UNISECO

UNDERSTANDING& IMPROVING THE SUSTAINABILITY OF AGROECOLOGICAL FARMING SYSTEMS IN THE EU

Deliverable 7.3 Report on assessment of transdisciplinary tools & methods (in-progress)

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1. INTRODUCTION

The UNISECO project aims to develop innovative approaches and better understand the socio-economic and policy factors that hinder or enhance the transition towards agro-ecological farming systems (AEFS) in EU. UNISECO addresses the challenge of assessing complex systems by employing a transdisciplinary research approach that includes scientists from humanities, social and natural science, farmers, advisory services, environmental stakeholders, actors in the value chain, consumers and actors involved in designing market incentives and policies. Transdisciplinarity is performed through three key mechanisms: 1) the consortium composition, 2) setting up networking and knowledge sharing platforms and 3) the inclusion of participatory methods in all project phases. The ultimate aim of UNISECO is to integrate the knowledge of the partners' different scientific background with the experiences of the various stakeholder groups in order to strengthen the sustainability of EU farming systems, through co-constructing practice-validated strategies and incentives for the promotion of improved agro-ecological approaches. This transdisciplinary collaboration is mainly based on the Multi-Actor Platforms (MAPs), i.e. pools of key actors associated with agro-ecological farming systems are established at the levels of the EU and the local case studies.

The main objective of Task 7.3 is to design, monitor and evaluate the performance of the MAPs as adapted for the SES framework, use of the different assessment tools (WPs 3 and 6) in participatory processes, and the transdisciplinary approach.

2. LITERATURE REVIEW

2.1. Defining transdisciplinary and participatory approaches

The complex problems of sustainability demand synthesis and integration of different scientific fields along with the collaboration between academic and non-academic actor groups. Thus sustainability science uses practices, such as transdisciplinary and participatory research approaches that enable researchers of various disciplines to work together and collaborate with concerned actors in order to deal with the complexity and thus co-generate solution options (Lang et al., 2012). It is argued that transdisciplinarity facilitates mutual learning processes among the scientists and non-scientific actor groups encouraging the co-creation of knowledge (Lang et al., 2012).

The key aspect of transdisciplinary research is the active involvement of the non-academic actors, thus participatory research is defined as "participants collaborating to problem solve and produce new knowledge in an ongoing learning and reflective process" (Blackstock et al., 2007). Through participatory processes stakeholders have the capacity to shape what affects them and develop solutions, nevertheless, participants' involvement in research processes varies. Based on the degree of communicating and sharing of knowledge, four different levels of engagement are identified, from information through consultation and collaboration towards empowerment (Brandt et al. 2013).

2.1. Evaluation of transdisciplinary and participatory approaches

Evaluation is defined, in its broad sense, as an assessment of worth or merit of an object, such as a project, programme, policy etc., and it has to be a systematic process of inquiry (OECD, 2005; as adopted by the American Evaluation Association, Joint Committee on Standards, 1994), while monitoring deals with the collection and analysis of information about an on-going project.

In general, evaluation can be differentiated into ex ante or ex post, depending on when evaluation is being conducted, before or after the implementation of the project, programme, policy, respectively. Process evaluation pays particular attention to the process of operating and progressing a project and how outcomes

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are produced rather than on the outcome itself (Blackstock et al., 2007). Process evaluation usually examines the activities of the project, the team composition, the actors' involvement, the integration and transfer of knowledge through interviews or surveys using qualitative questions about the quality of knowledge and information exchange, leadership of the group, communication, etc. (Holzer et al., 2018). A process evaluation is called formative evaluation when it is done in a reflexive way and provides useful information and ongoing feedback in order to revise and make improvements. On the contrary, summative evaluation is an ex post evaluation which forms critical views on what worked and what didn't work in order to highlight the lessons learned for future actions. Concerning focus, evaluation can be strategic when it seeks to examine whether intended results are achieved and are consistent with the project's objectives; or operational, when it is concerned to monitor the timing, costs and quality of the planned activities. The purposes of evaluation are to prove (focus on efficiency or value), to control (check quality control), to improve (reach objectives) and to learn (transform the individual participant). Given that participatory processes should promote social learning, transformation and empowerment, thus evaluation's purpose is to learn and improve (Blackstock et al., 2007). When the purposes of evaluation is to record experiences and disseminate the knowledge accumulated and lessons learned to others for a specific decision making situation, then it is considered an instrument of learning (OECD, 2005).

