



# **Stakeholder Dialogue for Improving Nature Protection in Agriculture**

Exploring Communication Dynamics through  
the Lens of Communicative Rationality and  
Symbolic Interactionism

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Independent project • 30 credits

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Faculty of Natural Resources and Agricultural Sciences

European Master in Environmental Science (EnvEuro)

Uppsala 2023



# Stakeholder Dialogue for Improving Nature Protection in Agriculture. Exploring Communication Dynamics through the Lens of Communicative Rationality and Symbolic Interactionism

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**Credits:** 30 credits

**Level:** Second cycle, A2E

**Course title:** Master thesis in Environmental Science, A2E

**Course code:** EX0897

**Programme/education:** European Master in Environmental Science (EnvEuro)

**Course coordinating dept:** Department of Aquatic Sciences and Assessment

**Place of publication:** Uppsala

**Year of publication:** 2023

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**Online publication:** <https://stud.epsilon.slu.se>

**Keywords:** dialogues, biodiversity protection, agriculture, co-design  
communicative rationality, symbolic interactionism, identity, trust

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## Abstract

To act against biodiversity loss in agriculture, participatory approaches involving farmers as co-designers of solutions are a possible solution to improve financial incentives on the EU level. However, not much research focuses on examining participatory processes, especially in the form of dialogue events. Thus, this study examined the dynamics of a dialogue event as part of the co-design project ECO2SCAPE.

Drawing on the theoretical frameworks of communicative rationality and symbolic interactionism, the research aimed to understand how the meaning of biodiversity conservation is interpreted during the dialogue and assessed the effectiveness of the dialogues in incorporating principles of communicative rationality in terms of openness, inclusivity, and equal participation. The study builds on one dialogue observation and six semi-structured phone interviews with participants of the observed dialogue event.

The results showed that biodiversity protection symbolises for farmers a trade-off between conservation efforts and economic viability as well as farmers are burdened and demotivated by their societal image as environmental villains. In addition, the participants of the event actively engaged with each other in the dialogue to reach mutual understanding and common ground. Some aspects of the dialogue did not fully comply with the principles of communicative rationality, but were intentional, particularly empowering farmers to contribute to the discussion.

From the results, it can be recommended that dialogues must provide positive results to challenge the notion of farmers as environmental villains, guarantee comprehensibility and build learning opportunities, and strengthen trust and collaboration among the participating stakeholders. In the end, these findings contribute to the field by providing insights into the dynamics of communication, the influence of identity on decision-making, and the importance of creating inclusive and transparent dialogue processes.

*Keywords:* dialogues, biodiversity protection, agriculture, co-design communicative rationality, symbolic interactionism, identity, trust

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# Abbreviations

AES	Agri-Environmental Schemes
CA	Conservation Agency
CAP	Common Agricultural Policy
EU	European Union
LA	Local Authority
LCA	Landscape Conservation Association
NNL	National Natural Landscapes
SLU	Swedish University of Agricultural Sciences

# 1. Introduction

## 1.1 Background

### 1.1.1 Problems in Agricultural Governance to Face Biodiversity Loss

In response to unprecedented challenges of biodiversity loss, the preservation of biodiversity and its ecosystem services have been on the political agenda for a long time (Pistorius et al. 2000). The loss in diversity of living organisms at genetic, species, and ecosystem levels is predicted to greatly impact humans due to the actual and potential value of ecosystem services (*Convention Text* 2006). Especially farmers are one of the stakeholders whose economic productivity will be negatively impacted by its losses. However, they are also in the power to protect biodiversity with more environmentally sound farming measures (Pistorius et al. 2000).

The agricultural sector in Europe is regarded as one of the biggest sectors that causes biodiversity loss, as it changed dramatically within the last 70 years. Driven by changes in political instruments by the Common Agricultural Policy (CAP) of the European Union (EU), the traditional small-scale farming, that shaped the biodiversity of agricultural landscapes, changed to either large-scale, high-intensity production-orientated management or total abandonment of traditional farming land (Fischer et al. 2012; Emmerson et al. 2016).

In the EU, the agricultural policies are centralized on the EU level and applied by each member state according to the subsidiary principle. At a later stage, environmental objectives were added to the CAP. With Agri-Environmental Schemes (AES), policymakers created financial incentives, so that farmers could adopt voluntarily environmentally sound farming practices. Nevertheless, past reforms to 'green' the CAP have failed. The measurements failed to apply to all EU farmlands and most farmers could not deploy them so biological resources further declined (Emmerson et al. 2016).

