann, Matthias; Jahn, Thomas; Knobloch, Tobias; Krohn, Wolfgang, 2010: Methoden Transdisziplinärer Forschung - Ein Überblick mit Anwendungsbeispielen. Campus Verlag Frankfurt

<sup>3</sup> Durham E., Baker H., Smith M., Moore E. & Morgan V. (2014). The BiodivERsA Stakeholder Engagement Handbook. BiodivERsA, Paris (108 pp). BiodivERsA (2014) Stakeholder Engagement Handbook. Best practice guidelines for stakeholder engagement in research projects, Paris

<sup>4</sup> Giseke U., Gerster-Bentaya M., Helten F., Kraume M., Scherer D., Spars G., Amraoui F., Adidi A., Berdouz S., Chlaida M., Mansour M., Mdafai M. (eds) (2015): Methods for complex knowledge production (Part C2), in Giseke et al., Urban Agriculture for Growing City Regions, Routledge, London, New York, pp90-99

<sup>5</sup> Bammer G., 2017, Toolkits for transdisciplinary research. <https://i2insights.org/2017/07/25/toolkits-for-transdisciplinarity/> accessed 6 Feb, 2018. She makes reference to the following sources:

Toolkit #1 – Co-producing knowledge. *GAIA*, 24, 3: 149. Online (DOI): [10.14512/gaia.24.3.2](https://doi.org/10.14512/gaia.24.3.2)

Toolkit #2 – Engaging and influencing policy. *GAIA*, 24, 4: 221. Online (DOI): [10.14512/gaia.24.4.2](https://doi.org/10.14512/gaia.24.4.2)

Toolkit #3 – Dialogue methods for knowledge synthesis. *GAIA*, 25, 1: 7. Online (DOI): [10.14512/gaia.25.1.3](https://doi.org/10.14512/gaia.25.1.3)

Toolkit #4 – Collaboration. *GAIA*, 25, 2: 77. Online (DOI): [10.14512/gaia.25.2.2](https://doi.org/10.14512/gaia.25.2.2)

Toolkit #5 – Change. *GAIA*, 25, 3: 149. Online (DOI): [10.14512/gaia.25.3.2](https://doi.org/10.14512/gaia.25.3.2)

Toolkit #6 – Research integration and implementation. *GAIA*, 25, 4: 229. Online (DOI): [10.14512/gaia.25.4.2](https://doi.org/10.14512/gaia.25.4.2)

Toolkit #7 – (Dynamic) systems thinking. *GAIA*, 26, 1: 7. Online (DOI): [10.14512/gaia.26.1.3](https://doi.org/10.14512/gaia.26.1.3)

Toolkit #8 – Integration Methods. *GAIA*, 26, 2: 79. Online (DOI): [10.14512/gaia.26.2.3](https://doi.org/10.14512/gaia.26.2.3)



---

### 1.3 Methods – instruments – techniques: clarification of the terms used

**With ‘methods’** we refer to the way the communication among a group of people is organised. We differentiate e.g. presentations with a predominant one-directional communication, group works where co-operation takes place, individual work that is synthesized, etc. Usually, methods are underpinned by instruments that guide and structure a working procedure in a targeted way, thus structuring the process and/or ensuring the documentation of results etc.

**Instruments** or **tools** are all kinds of elements that support the facilitator in the communication process to structure the discussion and to facilitate the understanding among participants as a prerequisite for exchange and learning. Instruments can be used to visualise and structure a process (tables → matrices, maps, networks ...). Often, ‘instruments’ and ‘tools’ are used interchangeably. In this paper, we use the term ‘tool’ only in the context of the ‘toolbox’ while we generally refer to instruments.

A key function for successful work in groups and teams is the facilitation of communication by a facilitator. This person could come from within the group or outside. A good facilitator properly diagnoses what methods and instruments fit to a given social situation or conducts such a diagnosis together with the other actors involved. In order to be effective and efficient, they make use of a range of essential communication techniques such as active listening, paraphrasing, visualisation, asking questions and summarising.

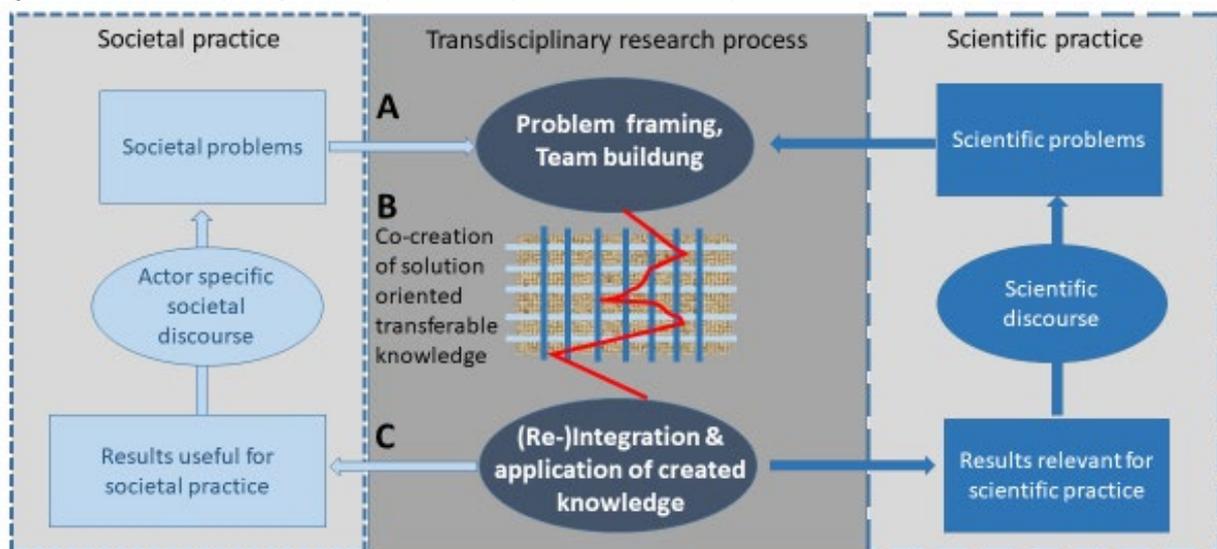
Methods, instruments and techniques are constitutive elements for successful inter- and transdisciplinary cooperation. We put together a number of instruments to form the **toolbox** – a container of the different building blocks to design the various working settings.

## 2. The transdisciplinary research toolbox

### 2.1 The transdisciplinary research process

The toolbox presented here is composed to support transdisciplinarity which according to Lang et al 2012<sup>6</sup> can be defined as ....”a reflexive, integrative, method-driven **scientific principle** aiming at the solution or transition of **societal problems and** concurrently of related **scientific problems** by differentiating and integrating knowledge from various scientific and societal bodies of knowledge”.

Figure 1: The transdisciplinary research process (adapted from Jahn, 2008, p.8)



A detailed description is also presented in Knierim et al. (2018)<sup>7</sup>, using examples from the bioeconomy sector. The core of transdisciplinarity is the recognition of the different (societal and scientific) practice partners, their knowledge and view on a certain complex problem. All practice actors meet in the transdisciplinary research process, and together as a team, they appraise the complex problem, and frame it in a common research question. The integration of the various (non-scientific) stakeholders is a challenge. Therefore, careful analysis of persons or groups of people needs to be done to find out about their interest, possible influence and contribution to the research. This allows proper involvement according to their capacities and needs (Gerster-Bentaya 2015<sup>8</sup>). The co-creation of knowledge (solutions to the complex problem) takes place through the combination of knowledge from the different disciplines and practice actors. This integration requires special emphasis on communication processes among the different stakeholders to ensure

<sup>6</sup> Lang JD, Wiek A, Bergmann M, Stauffacher M, Martens P, Moll P, Swilling M, Thomas CJ (2012) Transdisciplinary research in sustainability science: practice, principles, and challenges. *Sustain Sci* 7(1), pp 25-43.