It seems that selecting evaluation criteria is a crucial step in the evaluation process and should be in accordance with the type of evaluation and its objectives, while their choice in turn determines the selection of methods and data sources (Blackstock et al., 2007). Both qualitative and quantitative evaluation methods should be combined (e.g. stakeholder analysis, interviews, surveys, document analysis, media analysis, observation notes, participants' expectations before and after the workshops, impact assessment) in order to ensure that each criterion is collected by different sources (Hassenforder et al., 2016). Among the evaluation methods, it seems that written questionnaires and interview-based surveys are commonly used. Questions are related to research objectives, actors' involvement, knowledge integration, quality of scientific research outputs, quality of knowledge and of technology transfer, and competence of project management (Holzer et al., 2018).

The evaluation of transdisciplinary research is complex (Klein, 2008), since it has to integrate knowledge from various disciplines, develop dynamic methodologies that are context and problem-specific and involve non-academic actors (Carew & Wickson, 2010). A diversity of studies concerning the evaluation of research projects in which transdisciplinary and participatory approaches are applied can be found on literature. This diversity is based on the heterogeneous natures of transdisciplinary research and evaluation. Although the evaluation of the transdisciplinary approaches and participatory processes have increased over time, the research on this topic is considered incomplete and literature doesn't guide researchers on how to do a good transdisciplinary research (Lang et al., 2012; Blackstock et al., 2005; Holzer et al., 2018).

Some scholars are interested in developing frameworks for evaluating transdisciplinary or participatory research (e.g. Holzer et al., 2018; Blackstock et al., 2007; Hassenforder et al., 2016), while others propose guidelines and specific quality criteria for assessing the success and quality (e.g. Lang et al., 2012; Bergman et al., 2005; Klein, 2008; Späth, 2008). Moreover, the timing, focus and purpose of evaluations are different (e.g. Blackstock et al., 2007: offer a summative evaluation emphasizing on the learning aspects for future projects; Bergman et al., 2005: a formative evaluation that supports the quality of learning process; Walter et al., 2007: an ex-post evaluation that assesses the impact of research, etc.). In addition to the above, the terminology and methods used differ (e.g. Bergman et al. (2005) acknowledge basic and detailed criteria formed as evaluation questions; Hassenforder et al. (2016) use analytical variables; Jahn and Keil, (2015) use dimensions and requirement profiles). It should be noted that the terms of "stakeholders" and "actors" are not distinguished in the papers reviewed and are used interchangeable. Besides these terms, others are also used (practitioners, non-academics/scientists, etc.). For the UNISECO project, the term "actor" refers to all non-consortium individuals who are engaged in the project activities and it is not differentiated from the term "stakeholder" as emphasized by the European Commission (Irvine et al., 2019). Given that the core characteristic that shapes the transdisciplinary research is the on-going collaboration between the project

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team and all other actors involved, thus when different actors involved in the transdisciplinary research, learning is gained through reflection (e.g. Jahn&Keil, 2015; Bergman et al., 2005).

In summary, a set of criteria and methods can be derived from literature in order to develop a monitoring and evaluation framework that will aim to assess project's activities in which various stakeholders are involved.

3. MONITORING AND EVALUATION FRAMEWORK

3.1. Framework for UNISECO project

The monitoring and evaluation framework aims to guide the steps for assessing the transdisciplinary approaches and methods used in the multi-actor approach in UNISECO project. The framework sets the objectives of the process, specifies the evaluation questions and selects the assessment criteria. It also proposes a method for the assessment by defining a systematic process for collecting, analyzing and reporting the data.

The objective of the evaluation is primarily to assess the performance of the MAPs in promoting co-learning and capacity building of key stakeholders at EU-level and in the case studies. As MAPs involvement occurs several times through the project duration, and each case study MAP operates in a unique geographical, social, political, economic and environmental context, establishing a common procedure in which all different MAPs will be monitored and evaluated is a challenging task.

Focusing on the "moments of engagement", the framework aims to assess the project activities in which the MAPs' members are involved in participatory processes (see Budniok et al., 2018 & Irvine et al., 2019, for an overview of the activities with MAP involvement). Thus it is important to give attention to the process and outcome of the various transdisciplinary and participatory activities carried out in project duration ensuring that valuable interactions occur between the project team and the different actors involved. Thus the framework focuses on the preparation and implementation phases of the group activities (i.e. focus groups, workshops), as well as on the success of the produced outcome (i.e. the benefits for the participants of the MAPs and UNISECO project). The evaluation should be considered as a learning tool for the project team whereas the findings should contribute to improving future participatory activities.