The loss of biodiversity and its ecosystem services in the context of agriculture can be described as a wicked problem, because there is no ultimate solution that



solves the problem, but different approaches to either improve or worsen the situation. Especially, when it comes to wicked problems, it is important to involve affected stakeholders who have diverse perspectives on a problem and its potential solutions. The possible solutions vary among different stakeholders, as biodiversity is a value-laden concept, and decisions are made on experience and feelings (Sharman & Mlambo 2012). As wicked problems are differently perceived among stakeholders, stakeholder dialogues must aim at a mutual understanding of the problem rather than just solving it (Cuppen 2012).

Moreover, the current governance system created great dissatisfaction among farmers, as environmental measurements are getting more complex over time so a collaborative governance system to protect biodiversity is rather advocated by them (Velten et al. 2018). Social interactions and dialogues are required for social transformations, even though, this also comes along with challenges of increased communication, coordination, and collaboration as well as interests may rather be driven by narrow self-interests than for ecologically defined units (Brulle 2010; Velten et al. 2018).

### 1.1.2 Concept of Case-study Project ECO2SCAPE

To solve the problem of biodiversity loss on agricultural landscapes in Europe and improve the success of financial incentives in the next CAP on the European level, the project ECO2SCAPE was initiated to experiment with a more participatory approach by involving farmers as equals to co-design solutions. As part of this, financial measurements are redesigned and tested by farmers for the model region “Vereignigte Mulde” located in North-West Saxony, Germany (Figure 1).

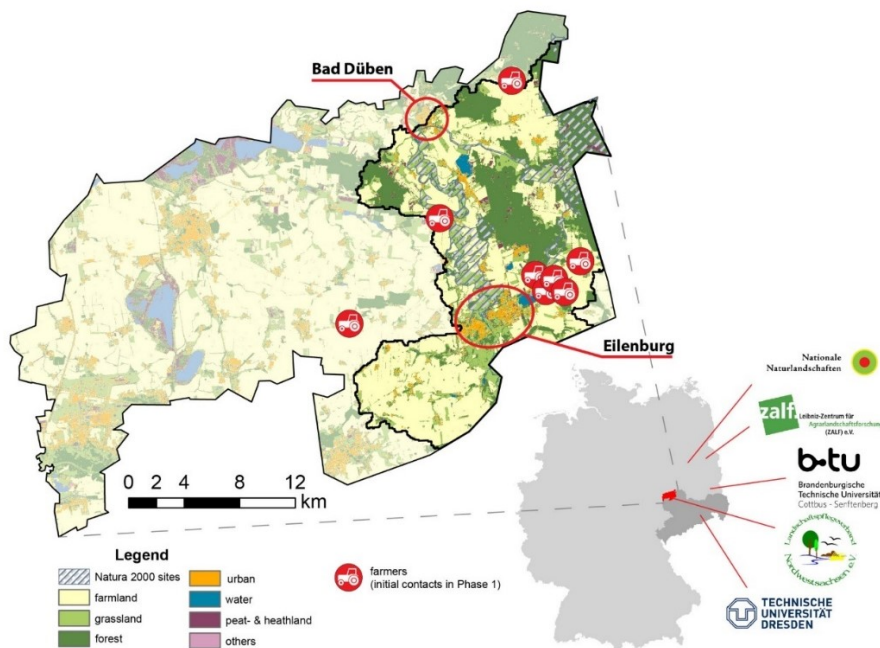


Figure 1. Model region of the project ECO2SCAPE located in North-West Saxony (TU Dresden 2023)

As seen in Figure 1, the region is used intensively but also diversely and thereby representative of other cultural landscapes in Germany (TU Dresden 2023). The Vereinigte Mulde area spans an area of 241km<sup>2</sup> and inhabits approximately 40.000 residents. Despite the presence of extensive farming systems, the area is characterised by distinct biodiversity, which is safeguarded through designated conservation zones (Hölting et al. 2020).

The project ECO2SCAPE combines different stakeholders from research and practice. The partners of the project are the landscape conservation association of North-West Saxony (LCA), some scientists from universities and research institutes, such as BTU Cottbus-Senftenberg, TU Dresden, ZALF e.V., and the Association of National Natural Landscapes (NNL) (TU Dresden 2021).

The LCA is an association that is governed by at least two representatives of three interest groups. This incorporates representatives from politics, land-use areas, and nature protection associations (LCA n.d.a). The LCA also employs external people who are qualified in the field of nature protection and landscape conservation. While the association aims for more nature protection in agricultural fields, it also advocates more financial profitability (LCA n.d.b).