<sup>7</sup> Knierim A, Laschewski L, Boyarintseva O. (2018) Inter- and Transdisciplinarity in Bioeconomy. In: Lewandowski et al., bioeconomy. Shaping the Transition to a Sustainable, Biobased Economy. Springer Nature, Cham, pp39-72. <https://doi.org/10.1007/978-3-319-68152-8>

<sup>8</sup> Gerster-Bentaya M. (2015) Stakeholder analysis. In: Giseke U, Gerster-Bentaya M, Helton F, Kraume M, Scherer D, Spars G, Amraoui F, Adidi A, Berdouz S, Chlaida M, Mansour M, Mdafai M, Helten F (eds) *Urban agriculture for growing city regions. Connecting Urban-rural spheres in Casablanca*. Routledge, Abingdon



their participation and mutual understanding and learning. Outputs of a transdisciplinary research process need to be brought back to the different practices (real life world as well as the scientific and disciplinary world). To this end, it has to be evaluated regarding its usability for the respective practice and include transformative knowledge (i.e. how to change practices and institutions and to apply the generated solutions)

Several key elements typically characterise a transdisciplinary research approach and include the following.

**Complexity** as expressed through **complex problems** is a rather frequent phenomenon in real life. Complex problems are highly contextual, marked by interdependences and uncertainties, and their solution requires knowledge from various sources and a multi-perspective approach (Batie 2008)<sup>9</sup>.

In order to realise a multi-perspective approach, **a number of actors** representing various disciplinary and practical fields of expertise are necessary to solve complex problems. This, however, brings about additional problems: actors may have antagonistic interests and conflicts may occur. **Communication and cooperation among actors** who normally do not or would not cooperate is necessary – which may critically influence or even hinder the effectiveness of the cooperation.

A transdisciplinary research process is the communication among science and practice actors – frequently designed and driven by research. One main challenge is the handling of participants, the realisation of the participatory process and the co-operation at equal level.

**Co-design** means to create a common understanding of the problem and the research question(s); a prerequisite to this is the stakeholder analysis to ensure that the different interests of all partners are made explicit. Co-design involves a common (cyclic) planning.

The **co-production** of knowledge ...”*can be understood as an exploratory space and a generative process that leads to different, and sometimes unexpected, forms of knowledge, values, and social relations*” (see Filipe et al. 2017<sup>10</sup>). Co-production (process/collaboration and outcome) highly depends on the relationship among the involved partners/actors. There is need to look at the different forms of engagement, interactions, social relations and dynamics which are being created and influence the outcome and are part of it. “*This means that the process of co-production must take into account the participants' understandings of participation and co-production, salient differences between them (e.g., identity, mobility, forms of communication), and power dynamics that may be reconfigured through the process of co-producing services and research. Such a process involves dialogue and recognition of each other's capabilities and knowledge, while also allowing critical inquiry and the confrontation of ideas*” (Filipe et al. 2017, 4).

<sup>9</sup> Batie SS (2008) Wicked Problems and Applied Economics. American Journal of Agricultural Economics. 90(5):1176-1191. doi:10.1111/j.1467-8276.2008.01202.x.

<sup>10</sup> Filipe A., Renedo A., Marston C. (2017): The co-production of what? Knowledge, values, and social relations in health care. PLoS Biol 15(5): e2001403. <https://doi.org/10.1371/journal.pbio.2001403>, accessed 6 Feb, 2018.



---

The **sharing/exchanging** and **dissemination** of knowledge is geared to incorporate the findings into decision making of all partners involved in the research process as determined in the design process when formulating research objectives. It refers to the usability and use of the co-produced outcome for both, practitioners (societal actors) as well as scientists and therefore, different ways of dissemination need to be envisaged. While practice partners may immediately apply the generated knowledge (improved decisions) in their actions, science partners also can use the feedbacks (novel insights, questions, data analysis, interpretations, etc.) from diverse sectors to improve research (Grove et al. 2015<sup>11</sup>).

## 2.2 Overview of methods and instruments to address the specificities of inter- and transdisciplinary research

Methods and instruments can be structured in many ways. We decided to present them **along the inter- and transdisciplinary research process** as described in the previous chapter. Table 1 provides an overview, and the following paragraphs briefly describe the method / tool / instrument and provide sources for further information. It is important to notice, that it is not a complete list. Rather, we selected those we consider most useful and feasible in the context of the TRUE project.

It is worthwhile mentioning that specifically facilitation techniques, including methods and instruments that are used to involve different actors in a joint working process are relevant for all phases in the common research (see Table 1: “common to all”).

---

<sup>11</sup> Grove M.J., Roy Chowdhury R., Childers D., (2015): Co-Design, Co-Production, and Dissemination of Social-Ecological Knowledge to Promote Sustainability and Resilience: Urban Experiences from the U.S. Long Term Ecological Research (LTER) Network. GLPNEWS, April 2015.  
[https://www.fs.fed.us/nrs/pubs/jrnl/2015/nrs\\_2015\\_grove\\_001.pdf](https://www.fs.fed.us/nrs/pubs/jrnl/2015/nrs_2015_grove_001.pdf), accessed 6 Feb, 2018.

Table 1: Compilation of methods, instruments and tools and their possible use in the transdisciplinary research process

Key aspects in the inter- and transdisciplinary research process	Relevant to all phases					Collaborative problem framing and building a research team				Co-creation of knowledge		Re-integration		Group size	
	Preparation of collaborative events	Reflecting, assessing, feedback	Structuring ideas	Idea collection	Fostering group cohesion and collaboration	Identify & characterise stakeholders	Describing / diagnosis of the situation	Assess complexity	Common problem definition and framing	Identify solutions	Common decision making	Sharing & exchanging ideas and results	Incorporation of new knowledge	Groups with < 20 persons	Groups with > 20 persons
<b>Methods, tools, instruments</b>															
Script	X				X							X			
Stakeholder matrix, Stakeholder mapping	X					X									
“vernissage” (poster sessions) and information market						X						X			X
(Participatory) video					X		X					X			X
<b>facilitation techniques</b> (paraphrasing, active listening, visualisation, asking questions, ...)	X	X	X	X	X	X	X	X	X	X	X	X		X	X
<b>Interactive techniques</b>															
▪ Visualised discussion															
▪ Brainstorming, Brainwriting															
▪ (anonymous) Card collection	X	X		X											
<b>Group methods (small to large groups)</b>															
▪ Speed dating				X								X			X
▪ Buzz groups															
▪ Group work				X						X				X	
▪ World café				(X)						X		(X)			X
▪ Open space				X						X		X			X
▪ Future search				X	X		X	X	X	X	X				
<b>Individual reflection tools</b>															
▪ (Learning) Diary		X		X											
▪ Observation cards <sup>1)</sup>				X											
<b>Methods for structuring ideas</b>															
▪ Mind mapping	X		X												
▪ SWOT analysis															
<b>Methods and tools for the field</b>															
▪ Focus group discussions															
▪ Maps / Mapping			X	X	X		X		X	X	X	X		X	
▪ Transect			X		X	X	X		X	(X)					
▪ Kitchen table talk				X		(X)	X		X	X				X	
<b>Networking: Setting up and managing</b>															
▪ Community of practice		X			X							X	X		

### 3. Description of selected methods, instruments and processes

#### 3.1 Instruments for preparing and planning an event

Before actually conducting a single event in the course of an inter- and transdisciplinary research endeavour, the preparation starts often months earlier, looking not only at logistic matters (right location with easy access for participants, size of the meeting hall). These logistic and organisational reflections are influenced by topic-related and didactical considerations, such as the:

- overall objective and expected outcome of the event (and feasibility regarding the given time frame, composition and number of participants, ...);
- topics to be covered (what is *necessary* to achieve the objectives, what is *feasible* regarding the time, number of participants, .... and other frame conditions);
- composition of participants. (or ‘*who do I want to come?*’);
- kind of methods and tools participants are already familiar with; and,
- features which could attract participants to attend the meeting and to share their ideas.