It is important to ensure that the evaluation should address the following aspects:

- assess the effectiveness of the project activity in which the MAPs' members were involved by examining whether it succeeded to engage the participants and accomplished its intended objectives and outcomes;
- check whether the method of engagement used was appropriate and successful, whether the phases of preparation and execution process of the research activity were well organised;
- appraise the degree to which the activity promoted collaboration and increased mutual learning.

Consequently, the evaluation should help answer the following key questions:

- Did the research activity reach its target groups?
- Did the MAP engagement meet its objectives and achieve the intended outcome?
- What worked well and what constraints/difficulties occurred through planning and implementation processes?
- Did it promote mutual learning among different participants and co-construct knowledge?
- What were the lessons learned, both for the project team and participants involved?
- What should it be changed for future activities?

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At the first stages, monitoring and evaluation will deal with the process of MAP engagement in the activities, i.e. how interactions are carried out and whether they are progressing according to planning, while at a later time the focus will be put on the outcomes and participants' appraisal of the overall process.

Given that the MAPs' members are continuously engaged in all project phases, UNISECO team was very cautious and avoided engaging external participants also in designing the evaluation process, particularly in the initial stages, i.e. for selecting evaluation criteria, as this activity would increase the risk of stakeholder fatigue. Thus it is the UNISECO partners' responsibility to choose appropriate criteria to be used in assessing the research process and how interactions with MAPs evolve through the project lifetime.

3.2. Suggested evaluation criteria - methods

A selection of appropriate evaluation criteria with reference to the purposes of the project were selected from literature on evaluating participatory approaches and assessing transdisciplinarity research quality (e.g. Blackstock et al. 2007; Walter et al., 2007; Hassenforder et al., 2016; Holzer et al., 2018; Rowe & Frewer, 2000, etc.). Chosen criteria were compiled and grouped into three sets that describe the different phases of the research activities: preparation, implementation, post-implementation. The evaluation criteria cover the steps of preparing and conducting the research activities in which the MAPs members are involved as well as provide the opportunity to get MAP's and UNISECO members' feedback on the effectiveness of the outcomes.

Chosen methods for obtaining and collecting data include observation and reporting/debriefing sheet filled by project partners and feedback questionnaire requested from participants.

The sets of evaluation criteria suggested for the UNISECO evaluation are summarised in the following table (Table1).

Table 1. Evaluation Criteria Set

Operational	Process	Outcome
Participants' profile	Representativeness	Network building
Design of the process	Access to resources	Capacity building/Social learning
Level of involvement	Group dynamics	

A. Operational criteria set

Who, What & When: After the completion of a project participatory activity, "transdisciplinarity" officers complete the debriefing/reporting sheet providing the following information.

- **Participants' profile**: Quantitative information about the number of stakeholders engaged in the activity, proportion of stakeholders by gender, age, professional background, origin (geographic location).

- **Design of the process**: Description of the activity's preparation and participants' selection so as to measure and demonstrate what makes an effective and successful process. It is crucial to establish transparent and objective justification of who is involved in the research activity and how the activity was planned and executed.

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- **Level of involvement**: The consistency and loyalty in participation for each MAP member, after the second event and in case of multiple invitations.

B. Process criteria set

Who, What & When: Questionnaires (in a Likert scale) are completed by participants who were involved in the group research activities, i.e. focus groups, workshops and sessions in another meeting, providing their feedback on the effectiveness of the activity and their satisfaction. Moreover, "transdisciplinarity" officers are responsible for addressing, as observers, some of the key issues indicated below completing the qualitative information of the debriefing/reporting sheet.

- **Representativeness**: When a participatory process takes place, it is crucial to ensure that representatives of the key stakeholder groups are involved in the activity, so that diverse viewpoints, interests and values are considered.

Key issues

- How legitimate the representation was seen to be?
- Have all relevant stakeholder groups been targeted and participated in the activity?
- Were the right participants included in the meeting?
- Was there ethical and fair representation of all involved?

- **Access to resources**: Access to relevant and appropriate to the research context information allows participants to effectively participate in the research activity. Resources may also refer to time and human resources.