As part of the project, farmers cooperate with the LCA and scientists by adopting some financial measurements and allowing scientists to conduct field research on their agricultural fields as well as showing a willingness to participate in interviews. Nevertheless, not all of the farmers in the model region are applying financial measurements from the AES.

Throughout the three years of the project, network meetings with farmers are organised every year. The first event started in 2022 and the last will be organised in 2024. The measurements are aimed to be both ecologically and economically efficient. Towards the end of the project, the new insights from the project and newly suggested measurements that have been proven as practicable by farmers will be forwarded to the EU as suggestions for improving the new CAP in 2028 (TU Dresden 2023).

## 1.2 Research Problem

As a response to the dissatisfaction with the current top-down governance system in agricultural policy and the wickedness of the problem of biodiversity loss, more participatory approaches, such as in the form of co-design approaches, are a step to involve the local knowledge of farmers in the decision-making process to find more practicable solutions to conserve biodiversity on agricultural fields.

The benefits of dialogues are undeniable, however, there is in general not much research in assessing and evaluating their effectiveness. From the insights of communicative rationality, effective dialogue processes can be characterised by constructive and meaningful exchanges, active engagement, shared

understanding, and a commitment to reaching common goals. This involves creating a collaborative and inclusive space where stakeholders come together to discuss, understand, and address challenges and opportunities on, in this case, policy instruments in the form of financial measurements for more biodiversity conservation on farms.

Oels (2006) already stated that there are in general not many studies evaluating participatory processes, but emphasised the importance to conduct a thorough examination to recognise successful practices and identify potential areas of improvement. From my literature review, it appears that a gap exists in understanding dialogues. Especially dialogues for nature protection that involve farmers are highly underrepresented. However, it is important to design and conduct dialogues effectively to involve farmers in the decision-making process.

The network meeting with farmers as part of the project ECO2SCAPE is especially of interest for this research study and serves as a case study by observing this event and interviewing some of its participants. Eastwood et al. (2022) have already studied co-design processes that involved farmers, but otherwise, there are not many other studies that assess participatory approaches including farmers. While Berkes et al. (2020) have already identified limitations for farmers to participate in dialogue formats, more research is necessary, as farmers are key stakeholders in the biodiversity protection of plant and animal species depending on a functional agroecosystem.

Previous research also examined dialogue processes concerning forestry conflicts in Sweden and used, for example, communicative action as articulated by Habermas (Hertog & Brogaard 2021). The notion of communicative action is important, as it emphasizes the need for shared understanding that has to be agreed on to facilitate action for sustainable development (Foster & Jonker 2005; Del Corso et al. 2015).

Other studies emphasize the importance to investigate further how farmers' input can be incorporated successfully within regulatory frameworks, especially after studying the influence of identity on farmers' environmental actions (Burke & Running 2019). Using a lens of symbolic interactionism, the social interactions and construction of shared meaning and identity can be further explored, as identity constructs discursive positions (Carpentier 2011).

Both theoretical approaches provide a more holistic understanding of communication processes and were applied in previous studies separately, but not as a combination (e.g., Foster & Jonker 2005; Ångman et al. 2011; Kiisel 2013; Del Corso et al. 2015; Hertog & Brogaard 2021). Therefore, this research provides new insights by combining both theories for analysing dialogue processes.

## 1.3 Research Aim

The research aims to explore how the dialogue event as part of the co-design project ECO2SCAPE was conducted, using the theoretical framework of communicative rationality by Habermas and symbolic interactionism.

Symbolic interactionism, on the one hand, is used to delve into the different roles of participants and to interpret the construction of meaning to concepts, such as biodiversity protection and financial measurements, and identities during the dialogue. Assessing the interactions helps to understand how those aspects support biodiversity conservation in agriculture.

On the other hand, communicative rationality emphasises the importance of rational discourse, open communication, and the exchange of reasons and arguments, including active listening and constructive feedback, to achieve shared understanding and common ground. Thereby, it is essential to provide an environment of trust, respect, and equality, where stakeholders can openly express their perspectives, challenge assumptions, and critically evaluate different proposals and solutions.

By looking at the dialogue with the principles of communicative rationality and a lens of symbolic interactionism, I aim to understand the communication dynamics between farmers and other stakeholders as well as assess the effectiveness of the dialogue. In the end, I will provide practical recommendations and strategies to reinforce positive aspects while improving areas that need attention to enhance collaboration and outcomes related to nature protection.

The following research questions are applied to the case study of the project ECO2SCAPE and studied by observing the project's second dialogue event and conducting follow-up interviews. In the method section, the methods and questions for observation and interviews are further introduced.