All these considerations can come up when the preparation team sits together and is deliberating and planning the event. Here, the **mind map** is suggested as a tool to support the collection and structuring of the different elements that need to be considered in the preparation phase in the first planning stage. The **script** for the detailed planning shortly before the event helps to structure the different sessions (see Table 2 below).

#### Script

The script links the various elements that determine a certain session in a time line and allows one to rehearse virtually the time-sequence of activities. It can include the elements as shown in Table 2 below.

Table 2: Script

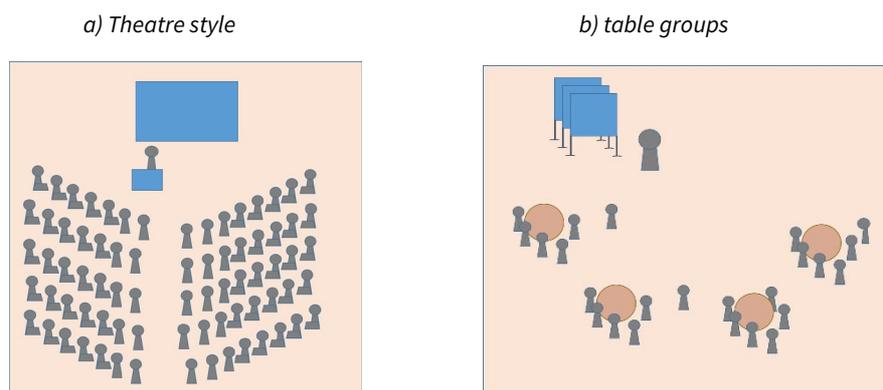
Who	Time	Duration	Content	Objective	Method	Material / media	Alternatives

Important aspects to consider when developing a scenario include the following.

- Sufficient time for the introduction to group work (the assignment needs to be clear to all participants; otherwise, precious time is spent in the group to clarify the task) and the product and type of how to present the product;
- Think about the composition of the group beforehand:
  - form mixed groups if you want maximum mingling;
  - gather ‘experts’ and thus topic related groups if you want to deepen a topic;
  - combine future team members for planning to create commitment and understanding of activities to be implemented.
- How to do the groups present their results? In plenary, each group comes with their results to listen to other groups. Or as an inter-group event, i.e. a group joins another group at their working place to listen to the presentation. Also, consider that standing around posters or boards may present a friendlier atmosphere than a more informal approach such as sitting in an orderly format etc.
- Plan for ‘buffer times’, as rarely sessions can start in time
- Breaks should be planned of sufficient length to allow exchanges and reflection. General recommendations are:
  - 1.5 hrs for lunch break; and
  - 20-30 min for tea/coffee break.

### Seating arrangements and materials

Figure 2: seating arrangements (schematised)



The way a room is set, and specifically how arrangements for seating participants are made influences the possibility of interaction and communication in general. The usual “theatre style”, i.e. the chairs and participants are oriented towards the front where a speaker or a panel is placed, is a good way for presenting information. To prepare and encourage sharing and exchange can best be done by organising table groups right from the beginning: Participants sit around tables, tables are arranged as a half circle around the ‘stage’, the facilitator in the middle.



To facilitate visualisation, sufficient pin boards and visualisation material needs to be available. Basic visualisation materials may include:

- pin boards;
- rectangular cards of 20x9 cm size (A 4 format card cut twice = 3 cards), and pins to fix the cards on the pin board;
- different colours (always prefer light colours) and shapes of cards (long stripes of 40 x10 cm, round cards of 9, 12 or 20 cm Ø, or oval cards of 20 x 9 cm) ease structuring of ideas;
- legible writing using printing letters, and big enough to be readable from a 5 m distance are indispensable; and,
- brown paper to cover the pin boards provide a uniform neutral ground for the card.

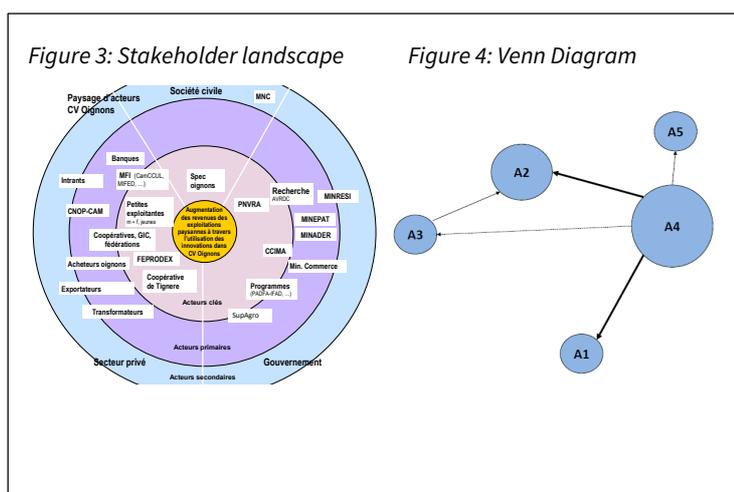
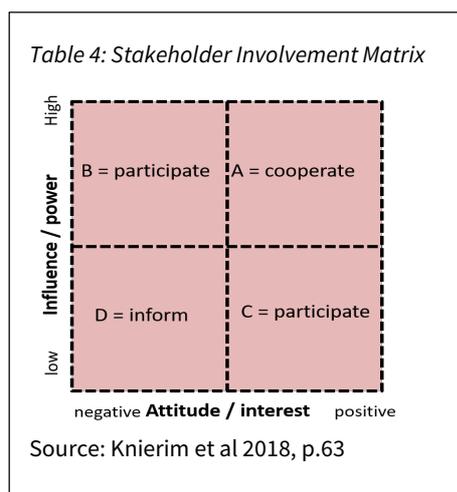
Depending on the (interactive) method that will be applied, the material (number of cards of the respective colour and shape, number of pin boards, pins, etc.) needs to be prepared.

### 3.2 Stakeholder analysis

Prior to any collective action, there is need to know the different stakeholders who will or should be included in the common (research) process – in the different stages to different degrees in different roles. This requests a thorough analysis of stakeholder types from the outset of the planning process, and needs to be carried out repeatedly as relationships, and roles may change during the process. Also, new actors may come in, others might leave the process (Gerster-Bentaya 2015)<sup>12</sup>. There exists a variety of instruments and tools for characterising stakeholders. Most commonly, stakeholders, and in addition to their organisational affiliation and expertise, are described by their possible interest and influence in the (research) project. The documentation of the analysis can be organised in form of tables where the information is introduced (see Table 3) or in diverse other visual forms (mapping) that support the association of different information, such as a stakeholder involvement matrix (see Table 4) or actor landscapes (see example Figure 3).