Key issues

- To ensure flow of adequate information to all actors;
  - Actors are adequately and timely informed by the project activity/and their expected role;
  - Relevant information is provided in clear and understandable language;
  - Information is appropriate and of interest to all participants;
  - Activity objectives clearly stated and presented;
- Enough time was given to interact, respond, make questions;
- The facilitator has successfully guided the discussion.

- **Group dynamics:** Referring to participants' ability and opportunity to participate and influence the process, outcome and others, thus effectively collaborate and learn from their involvement in the research activities.

Key issues

- Did participants follow the principles for involvement in the MAPs: Respect - Sharing - Listening - Attention – Teamwork (Irvine et al., 2019)?

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C. Outcome Criteria set

i. Who, What & When: Questions of this criteria set are usually relevant at the latter stages of the project, since they focus more on the influence of the overall project activities on participants' capacity. Participants, who are actively and continuously involved in the group research activities, provide their feedback on the effectiveness of their engagement and their satisfaction.

- **Network building**: Existing social networks are strengthened, new ones and collaborations are developed as a result of the involvement in the project.

Key issues

- Size and strength of network
  - How many new people they met during their involvement in the project ;
  - Whether they participated in any further meetings, projects on related topics due to their involvement ;

- **Capacity building/Social learning:** Referring to change in knowledge, skills, relationships, understanding, trust that enable participants to take part in future processes/projects. When participants experience some transformation in their knowledge/viewpoint due to their involvement.

Key issues

- Whether there is evidence
  - that behavior of actors changed, knowledge and skills of actors increased;
  - of improved professional opportunities;
  - of practical engagement and application of project results in the future;
  - that project results meet the needs of stakeholders and can be used by all participant's in everyday context;
  - sense of ownership of project results;

3.3. Application of the monitoring and evaluation framework

A pilot application of the framework was tested at the 1st annual meeting of the UNISECO project in Helsinki, (May, 2019), where all project partners had the opportunity to get acquainted with the framework and provided their feedback when the debriefing session of the stakeholder workshop took place.

Afterwards, the framework has been applied at the stakeholder workshop in Basel (November 2019) as well as at the local level in project partner case study where tasks related to case study work carried out through participatory processes (such as focus groups, workshops).

Evaluation of Helsinki workshop

Out of the 14 participants who attended the stakeholder workshop in Finland, 11 responded to the evaluation questionnaires, providing mostly constructive and positive feedback on the workshop process (Figure 1). Among them, there were four EU-MAP members, four PAG members and three SRG members, while they were six males and five females coming from across Europe.

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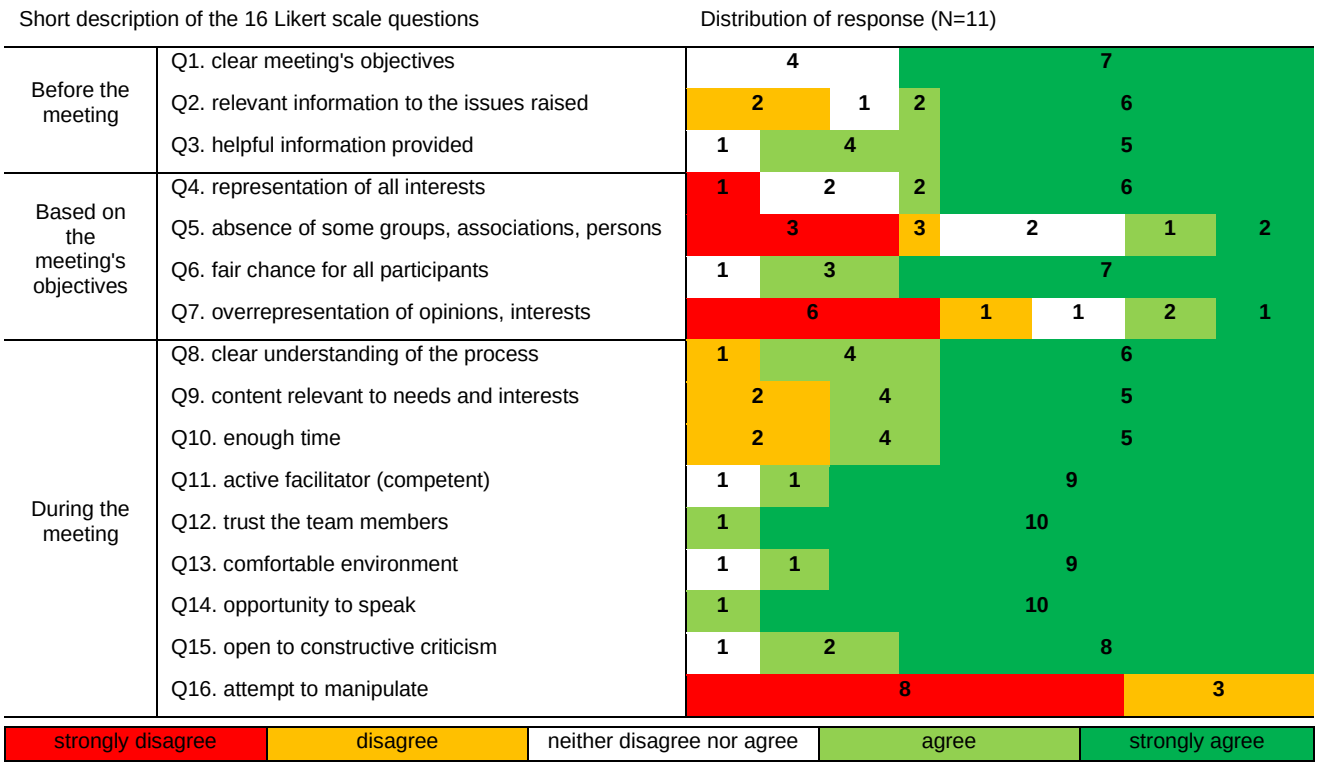