**RQ1:** How was meaning in the context of biodiversity protection interpreted and assigned through communication and interactions during the dialogue event, as observed through the lens of symbolic interactionism?

**RQ2:** How effectively does the dialogue event, implemented as part of the co-design approach, incorporate the principles of communicative rationality in terms of openness, inclusivity, and equal participation?

**RQ3:** How to improve the dialogue event and promote biodiversity protection in agricultural fields through the findings?

## 2. Theoretical approach

The dynamics of the dialogue event are assessed and analysed by using a lens of symbolic interactionism and communicative rationality. The lens of symbolic interactionism is used to analyse how identities were constructed in the dialogue and how those identities affected the communication and behaviour of participants in the dialogue. Then, it was assessed whether the conditions necessary for an effective dialogue were met according to the demands of communicative rationality.

While symbolic interactionism aligns with a social constructivism perspective, the theory of communicative rationality is associated with a pragmatic perspective (Bohman & Rehg 2017; Hallgren et al. 2020). Therefore, their combination provides a more comprehensive framework to understand the real-world implications and effectiveness of dialogue, while also exploring identities, roles, and values that shape the perspectives and actions within the dialogue.

### 2.1 Symbolic Interactionism

Herbert Blumer (1969) is one of the key theorists who examined the key principles, concepts, and methods of symbolic interactionism based on the initial ideas of its conceptualisation by George Herbert Mead (1934). According to Blumer (1969), symbolic interactionism explores the processes through which individuals interpret and respond to symbols, negotiate shared meanings, and engage in social interactions.

In symbolic interactionism, there are social and physical realities that are dependent on language to communicate and negotiate shared understanding and interpretation of symbols (Ångman et al. 2011). The symbols can incorporate objects, gestures, or speech sounds that signal or represent something to people based on their interaction with them (Blumer 1969). Those interpretations, however, depend on past experiences, cultural background, and social context, so they may differ among different human beings or social groups (Joas & Knöbl 2009).

The meaning of symbols can be distinguished between different dimensions, depending on the process of interaction between different people towards the symbol. A physical object derives meaning based on how human beings act

towards it, e.g. trees, chairs, bicycles, etc. Social objects' meanings arise out of the social interaction that one has with another person, such as being friends or considering the occupation of someone else. Abstract objects may define social rules, norms, and values, as they are used by people and modified through an interpretative process (Blumer 1969).

Moreover, symbolic interactionism may be used for understanding identities, which are constructed by the individual themselves, through social interactions as well as through other actors' societal expectations and categorisation. In this process, individuals may identify themselves with a social group or a category, which is then further influenced by the interpretation, description, and recognition of other actors and how the individuals view themselves through the eyes of those other actors (Hallgren et al. 2020).

## 2.2 Habermas Theory of Communicative Rationality

The concept of communicative rationality by sociologist Jürgen Habermas is closely related to his other theory of communicative action, which both follow a pragmatic approach. According to Habermas, communication is action based on the principles of communicative rationality (Niemi 2005). Thereby, mutual understanding and consensus can be achieved by a reasoned discussion and the use of valid and factual arguments (Tewdwr-Jones & Allmendinger 1998).

A dialogue is ideal according to Habermas, when the participants engage in an open and honest exchange, where the rationality of arguments has higher validity compared to the power of authority within a dialogue. Thereby, communicative action segregates from strategic action, whose argumentation is based on persuasion and manipulation. While communicative action is directed at reaching understanding among everyone, strategic communication is influenced by individual goals and aims for success (Thompson 1983; Hertog & Brogaard 2021).

The framework of communicative rationality follows the notion that different perspectives should be equally considered within the process of communication. Then, collective decisions can be reached by giving equal weight to various aspects to combine economic and ecological values. Thereby, communicative rationality recognizes the emancipatory potential of communicative action, where dominant perspectives can be challenged to achieve a more egalitarian exchange of ideas (Hertog & Brogaard 2021).

For an idealized condition of dialogue according to communicative rationality, the dialogue needs to foster communication that provides full and equal inclusion of the stakeholders being affected, an open and honest exchange of ideas, respectful interaction, and valid argumentation that aim for a fair and democratic discourse to facilitate understanding. Thus, the dialogue should be free from power

and manipulative tactics to achieve certain interests. Instead, participants must engage in meaningful and productive discussions (Hertog & Brogaard 2021).