Table 3: Stakeholder characterisation matrix

Stakeholder name	Objective, motivation, interests in collaborating, claims	Possible influence (on other stakeholders, on the process)	implications	(possible) role in the project	Strengths	Weaknesses	Etc.



<sup>12</sup> Gerster-Bentaya M. (2015) Stakeholder Analysis. In: Giseke et al. 2015

---

### 3.3 Interactive techniques, methods and instruments for face-to-face meetings

#### Facilitation (techniques)

Facilitation of co-design and co-production in research means bringing together different stakeholders in the most efficient way. Facilitation, the art of making such meetings efficient, pleasant and successful is a combination of principles, techniques and methods to achieve an objective. Facilitation is applied in situations where a group of people wants to interact, it aims at helping the group members in determining the objectives and expected outcomes, setting the agenda and rules for collaboration, suggesting methods and a structure for achieving the outcomes. Detailed information on how to set up facilitated meetings has been presented e.g. by Bolliger and Zellweger (2007)<sup>13</sup>.

The main principles of facilitation are:

- **Continuous visualisation:** continuous visualisation means that the group communication is supported by an ongoing openly perceivable documentation of relevant contents and decisions taken. A common way of visualisation makes use of moveable cards of different forms, colours and shapes that are fixed on a pin board. The cards are arranged in a coherent way, representing key aspects of the discussions and reflecting shared ordering structures; such visualisation allows the participants to follow the discussion easier, to complete, and help the facilitator to avoid duplications and to address misunderstandings or even conflicts. At the same time, visualisation serves as documentation of results.
- **Questions – they are key to activate** participants' knowledge and to invite them to contribute. Depending on the stage of a process, questions can enlarge or narrow a topic. In order to be functional, they need to be perceived relevant and answerable for the participants. Idea collections normally start with quite open questions, while in a situation analysis to identify cause-effect relations, questions can be rather specific.
- **Make everybody speak:** politeness requests that only one person at a time speaks up. Several methods and techniques help to ensure that everybody can contribute, using (anonymous) card collections, brain writing, group work, work in pairs, etc.
- **Watching and using group dynamics and create a dramaturgy.** The design of an event needs to consider personal relationships and the energy levels of participants. Intense and relaxing phases need to be combined: working units in which contents are elaborated in sub groups and later presented and discussed in the plenary, presentations in plenary; listening and contributing. To this end, also breaks are of tremendous importance, and change in methods whenever the energy level of participants starts declining.

Core methods and instruments most frequently used in facilitation are mentioned in the sections below.

---

<sup>13</sup> Bolliger E., Zellweger T. (2007) Facilitation – the art of making your meetings and workshops purposeful and time-efficient. Agridea, Lindau.

### Visualised plenary discussion

Initiated by a precise, open question, the facilitator asks participants in the plenary to give their opinion. The task of the facilitator is to make sure that everybody participates, respects discussion rules (set during the ground rule fixation period), and also motivates so-far silent participants to give their view. Contributions are noted on cards and placed on a pin board. This ensures that the line of thought is kept and participants can easily follow the discussion. This is particularly important for participants in multi-lingual groups where the participants are not so fluent in the main spoken language. During and at the end of the process the facilitator should summarise the arguments, highlights of the discussion and possible contradictions etc. (Gerster-Bentaya & Hoffmann 2011, 173-174).

### Collecting & structuring ideas

Depending on the nature of the topic, hierarchy within the group and the stage of the work, different methods for collecting and structuring ideas exist.

#### A) *Brainstorming*

Brainstorming is often used at the beginning of a process to activate participants' knowledge on a certain topic. It is important to start very broad and not to comment on the various ideas. Each idea has to be respected. After all ideas have been written down, they are clustered (similar ideas are grouped together) and worked on in the next working step through e.g. buzz groups<sup>14</sup>, plenary discussions, etc. (Gerster-Bentaya & Hoffmann 2011, 175).

#### B) *Brainwriting*

Brainwriting follows the same procedure as the brainstorming except that: a) several questions / topics are placed on different pin boards; and, b) participants themselves write their ideas on card and pin them below the respective topic. Inspired by ideas from their colleagues, participants can move around and "visit" the same pin board several times and react to comments.

#### C) *Anonymous card collection*

Card collections is used to quickly gather the ideas of participants to a certain open question, like a collective mirror, visualised and structured on a pin board. This is the highest possible interaction density, and each participant can contribute.

The facilitator visualises the question to be answered. Participants distribute the same number of cards (ideally oval shape, but can be any other shape) to each participant. If more than one category of idea is to be gathered at the same time, (e.g. opportunities and problems, achievements and failures) each category should be represented with a different colour.

---

<sup>14</sup> The larger plenary group is subdivided into intense discussion groups of approximately 2 to 3 people who seek to address a specific question. See below.



The participants think and write their cards silently, following the rules of writing. They can write on the cards on their laps without moving from the plenary. When everybody has finished writing, the collected cards are put on the floor, face down in the centre of the group, and then shuffled. Separate piles should be used for different colour cards.

The facilitator holds each card up so that it is clearly visible to the participants and reads its contents. Cards which are not clear in meaning, or which are improperly written, are rewritten immediately. However, the facilitator never asks who wrote the card. Clarification comes from group discussion. The card writer may voluntarily identify himself and clarify or rewrite the card. The facilitator then pins the cards on the board which has been covered with wrap-ping paper. She deals with only one category or colour at a time. In the beginning she pins the cards far apart, asking participants if each card belongs to the same cluster or not. She pins associated ideas in the same cluster, according to the instructions of the participants. Duplicate cards should not be discarded, as every card belongs to someone and duplication expresses the importance of the idea for the group.

Once all the cards are on the board, the participants review the clusters and revise, restructure and label them, using a different colour and shape of card for the cluster title. If no further discussion is to take place which might alter the clusters, the clusters can be drawn in clouds and the cards glued to the paper. If desired, the clusters can be prioritised by giving a specific number of dots to each participant to put on the cluster title card or on cards within clusters. For instance, the facilitator may ask the participants to cluster the most important problem area to solve, the three most important topics to discuss in the next exercise in group work, etc. (Gerster-Bentaya & Hoffmann 2011, 175-176).

## Group work

### A) *Buzz groups (work in pairs or three persons)*

Working in pairs can break monotonous plenary sessions when splitting a theme into sub-topics that are to be worked on within a short period of time. The classic “**work in pairs**” refers to a setting where an assignment is given to participants, and two persons (normally persons who sit next to each other) work on the task for 5-10 minutes. This ensures high interaction and compared to a plenary session, many more participants can talk at a time.

### B) *“Speed dating”*

“Speed dating” refers to a working set-up where two participants have to meet and exchange for a few minutes only. Depending on the overall available time and the nature of the topic, up to 6 “dates” can take place in a very short time (2-5 min per meeting). Rules can be set which e.g. determine that for each “dating” different types of actors have to meet (e.g. a researcher with a practitioner; a producer with a processor, etc.). Such rules need to be communicated beforehand and participants have to be clearly identified (e.g. through different colour badges) (adapted from Wielinga, AgriSpin project).

Group work of 4-8 persons: A group of 4-8 persons gets an assignment to work on it for a certain period of time, normally 30 minutes to up to 1,5 hours. Assignments need to be clearly formulated and their content appropriately tailored so that they can be achieved in the time given. More complex questions need more time. Groups can work on different assignments in parallel. This helps to save time and to suit participants' interest. It is important, to present the assignments in plenary to all participants so that each participant knows about the task of the other groups (Gerster-Bentaya & Hoffmann 2011, 176-177). This helps to stay within the task and not to go beyond. Bigger groups have the chance for more diverse ideas, though on the other hand there are less chances to get involved and some participants may lean back.