Figure 1. An overview of the distribution of the respondents' answers at the Helsinki workshop.

Written comments received from respondents stress that:

- Information provided proved to be insufficient. Participants need adequate support of information, (background material, agenda with clear objectives of the event and their roles) in order to participate effectively.
- Representation of stakeholders was imbalance, as some respondents felt that farmers and policymakers were neglected, while there was an overrepresentation of male researchers and academics.
- A tight schedule, complex topics, lack of expertise and language barriers may influence meaningful contributions. Consequently, discussions in small groups developing relationships of trust and confidence enable all participants to participate and communicate openly.

Evaluation of Basel workshop

Feedback from the participants involved in the Helsinki workshop became the lessons learned for the next project activities and the Basel workshop.

Despite the number of actors attended the Basel meeting, the response rate to the evaluation questionnaire is considered significantly low (6 out of 21). Respondents were three females and three males, while five grouped as SRG members and one was PAG member. Nevertheless, positive feedback has been received regarding the workshop process (Figure 2).

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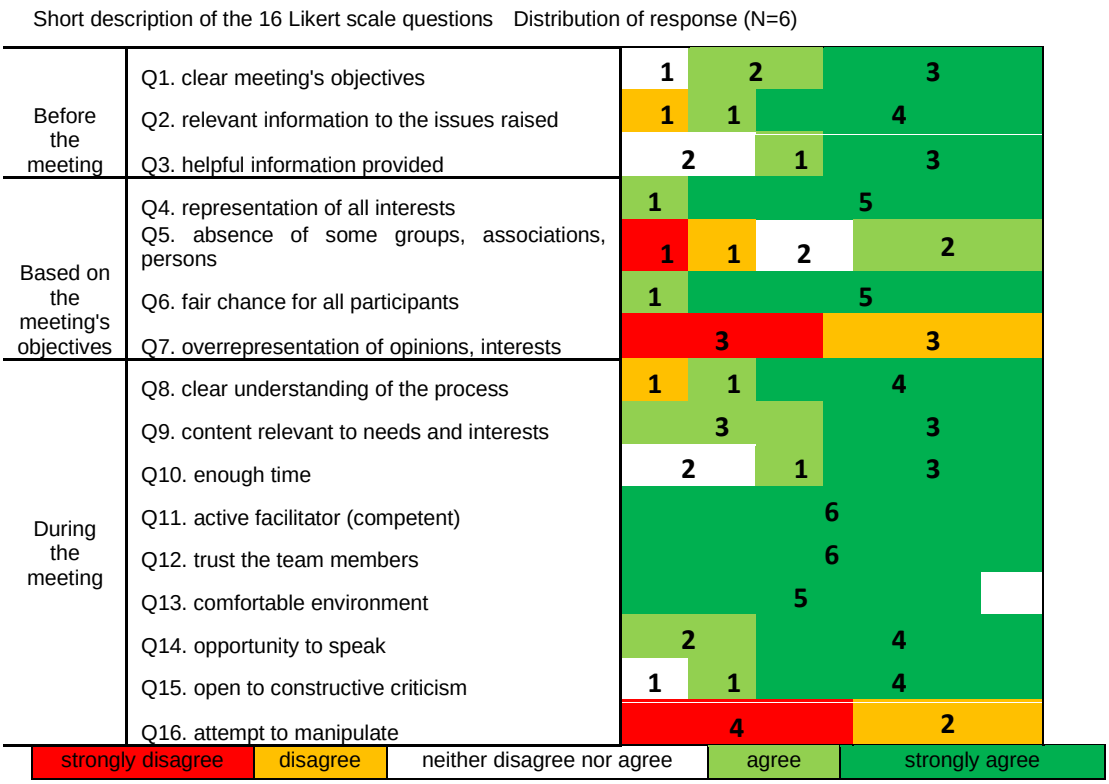