## 3. Methodology

The study follows an explorative approach, distinct from existing research studies in the field. The data of the study was collected through the observation of a dialogue event and six semi-structured phone interviews with participants of the observed event. Thematic analysis and qualitative content analysis were used to structure the data in themes. The theories of communicative rationality and symbolic interactionism backed the analysis of the findings.

### 3.1 Data Collection

A qualitative research design incorporated one dialogue observation that was supported by six follow-up interviews, as multiple methods of data collection are recommended where the focus lies on a case study (Robson & McCartan 2002). The case is based on a networking event as part of the project ECO2SCAPE, which in this study is referred to as a dialogue event. While the term "dialogue event" may not directly apply to network events, Habermas' theory can still provide valuable insights and criteria for evaluating the quality and democratic potential of this case study.

At the beginning of the event, the participants were informed about the research purpose and the use of the collected data for the master thesis. The consent from the participants to document the meeting was received and signed by the organising chair of the event. Moreover, the participants who participated in an interview were also asked to sign a consent form during the event informing them how their data would be used and agreeing to the recording of a follow-up interview. Interviews were then conducted at a later point via phone according to the interviewees' availability. It was possible to collect data due to a contact person from the project.

It was not possible to record the dialogue event, due to data protection concerns. Nevertheless, throughout the event, I was allowed to take in-depth notes in a semi-structured way, using my self-developed guiding questions (Appendix 1). From the beginning of the dialogue event, it was made clear to the participants of the dialogue, that I am participating as an observer (Robson & McCartan 2002; Creswell & Creswell. 2017).



Concerning the guiding questions, I especially focused on how the participants contributed to the discussion by noting down whenever participants asked questions, answered questions, made remarks, and clarified what was said. Moreover, I noted down my impression of participants' engagement to contribute, the existence of conflict and disagreement, and the expression of different viewpoints. Besides, I paid attention to whether the participants were arguing manipulatively, actively listening, participating equally, and appearing on seeking consensus. In my observation notes, I also documented the topics of discussion and non-verbal cues where possible and whenever considered important by myself.

The follow-up interviews were conducted via phone, recorded, and semi-structured following a prepared interview guide (Appendix 2). The questions of the interview covered different aspects of the dialogue and were adapted depending on the professional background of the interviewee. In the beginning, every interviewee was asked about their previous experience and motivation for participating. Then, the interviewees were asked to describe how they observed, valued, and perceived the dialogue as well as other participants. In the end, it was concluded with questions on recommendations for improvement and increasing participation.

## 3.2 Data Analysis

The interviews were transcribed and then analysed in combination with the observation notes using the Software NVivo (QSR International Pty Ltd. 2018). For the analysis, both thematic analysis and qualitative content analysis were used. Thematic analysis according to Braun & Clarke (2006), was especially used for the first research question by exploring how the meanings of financial measurements and biodiversity protection are interpreted and assigned through communication and interactions during the dialogue event. Qualitative content analysis, on the other hand, contributed to analysing the second research question by determining the effectiveness of the dialogue event in incorporating the principles of communicative rationality in terms of openness, inclusivity, and equal participation as well as the use of rational argumentation (Mayring 2021).

As part of the analysis approaches, I first familiarized myself with the data. Then I coded the data using descriptive and value-based coding schemes. The descriptive coding scheme was used to get an overview of the communication dynamics during the dialogue and the topics and perspectives discussed from a more objective stance. With value-based coding, in contrast, I ordered the data according to subjective values to assess whether the dialogue occurred based on the principles of communicative rationality.

After performing descriptive and value-based coding, I employed thematic analysis and qualitative content analysis to create themes informed by the theories of symbolic interactionism and communicative rationality. Subsequently, I revised the themes to ensure an accurate representation of the data and renamed themes for improved understanding. For the analysis, however, I only focused on presenting and discussing the most relevant findings to my research questions.

### 3.3 Methodological Reflections

While the research gives valuable new insights into the research of dialogues, I am aware of its limitations and the potential to improve future studies. In the following, I provide some reflections on my research design.

Other research studies also applied the observation approach to dialogues but conducted several observations over a longer period (e.g., Lundholm & Stöhr 2014). Attending more stakeholder dialogues has the advantage of identifying more robust and generalizable patterns. However, due to time constraints, it was not possible to attend more dialogue events and in qualitative research, the generalization of findings is not a major concern (Robson & McCartan 2002).