### *C) Combining different forms of group work*

If the number of participants is beyond 30, and still high interaction is desired, the following combination of methods can be suggested. Based on a question, each participant individually reflects on it and takes note of it. Then, after 2 minutes, two persons meet and share their reflections, for 5 min. Then, two pairs meet and again share. After another 3-5 min of sharing, two groups of 4 persons meet and exchange. Finally, after 5-8 minutes, the results are shared by a spokesperson designated by the group of 8 persons.

In this way, if participants are requested to write the ideas on cards, each grouping means to sort out duplications, to clarify certain aspects more and come up with a common result. The maximum group size would be 8 (1-2-4-8), exceptionally 16 (when two groups of eight are requested to join in large group events).

### **World café**

The world café is widely used in the context of meetings with a big number of participants (50-200 or more). The “original” format is described by its inventors Juanita Brown and David Isaacs in their book “the World Café” (Brown and Isaacs 2018<sup>15</sup>). Many versions and modifications exist.

The basic idea is to organise communication as an exchange in a café-like atmosphere (relaxed, rather informal) which stimulates creativity and openness among participants, and thus helps achieving new insights. Participants are grouped around tables with a minimum number of participants per group of around 6-8; the number of groups is limited by space and topics, and work on a special question for around 20-40 minutes. Neighbouring tables work on a different topic. Topics are addressed in a sequential manner (normally in 3 rounds). A “host” (table and topic responsible) facilitates the discussion. After each round, participants switch to another table (and thus, topic). Before working on the next topic, the host summarizes the main results to integrate new participants, and to start the next discussion round. At the end of the process, the host summarizes the results and presents them in a plenary session.

---

<sup>15</sup> <http://www.theworldcafe.com/key-concepts-resources/design-principles/>, accessed 6 Feb, 2018



Detailed descriptions are available under

- The World Café <http://www.theworldcafe.com>
- <https://organisationsberatung.net/world-cafe-grossgruppen-methode/>
- <http://www.partizipation.at/world-cafe.html> (en, de)

## Open space

The open space (technique / instrument) is a way to run meetings with many participants (can be up to 2000 people) while providing space for generating and exchanging ideas for participants. In various parallel sessions, participants suggest topics they want to discuss and make sure that results are documented. Any interested participant can join the discussion around the topic and stay as long as he/she wants. The topic is “finished” when there are no more interested people. The organisers “only” have to ensure the infrastructure (space, material, time schedule).

With its four principles and diverse roles, the open space technique comprehensively motivates participants to get involved in the process, to stay as long as they want and to change to other topics if they want (Scholz & Vesper 2010<sup>16</sup>).

Detailed descriptions are available under:

- [www.openspaceworld.org](http://www.openspaceworld.org) (en);
- [www.openspacetechnology.com](http://www.openspacetechnology.com) (en);
- <http://www.agonda.de/open-space/open-space.html> (de); and,
- <http://www.partizipation.at/openspace-conference.html> (en, de).

---

<sup>16</sup> Scholz H., Vesper R. (2010): Open space technology. Neuland Learning Map No.1.

## Future search

In a future search (workshop), around 60-80 (or more) representatives of different interest groups meet. Common to all is an urgent problem, and none of the present actors is able to solve it by their own. Therefore, it is important to get the “whole system” in the room, i.e. having all parties present having a stake in the outcome. Together, the group develops a vision, derives a consensus on a future situation, and plans concrete actions for implementation. Future oriented formats of work contribute to inducing changes and to create social innovations (Junk and Müller 1981<sup>17</sup>). The idea is to develop common ground instead of looking at differences. Thus in transdisciplinary research, this is an important tool for team building and improves collaboration among different interest groups. Due to the complexity of the task, a future search workshop generally lasts more than one day; a usual the sequence of such a workshop starts from looking into and learning from the past, analyses the present situation, imagines the future and establishes routes to make the future happen. Following this sequence, the different steps of a workshop could look like as follows (Table 5).

Table 5: Possible flow of a future search workshop

	Day 1	Day 2	Day 3
a.m.		Phase 1: Critical diagnostic (points to be proud of, weaknesses and challenges), synthesis	Phase 3: Common ground; Reality check
p.m.	Getting to know each other, Creating a common understanding of the process	Phase 2: Visioning / creative prospective	Action planning & preparing implementation

Gerster-Bentaya, 2009<sup>18</sup>

Detailed descriptions are available under:

- <http://www.sellnow.de/docs/Sellnow%20future%20search%20conference.pdf>;
- <http://www.kstoolkit.org/Future+Search>.

<sup>17</sup> Junk R., Müller N.R., 1991, Zukunftswerkstätten, Hoffmann und Campe, Hamburg

<sup>18</sup> Gerster-Bentaya, M. (2009): L’Atelier de l’avenir comme méthode de recherche dans la vallée de l’Oued el Maleh. Working paper, Unpublished.



### 3.4 Methods and instruments for personal / individual reflections

Any kind of sharing and exchange needs to be prepared by personal reflection on the respective topics. Reflections can be collected over a certain period of time, or during a specific time span (e.g. a field visit).

#### Learning Dairy

Against certain key questions related to the project, insights, critical points, ideas etc. (depending on the later use of the diary) will be noted in an individual dairy. In order to enhance and formalise the use of such a tool, a real diary with the key questions already included can be handed to the participants.

#### Observation cards

While the dairy is a compiled and fixed small booklet, the observation cards can be a way to collect sufficient information to analyse a certain process e.g. during a field visit. Having decided beforehand on different fields of observation, each member of the visiting group selects a limited number of cards with questions to focus during the field visit. (AgriSpin 2017<sup>19</sup>)

---

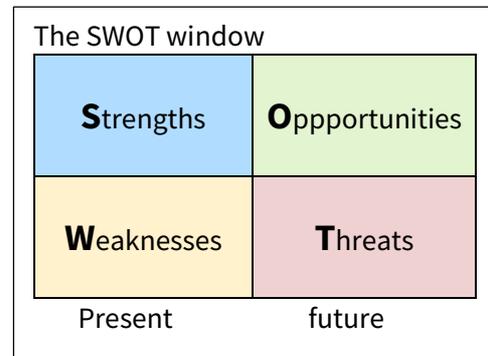
<sup>19</sup> AgriSpin (2017): Space for Innovations in Agriculture. The inspirational booklet. Collection of examples of good working practices. <http://agrispin.eu/wordpress/wp-content/uploads/2017/08/Inspiration-booklet-Agrispin-2017.pdf> (accessed 21 March, 2018).

---

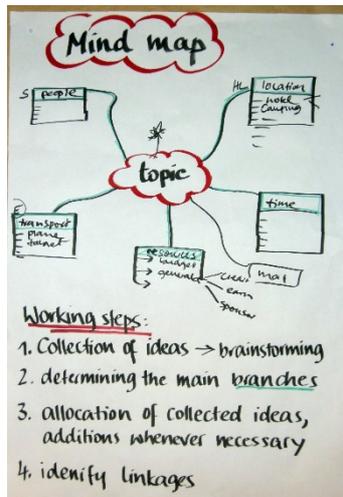
### 3.5 Instruments for structuring ideas

#### SWOT analysis

SWOT is a very commonly used instrument for the auto-evaluation and strategic planning of a group’s work, a project or programme. Its basic elements are the analysis of the current situation according to “strengths” and “weaknesses” which are characteristics that can be related to observable (and possibly quantifiable) indicators or items. The development of strategies for the future is based on the systematic assessment of opportunities and threats that all kinds of external conditions may cause. While strengths and weaknesses refer to the present situation, the opportunities and threats are looking into a possible future situation. The results are presented in the typical “4 field window” (see graph). The analysis is done mainly in a group work setting.