Figure 2. An overview of the distribution of the respondents' answers at the Basel workshop.

A total of 22 written comments received revealed that the available time was very short and everything presented in a hurry. Actors couldn't contribute as much as they wanted, consequently discussions were very general and didn't come to a conclusion (6 comments). Almost all respondents identified a missing group that could contribute to the discussion (e.g. DG AGRI policy makers, EU level stakeholders), while someone reported the presence of many scientists, appreciating that the use of MAP-NEF might balance this asymmetry (1 comment). Moreover one SRG stressed that the objectives of the workshop and information given were specified in a clear way only during the event. Offering opportunities for input in order to be integrated it into the research was considered a positive step for the co-construction of knowledge (1 comment). All respondents acknowledged benefits from attending the workshop.

UNISECO partners feedback

Besides the evaluation feedback received from the participants, the UNISECO partners were also asked to provide their feedback on the process of sessions as well as subjectively assess the group dynamics and interactions they observed during the workshop. Thus, a total of 22 assessment forms (10 questions asked in a 4-point Likert scale) were completed by the project partners giving their personal views on the group's performance, relationship and communication within the workshop sessions. Figure 3 depicts the answers given by the UNISECO partners to issues related to group dynamics during the Basel workshop.

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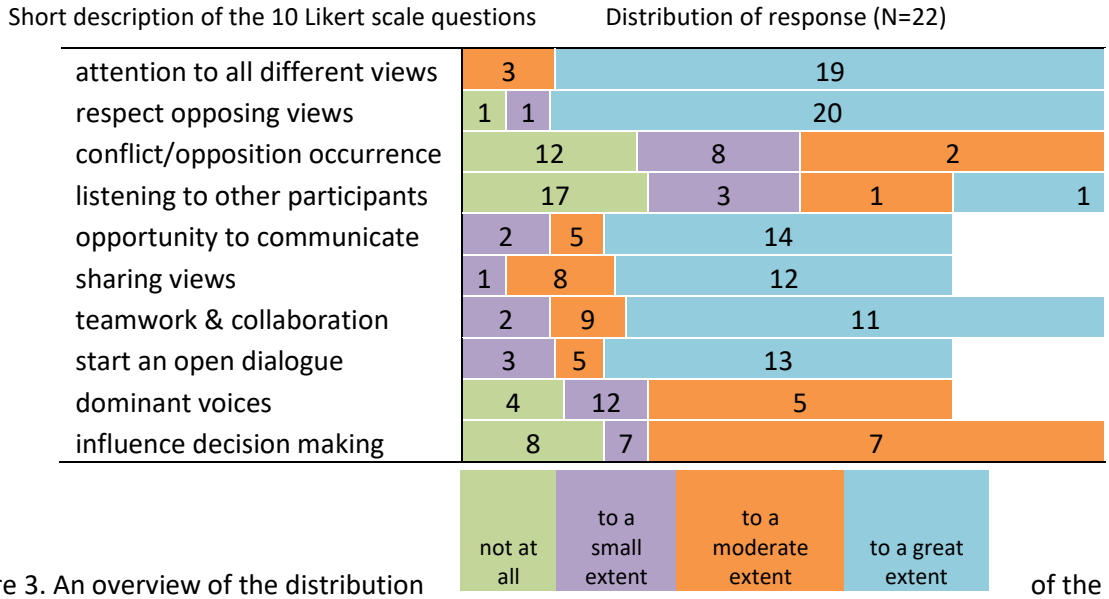

Figure 3. An overview of the distribution of the UNISECO partners' answers at the Basel workshop.