Moreover, the stakeholder dialogue from my study may not be comparable to most other stakeholder dialogues in other studies. While the main idea of my case study was to exchange information and strengthen cooperation with farmers, other dialogues focus more on involving a wider range of stakeholders, expressing conflicting perspectives (Lundholm & Stöhr 2014; Stöhr & Chabay 2014; Hertog & Brogaard 2021). Nevertheless, my research study still provides valuable insight into the underlying tensions between farmers and nature protection, concerning the implementation of biodiversity conservation on farms through financial measurements.

Another significant limitation of the study was that it was not granted permission to record the conversations within the dialogue. This limited the comprehensive examination of the conservation and potentially led to the lack of valuable details and nuances, which possibly compromised the depth of insights gained from my study.

In addition, it was challenging to conduct follow-up interviews with farmers and to limit disruption. These challenges could primarily be attributed to time constraints on the farmers' side and the general limitations associated with phone interviews. While phone interviews are beneficial for allowing more flexibility, they can disrupt the flow of conversation. Poor phone connection and technical issues were further communication barriers, which disrupted the communication and led to missing some words and phrases in the interview transcripts.

Moreover, the time constraints also delayed the implementation of the follow-up interviews. Some interviews were conducted a few days after the event,

whereas others were delayed up to one to two weeks after the dialogue event. Consequently, the interviewees may have forgotten some important aspects of the dialogue event. Ideally, the follow-up interviews should have been conducted immediately after the event, however, this was in this case study impossible.

Another limitation was that I only had limited control over the interview setting. Two farmers, for example, were driving their cars during the interview. Even though it was not ideal, I accepted it, due to their time constraints. However, this may have limited farmers from fully engaging in the conversation, so it was challenging to obtain in-depth responses from them.

Consequently, the results from the interviews may lack the depth and richness that could have been obtained in a more focused and engaged interview. Distractions and interviewees' divided attention may have reduced their openness to elaborate on their responses and their willingness to fully reflect on the interview questions, which may have left complex answers unexplored.

Last but not least, the subjectivity in the methodological approach, data collection, and understanding of data cannot be excluded. To mitigate the potential impacts of subjectivity, I chose to combine my observations with follow-up interviews to base my findings on more perspectives than mine. However, the process of coding and interpreting the interviews within my analysis is based on my perspectives in relation to the theoretical approaches.

## 4. Results, Analysis and Discussion

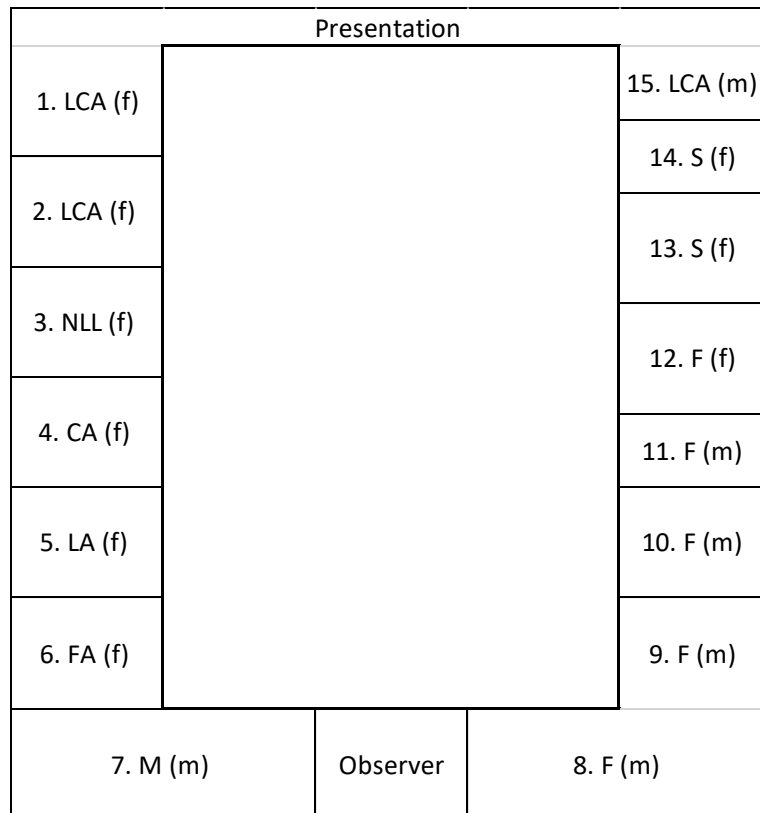
In the following section, the dialogue event and the findings from the observation and interview data will be presented. First, the goals, agenda, group of participants, and topics of discussion during the dialogue event will be described. Then, the interview answers and observations are presented drawing on the perspectives of communicative rationality and symbolic interactionism. Both theoretical frameworks provided a comprehensive framework for examining the data and gaining deeper insights into the dynamics of the dialogue event in the form of shared meaning and the construction of identities and modes of communication grounded on the principles of communicative rationality.