#### Mind map



Diagrams that visually map information using branching and maps have been used already for a long time. Tony Buzan, a known psychology author and personality popularized it and created the name “mind map” (Buzan and Buzan 2013<sup>20</sup>).

A mind map is a diagram to visually outline information. It is often created around a single word or text, placed in the centre, to which associated ideas, words and concepts are added. Major categories radiate from a central node, and lesser categories are sub-branches of larger branches.

**Checklists** can be generated from it as different responsibilities can be determined once all information around the event has being placed on the mind map.

For more information, please visit the website <http://www.tonybuzan.com/about/mind-mapping/> of Tony Buzan.

<sup>20</sup> Buzan T., Buzan B, (2013). Das Mind-Map-Buch. Die beste Methode zur Steigerung Ihres geistigen Potenzials. Mvg Verlag.

### 3.6 Methods and instruments for presenting results (dissemination)

The most common and effective way of presenting findings is in written form through (scientific, peer reviewed) articles in different journals addressing different actor groups. Another, and also very common way is the oral lecture during (scientific) conferences supported by e.g. a PowerPoint presentation. Increasingly used are videos (see below).

#### Posters (for a vernissage)

Posters are a one-page big size sheet of paper (DIN A 0) with information in a combination of text, pictures, graphs and (easy to read) tables. In a legible and understandable way, information is presented that speaks by itself, i.e. normally does not need a person to further explain the content. Guidelines to support the elaboration, and respecting some design principles, are available under: [https://engage.hutton.ac.uk/Projects/EU-H2020-TRUE/Style%20and%20Templates/TRUE\\_Poster\\_template.pptx](https://engage.hutton.ac.uk/Projects/EU-H2020-TRUE/Style%20and%20Templates/TRUE_Poster_template.pptx)

#### Information market

This method is useful for presenting information (research results, partnerships, organisations, etc.) during large-scale meetings. It is based on the idea of organising a fair / exhibition where participants freely can offer and demand information. Information markets can take place either alongside an event or, a specific time frame is reserved for the fair. To make best use of the fair, one possible arrangement is suggested:

A group of participants with a common background (e.g. people from the same project) prepare a poster and material to demonstrate specific feature of the project. Each group is allocated to a booth (i.e. special space in the hall). Participants can choose which booths interest them most, and can move between them, joining in the discussions at each booth. The respective group of participants needs to ensure that – while the colleagues move around for information – there is at least one person next to the booth available to provide information for the visiting “customers”.

#### Video documentations

Videos can be strong tools for communication. They can present in a nutshell with pictures from the field, people in action, summaries of outcomes the essence of a process, describe a project in general or very specific outcomes. Increasingly, this tool is accepted also for disseminating information. Specifically, participatory video (i.e. videos are developed by the stakeholders themselves) contribute to foster collaboration, and show the different perspectives of stakeholders. It is important that sufficient context information is provided to facilitate understanding of the audience who did not participate in the process (Lunch and Lunch 2006<sup>21</sup>). Videos can be of different length: short spots of few minutes and up to 30-45 minutes, depending on the objectives, the addressees and their role in the communication strategy.

---

<sup>21</sup> Lunch, N., and C. Lunch. 2006. *Insights into Participatory Video: A Handbook for the Field*. 1st ed. Oxford: Insight.

### 3.7 Methods and tools for the “field”

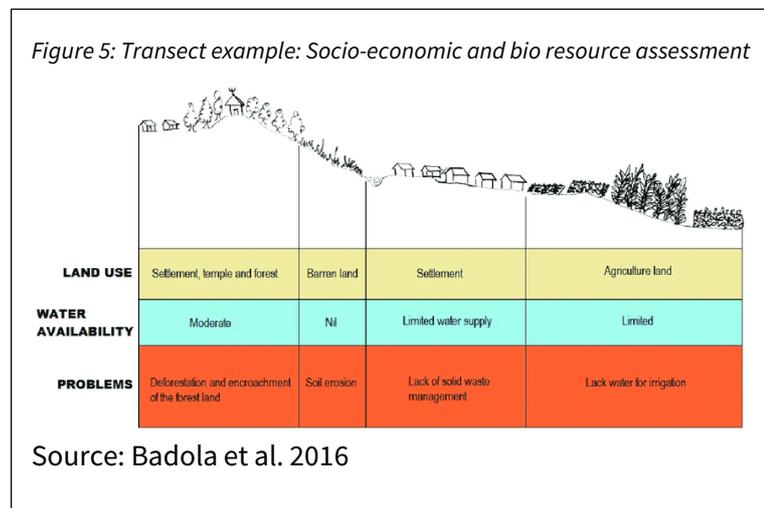
When including practitioners, exchange, co-creation of knowledge also takes place in the “field”: in the company, on the farm, on the plot, in the stable, etc. i.e. in real life environment. Originally developed for integrating practitioners into research, the PRA (participatory rural appraisal) toolbox includes a set of participatory and largely visual techniques for assessing group and community/common resources, identifying and prioritizing problems and appraising strategies for solving them (TES 2018<sup>22</sup>). Since the first participatory Trainers’ Guide has been published in 1995 (Pretty et al. 1997)<sup>23</sup>, the tools have been widely used in various technical and cultural contexts, different compositions of teams and by various organisations. The increasing concern for being more inclusive and learning-centred, and geared towards action has shifted the understanding and use of methods into “PLA”: Participatory learning and action.

The website (<https://www.iied.org/participatory-learning-action-pla>) includes 66 issues of PLA notes with reports on numerous methodological experiences and tools.

This basic philosophy of mutual learning makes PRA/PLA methods and tools predestined for being used in transdisciplinary research. Therefore, a lot of them can be used, such as transects, seasonal calendar, resource (flow) mapping, etc. These methods and tools are suitable for diagnosing as well as for planning, monitoring and evaluation, as the visualised outcomes of an exchange process can be used not only to document a current situation, but also serve as the basis for planning, to monitor progress and evaluate interventions. Here, we will mention only a few, and refer to the manual of Pretty et al. 1997 (footnote 21).

#### Transect

The transect is one of the key PLA methods<sup>24</sup> to learn about complex problems from different point of views. It is a walk on a predefined route. All observations and informal interviews or talks with the people on the way are documented. The route is selected according to the topic of interest and maximises the diversity of the addressed local conditions (different soil types, fishing grounds, farming systems etc.). The outcomes are pictorial cross-sectional representations of the environment, combined with a tabular grid filled with information



<sup>22</sup> TES 2018, <http://www.kstoolkit.org/Participatory+Rural+Appraisal+%28PRA%29>, accessed 8 Feb, 2018

<sup>23</sup> Pretty J.N., Guijt I., Thompson J., Scoones I. (1997): Participatory Learning and Action: A trainer’s guide. IIED London, reprint 2002, available for download under <http://pubs.iied.org/pdfs/6021IIED.pdf>, accessed 7 Feb, 2018.