In addition to the Likert rating, more than 100 written comments were collected. According to them, it seems that nearly all UNISECO partners perceived that all views were well taken into account and appreciated by others, participants were polite listeners showing respect and without interrupting the speaker. Even in few cases where there was evidence of opposing opinions, those didn't result in conflict. As many discussions held in small groups, all participants had opportunity to communicate and express their positions. Nevertheless, half UNISECO partners commented that especially during plenary and despite the efforts of facilitator, there was little interaction. Only a few participants voiced their views and heard while many seemed reluctant to contribute to the discussion. It is also stressed that the more vocal ones didn't intend to dominate in the discussion during plenary, rather than there were many silent voices. Different personalities, levels of confidence, knowledge and experiences, or even language barriers and time constraints were reported as some possible explanations that might hinder participants from discussion. Thus various engagement methods/tools would be needed during project meetings, such as discussion in even smaller group size, more feedback in written forms, world-café format, set of cards designed to stimulate participants to express themselves. On the other hand, partners valued the individuals' willingness to exchange views in informal communications during coffee breaks and field trip.

Evaluation of events at the case study levels

It should be noted that in many cases, case study partners had the opportunity to choose between different options in order to carry out the various tasks related to the case study. For instance, to carry out the Social Network Analysis, each UNISECO partner could choose between three different options (individual interviews with at least 3 actors; interviews with at least east 2 key actors, followed by a workshop; interviews with at least 7 actors). Moreover, to reduce the risk of actor fatigue, some partners scheduled to run the Decision Support Tools workshops with participating farms at the end of the case studies.

Consequently, at the local level, the Social Network Analysis (Task 5.2), the results of Decision Support Tools (Task 3.2), the barriers of transition and policy analysis of existing instruments (Task5.3) were carried out through focus groups/workshops with case study actors and local MAPs in 12 partner case studies.

A total of 121 evaluation questionnaires were completed by local actors providing their perspectives on the events. According to the information received, the questionnaires were completed by 76 males and 45

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females, while in relation to the main actor categories there were 48 farmers (or representatives of farmers' unions), 19 representatives of authorities and administration, 14 representatives of NGOs, 20 representatives of advisors/consultants, 6 retailers, and 14 scientists, experts, representatives of certification body, etc. Table 2 summarises the allocation of questionnaires received by participatory activity in each partner case study.

Table 2. Allocation of questionnaires received by participatory activity in each partner case study who opted

Case study	Social Network workshop (Task5.2)	Decision Support Tools results (Task3.2)	Barriers of transition and policy analysis of existing instruments (Task5.3)
Switzerland		7	
Czech Republic			9
Germany	8		6
Spain			8
Finland		10	
France	8	5	
Greece	5		5
Hungary			6
Italy	10		6
Lithuania	11		4
Sweden			9
United Kingdom			4
Total questionnaires completed (N=121)	42	22	57

In general, a positive feedback is received from most of the actors who attended group activities at the local level (focus groups/workshops). The following key points could summarise:

- Only one third of the participants who completed the questionnaires provided written comments, revealing that case study actors do not feel comfortable expressing themselves in writing.
- Nearly half of the written comments related to the representativeness of groups and interests, noting that either a group was absent or another group was overrepresented (identified missing groups were farmers, consumers, public authorities, value chain, retailers). It seems that issues of representation are considered very crucial at the local level and should be addressed with more intensity in the participatory activities.
- Other written comments concern issues about the usefulness of information/material provided before or during the workshop as well as tight time constraints when complex issues were raised.
- For actors with early involvement, it seems that group activities are seen as opportunities for communication, interaction and debate with local actors.
- In addition, new members were proposed by actors who are already involved in previous events indicating that participation in local MAPs contributes in building relationships and bringing together unconnected actors.

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It should be also mentioned that the limited number of written comments is also a characteristic for the case study partners. In general, comments received from case study partners show that material in advance is appreciated by actors, the majority of discussions held a high level of interaction, actors were truly engaged in the process and were willing to share experiences and views, participants with opposing values respected alternative views avoiding conflicts and tensions. Only in one case, it seems that the presence of one participant prevented the progress of the discussion discouraging other actors to express their genuine concerns. Concerning the identification of individuals to participate in the UNISECO activities, there are cases in which new members were proposed by actors who are already involved in previous events indicating that participation in local MAPs contributes in building relationships and bringing together unconnected actors.

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