As the dialogue event and the interviews were conducted in German, I translated everything presented in the thesis. However, at some points, no direct translation was possible, but I delivered, what I considered, the core message of the original quotation. The quotes from the observations are based on my notes that only reflect, what I considered as the main message from what was said during the dialogue.

### 4.1 Observation of the Dialogue Event

On March 24<sup>th</sup>, 2023, the second dialogue event as part of the project ECO2SCAPE was held from 10 am until 3 pm. The meeting aimed at presenting some interim results from the project and discussing the implementation of financial measurement in the model region, as well as agreeing on the ecological accompanying monitoring schedule and receiving feedback. At the beginning of the network meeting, each participant engaged in a brief introduction, allowing everyone to acquaint themselves with each other. The moderator subsequently outlined the primary objective of the event, which was to contribute recommendations for the new CAP to be submitted to the EU.

Overall, 15 people participated in the dialogue event including the moderator, who is also the Managing Director of the LCA, and other scientists, LCA, and NNL who are part of the organizing team of the project. The moderator was mainly focused on guiding and encouraging the discussion, asking questions, and keeping the dialogue on time. Figure 2 shows who participated in the dialogue and displays the seating arrangements that were freely chosen by the attendees.



*Figure 2. Seating during the dialogue meeting. LCA – Landscape Conservation Association, NLL – Association of National Natural Landscapes, CA – Conversation Agency on the local level, LA – Local Authority of a Municipality, FA – Farmers Association on the local level, M – Moderator, F – Farmer, S – Scientist distinguished in f – female and m – male.*

The dialogue event encompassed a series of five presentations, which served to inform the participants as well as to catalyse engaging discussions. The discussions predominantly took place during or following each presentation, enabling participants to actively exchange ideas, insights, and perspectives. In the initial two presentations, researchers presented their findings on their respective studies as part of the project. The first presentation focused on the results of the plant and bird mapping on agricultural fields applying different types of measurements, while the subsequent presentation delved into the insights gathered from interviews with farmers from the model region, studying their perceptions and values towards financial measurements, biodiversity, etc.

In the third presentation, a representative from the LCA shared the financial measurements that form an integral part of the co-design project. The participating farmers were actively engaged and encouraged to provide their feedback on these measurements. The fourth presentation, delivered by one of the scientists responsible for ecological monitoring of cultural landscapes, outlined future tasks and sought input from farmers regarding their availability and preferred timing for conducting the monitoring as well as general feedback on the co-design process.

Lastly, the representative of the NNL presented in the last slideshow information on an excursion where the farmers of the model region can experience environmentally-friendly agricultural practices in a UNESCO Biosphere Reserve, explained by farmers.

From my perspective, I witnessed a somewhat reserved atmosphere among the participants in the initial phase of the event as well as at the beginning of each presentation, as they were actively listening and appeared hesitant to ask questions or offer comments. However, as time progressed, a noticeable shift occurred, particularly with the farmers taking a more active role and making significant contributions. This led to a more vibrant and engaged discussion, reaching its peak just before the lunch break.

However, after the lunch break, the energy subsided, and it became increasingly challenging to elicit concrete responses from the farmers. For example, the scientist asked after the lunch break about the availability of farmers for field visits related to ecological monitoring. However, the farmers seemed to evade providing a concrete answer, stating instead that further details could be worked out through future phone discussions.

It's best to arrange via phone (Farmer)

Call the farm, we find a solution (Farmer)

Moreover, I observed that in the beginning, the participants of the dialogue raised their hands when they wanted to say something. However, at the start of the second presentation, the researcher offered that everyone can interrupt whenever there are questions or remarks. From that point on, no one raised their hands anymore before saying something until the end of the dialogue event.

## 4.2 Uncovering Meaning and Identity Construction

Symbolic interactionism is used to understand the underlying dynamics, motivations, and meanings in the dialogue, exploring how participants construct and negotiate their identities, roles, and interactions. It uncovers symbolic constructions, interpretations, and shared meanings based on past experiences that shape communication patterns and influence the dialogue process.

An important topic discussed by farmers during the dialogue event was the meaning that they associate with financial measurements for biodiversity protection which shows how symbols and personal experiences intersect. The measurements symbolise for them a trade-off between conservation efforts and economic viability, as they complained, for example, that present measurements only cover the costs instead of generating a profit and repeatedly emphasised the economic aspects of farming.