<sup>24</sup> PLA = Participatory Learning and Action (see

about the features/aspects that have been examined (see graph Badola et al. 2016<sup>25</sup>). Such a tabular layout, in combination with a picture, assists in the presentation, analysis of the relationships between people, understanding of the situation, and identification of problems and possible solutions. Classical applications are transects of ecological systems in subsystems analysis regarding properties like soil quality, productivity, etc.

### Maps / mapping<sup>26</sup>

Participatory mapping is one of the most versatile tools and is powerful in generating pictures on any aspect of the physical reality. These maps cannot be compared with geographical maps, which are exactly reduced representations of geophysical structures.

Maps can be produced for big regions (movement of animal herds of pastoralists), villages, and farms or even for a single plot, depending on questions people are interested in. The products of participatory mappings are a visualisation of mental maps and can be different for different groups of people of the same village (e.g. men, women, children). Usually mapping is used to depict infrastructures, natural resources, land ownership, settlement pattern, soil types, cropping pattern, etc.

If possible, it is preferable to draw the map from a high vantage point so that the PRA team can relate to the map with direct observations. Usually, the maps are drawn on the ground using on the spot available materials. The location of the mapping session should be freely accessible to all groups of the community (e.g. different castes, men and women, rich and poor, etc.).

Maps can be also used according to a timeline e.g., the village 30 years back and now. A future model can be drawn to discuss people's vision of the future, how it will be, or how it should be. Such historical maps help to discuss the roots of the present situation and possible future developments.

Using pencils, pens or local materials (e.g. small rocks, different coloured sands or powders, plant material) members draw maps that depict and illustrate certain things. Each group member is then asked “to hold the stick”, to explain the map or to criticize it, or revise it. **Resource maps** can show the location of houses, resources, infrastructure and terrain features-useful for analysing certain community-level problems. **Social maps**, showing who is related to whom and where members of different socio-cultural groups live is useful in conducting baseline surveys.

---

<sup>25</sup> Badola H., Lepcha J., Gaira K.S., Dhyani P.P. (2016): Participatory and household survey methods, tools and techniques. A training manual based on the experiences from the Khangchendzonga Landscape, India. - Scientific Figure on ResearchGate. Available from: [https://www.researchgate.net/Transect-walk-an-example\\_fig2\\_313741452](https://www.researchgate.net/Transect-walk-an-example_fig2_313741452), accessed 8 Feb, 2018.

<sup>26</sup> Gerster-Bentaya 2008: Methods for situation analysis. In: Hoffmann V., Gerster-Bentaya M. (ed.): Rural Communication and Extension. Lecture reader, pp. 91-110.



### Kitchen table talk

This method refers to the location where a talk or interview takes place: the kitchen. The method is widely used in advisory work when advisors meet their clients to discuss changes on the farm, investments, etc. The kitchen is normally the place where family members gather, (good) meals are prepared and consumed. The place is accessible to all family members and thus, an opportunity is created to meet family members who may have a different view on a certain problem. A kitchen table talk is a variation of low structured interviews and needs to be prepared as any other type of empirical tool, reflecting on areas to speak about.

### Focus group discussion

Focus group discussion is a common method in qualitative research, which gained a certain popularity in the past decades. People from similar backgrounds or experiences (ideally up to 15) are gathered together to discuss a specific topic of interest. The group of participants is guided by a facilitator who introduces topics for discussion, and helps the group members to participate in a lively and natural discussion amongst themselves. While participants agree or disagree on a certain issue, such results provide insight into how a group's members' thinking about an issue, give a wide range of ideas, inconsistencies, opinions, etc. (Start & Hoveland 2004)<sup>27</sup>.

---

<sup>27</sup> Start D., Hoveland I. (2004): Tools for Policy Impact: A Handbook for Researchers. ODI London, pp 14-15.  
<https://www.odi.org/publications/156-tools-policy-impact-handbook-researchers>, accessed 8 Feb 2018,

---



---

## 4. Establishing and working with networks

Thinking ahead for a project's follow-up and preparing for the project's 'legacy' should be the concern of project members from the very outset of activities. Therefore, emphasis is given to the establishment of network structures in which people cooperate over a mid- to long-term period with common objectives, practicing mutual support and reaching common benefits. An important requisite during the lifetime of a project is to use methods that work towards strengthening relationships among people. Networks are the result of personal relationships geared towards better cooperation among the network members to better achieve their goals. Trust, reliability, non-abuse and reciprocity are values that carry a network and strengthen interpersonal relationships.

### 4.1 What is an (innovation) network?

Generally, a network refers to a group of agencies, organisations or individuals that agree to work collaboratively or in partnership to achieve a common goal (Powell 1990<sup>28</sup>). Members can come from the same sector or area of interest/expertise, but networks may also involve stakeholders from a seemingly unrelated interest area (Kenny et al. 2015<sup>29</sup>).

Multi-actor cooperation in the frame of transdisciplinary research projects can be understood with the concept of innovation networks (Schmid et al. 2016<sup>30</sup>). In the context of voluntary change aiming at the solution of complex problems, the network concept emphasises the voluntary cooperation of autonomous actors in order to design, develop and test innovations in social systems. Cooperation in network is considered as a flexible relationship based on reflexivity, reciprocity and mutual trust which will – in case of success – lead to longer term cooperation. Even if networks in project contexts are established informally, they can benefit from more formal frameworks, such as operating under memoranda of understanding (MoU), (partnership) agreements or protocols. Whether formal or informal, successful networks are built on strong relationships and trust.

---

<sup>28</sup> Powell, W.W., 1990. Neither market nor hierarchy: network forms of organization. *Res. Org. Behav.* 12, 295–336.

<sup>29</sup> Kenny, P., Morley, S., & Higgins, D. (2015). *Forced Adoption Support Services: Establishing and building networks*. Melbourne: Australian Institute of Family Studies.

<sup>30</sup> Schmid J., Knierim A., Knuth U. (2016). Policy-induced innovations networks on climate change adaptation – An ex-post analysis of collaboration success and its influencing factors. *Environmental Science & Policy* 56 (2016) 67–79. <http://dx.doi.org/10.1016/j.envsci.2015.11.003>

---

## 4.2 Prerequisites for establishing networks

Cooperation and networking is expected to be a win-win situation for the cooperating partners. There are a number of aspects that need to be taken into consideration prior to the formation of the network. Reischauer & Reischauer (2011<sup>31</sup>) group them into four categories as defined below.

- (a) **Individual prerequisites:** honest willingness to form a network; readiness to accept compromises and to share in-house information; social skills of key persons managing the network and/or persons who have a core influence on the foundation and continuation of the network, such as, honesty, trustworthiness.
- (b) **Organisational prerequisites:** in order to be effective in a network, an organisation has to authorise its members to act as autonomous and responsible network members, able to engage with others in a reliable and lasting relationship.
- (c) **Technical prerequisites:** aspects of communication tools, compatibility of production units.
- (d) **Legal conditions:** significant benefits emerge only if there is a legally binding form of cooperation; (work) processes can be designed efficiently, and synergies can be expanded systematically. Special attention should be put on questions regarding taxation, liability, insurances and risks, legal form of the organisation, the partnership contract, and financial aspects.

## 4.3 Pros and cons of working within network arrangements

While there are excellent opportunities that result from being part of a larger network, funded services may also face some challenges that can influence the effectiveness of networks if they are not carefully and strategically managed.

Some of the **benefits** of networks include:

- better coordination of service delivery—including, for example, co-location, case management, shared expertise and knowledge;
- broader community reach for each member of the network—each member can extend the geographical reach through partnerships or coordinated outreach to regional/rural areas;
- shared skills and resources—enhancing organisational credibility and bringing together people with common interests;
- opportunities to develop multi-agency collaboration and demonstrate this to potential funding sources who require such cooperation;
- development of ongoing relationships that promote a more complimentary approach to service provision to overcome gaps and build on divergent strengths; and, improved dissemination of information about a particular topic to a broader range of stakeholders outside any one group.

---

<sup>31</sup> Reischauer Th., Reischauer G. (2011). Netzwerk-Handbuch. Wettbewerbsvorteile durch Kooperation. Wirtschaftskammer Österreich, Linz.



Some of the **challenges** that can emerge within network arrangements, if not safeguarded against, include:

- slower implementation of services/projects due to more stakeholders being involved in planning, delivery and decision-making;
- lack of clarity about organisational and individual roles, expectations and priorities;
- internal conflicts and competition between stakeholders;
- communication failures;
- varying degrees of commitment to the network;
- varying and diverging organisational philosophies;
- historical tensions between individuals, groups and organisations;
- some client needs not being met, due to some service providers believing they do not have responsibility for them;
- operating within a competitive funding environment; and
- lack of time and resources.

Before embarking on establishing networks, it will be beneficial to consider strategies that can help minimise such risks to the overall quality of collaborative partnerships (see Box 1).

#### 4.4 How to start a network?

The first meeting is key and therefore, needs thorough planning. The focus is that possible networking partners get to know each other while getting in touch, learning from each other regarding expertise, interest, and personal relations.



Box 1: Successful networks (Kenny et al. 2015)

**Some of the factors that are common to successful networks include:**

- *Allowing time to establish trust and respect* — A relationship founded on mutual respect is more likely to survive, and can be established through regular and open communication.
- *Establishing common interests and goals* — These commonalities allow organisations to communicate in a similar language and move in the same direction over time.
- *Clearly defining everyone’s role within the network* — This ensures each member’s role is distinct in terms of actions and tasks, and is not restricted to, or reliant on, one individual.
- *Identifying the right people to champion relationships at the right time* — The network should not rely on one person to be the “champion” all the time. A catalyst is important in driving the network; however, all members must take ownership of its purpose, direction and maintenance.
- *Establishing formal agreements* — These may help collaboration and will make it easier to resolve potential conflicts.
- *Defining protocols for conduct and behaviour in meetings and between individual members* — These will make it easier to resolve potential conflicts between individuals, groups or organisations, and will set a standard for how people communicate.
- *Being aware of mutual strengths and gaps and sharing of skills* — This prevents any gaps in skills and allows members to understand and build on their existing abilities and knowledge base.
- *Being clear, transparent and accountable for any decisions/agreed actions*

#### 4.5 Good practice considerations for continuous work with networks

The ultimate challenge is to establish networks that enable service users to access the appropriate level of support. This needs to happen in a timely, sensitive and professional manner. Some “good practice” principles and actions for service providers to consider in order to maximise the likelihood of service uptake by network members are described in Table 6.

Table 6: Good practice principles for successful work in and with networks<sup>32</sup>

Principle	Description
Accountability	Includes being transparent about the services, the roles and tasks the different members fulfil; if money is involved, procedures need to be set up for checking.
Accessibility	Have point-of-contact person, being flexible and reachable – according to the agreed upon way; being flexible, timely response, and at low cost.
Effective high quality services	Mutual support and advise as an expert
Diversity of and tailor-made services	Making available a broad range of options and experts who are ready to be addressed and available, able to provide also tailored advice
Continuity	Develop formal links with institutions and other service providers

#### 4.6 Community of Practice

A Community of Practice (CoP) refers to the social dimension of learning, including the dimensions of community, identity, meaning and practice which are all closely connected (Wenger 2003<sup>33</sup>) Communities of practice are groups of people who are practitioners in a certain field. They develop and share a repertoire of resources: experiences, tools, ways of addressing recurring problems; they share a concern or a passion for something they do and learn how to do it better as they interact regularly. A CoP can be created within a bigger network as it can be the beginning of a bigger network. A CoP is a smaller group with clear and partly time-limited objectives to further develop or improve or solve a problem together.

Further reading:

- Wenger E.: <http://wenger-trayner.com/introduction-to-communities-of-practice/>

<sup>32</sup> Modified according to Kelly et al. 2015

<sup>33</sup> Wenger E. (2003). Community of Practice. Learning, Meaning, and Identity. Cambridge University Press, New York.



## 5. Conclusion and recommendations

This document is composed to create an initial overview of methods and tools for and provide some targeted insights into working processes' design in transdisciplinary research. So, we firmly emphasise that it is meant to inform the TRUE project members and stimulate them to practice participatory ways of interaction and joint research. It is our conviction and experience that transdisciplinary research can be best learned from practice through 'learning by doing' in reflexive loops. With this document it is our aim to encourage such an attitude and to get into exchange with other project members about how to best design and implement transdisciplinary research.

Additionally, and especially in cases of complex issues to be handled or large groups involved, we recommend to consult with professional facilitators and / or experts on transdisciplinary methods.



---

## 6. Bibliography

- Jahn, Th. 2008, Transdisciplinary in the Practice of Research. In: Bergmann M., Schramm E. (Hg.) (2008): Transdisziplinäre Forschung. Integrative Forschungsprozesse verstehen und bewerten. Frankfurt/New York: Campus Verlag, 21–37.

### Websites with descriptions of methods

#### ..in German

- Stiftung Mitarbeit: Methoden und Verfahren von A bis Z, <https://www.buergergesellschaft.de/mitentscheiden/methoden-verfahren/methoden-verfahren-von-a-bis-z/> accessed 6 Feb 2018
- Österreichisches Bundesministerium für Nachhaltigkeit und Tourismus, Wien: Partizipation & nachhaltige Entwicklung in Europa; Methoden, <http://www.partizipation.at/methoden.html> , accessed 6 Feb 2018
- Stadt Berlin: [http://www.stadtentwicklung.berlin.de/soziale\\_stadt/partizipation/download/Handbuch\\_Auszug\\_Methoden.pdf](http://www.stadtentwicklung.berlin.de/soziale_stadt/partizipation/download/Handbuch_Auszug_Methoden.pdf) , accessed 6 Feb 2018

#### ...in English:

- The World Café: <http://www.theworldcafe.com/> accessed 6 Feb 2018; some documents are available also in other languages like Spanish, Portuguese, Chinese, German
- Austrian Federal Ministry of Sustainability and Tourism (BMNT), Vienna, Participation & sustainable development in Europe. Methods; <http://www.partizipation.at/methoden.html> , accessed 6 Feb 2018



---

## Disclaimer

The information presented here has been thoroughly researched and is believed to be accurate and correct. However, the authors cannot be held legally responsible for any errors. There are no warranties, expressed or implied, made with respect to the information provided. The authors will not be liable for any direct, indirect, special, incidental or consequential damages arising out of the use or inability to use the content of this publication.

## Copyright

© All rights reserved. Reproduction and dissemination of material presented here for research, educational or other non-commercial purposes are authorised without any prior written permission from the copyright holders provided the source is fully acknowledged. Reproduction of material for sale or other commercial purposes is prohibited.

## Citation

Please cite this text as follows:

Gerster-Bentaya, M., Knierim, A. (2018). The TRUE Toolbox for Transdisciplinary Research. Developed by the EU-H2020 project TRUE ('Transition paths to sustainable legume-based systems in Europe'), funded by the European Union's Horizon 2020 Research and Innovation programme under Grant Agreement Number 727973.