Another aspect that highlights the subjective nature of symbols was the meaning of beavers. While the conservation agency mentioned the importance of beavers for water protection in the region, one of the farmers associated them with the increased financial burden for him and his future generations. As this farmer turned out to have a wetland on his farmland, his response to the beaver comment suggests that he was actively engaging with what was communicated and used it to make sense of his experiences and interests.

According to symbolic interactionism, identities are not fixed or inherent but are actively constructed through social interactions and the interpretation of symbols and meanings (Blumer 1969). In the dialogue, the formation of multiple identities was identified through social interactions and the meaning that individuals attribute to various symbols and roles.

The concept of biodiversity protection in the form of financial measurements and beavers is, for example, linked to and reinforces the broader identity of farmers as business entrepreneurs (Stenholm & Hytti 2014). In the dialogue, farming is communicated as a livelihood and a business venture that should generate profit. Tension arises when biodiversity protection is seen as conflicting with their economic interests.

Concerning their entrepreneurial identity, the farmers and other stakeholders also reinforced and constructed an identity of farmers as victims. In the dialogue, farmers mentioned that their actions in favour of biodiversity are bound to society's willingness to pay for its protection. However, instead of society taking action themselves, the farmers experience increased societal pressure and lack of understanding as society perceives them as being responsible for biodiversity loss. The conservation agency also mentioned that farmers feel like the "boomer" which also symbolises a sense of being blamed and burdened by societal expectations and conservation efforts.

Societal expectations and norms regarding environmental conservation may also shape the identities of farmers as environmental stewards, however, when farmers are unable to meet these expectations, it may reinforce the perception of them as a biodiversity villain (Hallgren et al. 2020). In the follow-up interview, the farmers expressed, for example, that they valued the communication of positive results related to the assessment of a high diversity of plants, birds, and wild animals on their agricultural fields. From a symbolic interactionist perspective, this may be perceived positively as it reinforced the notion of farmers being environmental stewards and challenged the notion of farmers as environmental villains.

Exploring the construction of identities is important to understand how farmers' self-perception and social identities influence their attitudes, behaviours, and interactions. Thereby, identity is an important factor influencing farmers' decision-making on their farms (Hallgren et al. 2020). The results show that farmers are

willing to protect biodiversity, however, its protection needs to align with their entrepreneurial identity. Moreover, society has a strong influence on shaping farmers' identities, so it is important to raise their awareness of their responsibilities and power to shape biodiversity protection in agriculture.

In addition, it is proven that farmers who are perceived by society and themselves as environmental heroes are more encouraged to act in environmentally positive behaviour (Hallgren et al. 2020). Thus, it is important to communicate to farmers and society successful results in the protection of biodiversity in agriculture to challenge the identity of them being biodiversity villains.

Nevertheless, the strong focus and shift of responsibility on society may not be very efficient and delay action, while it is urgent to act against biodiversity loss. It is important to promote shared responsibility and active engagement from all stakeholders, rather than solely relying on society as a whole. Moreover, the term "society" is very broad and unspecific. When discussing the responsibilities and actions related to biodiversity conservation, it is important to provide more clarity and specificity about the various actors within society.

### 4.3 Communication Dynamics during the Dialogue

In this section, I will present how I perceived the dialogue combined with how it was perceived by the interviewees after asking what was regarded positively or negatively in the dialogue. Thus, I will discuss the equality of participation, openness, inclusivity, transparency, and use of rational argumentation. Thereby, I relate to the ideal from communicative rationality and insights from symbolic interactionism.

#### 4.3.1 Roles and Interactions for Equal and Respectful Participation

Based on my observations, active contributions in the dialogue event were primarily displayed by four farmers, the representative of the conservation agency, one representative of the LCA, and to some extent the scientists. Every one of them actively participated by e.g., posing questions, offering remarks on the presented information, rectifying or elucidating statements, and sharing their own experiences.

The lens of symbolic interactionism helps to understand how the different roles within the dialogue are negotiated, such as the active contribution of farmers in comparison to the sole role of a listener. The farmers may identify as active contributors, as they were expected to contribute to the discussion due to the nature of the project as part of a co-design approach as well as they were



encouraged to contribute through interactions with others. During the dialogue, the farmers were specially encouraged to speak, as they were asked questions. This in turn may have reinforced the role of other stakeholders as listeners.

This power imbalance of only empowering farmers to contribute does not align with the ideals of communicative rationality. However, it is important to note that the power imbalance was intentional, as the dialogue is part of a co-design approach that particularly aims in including farmers as equal players to design policies adapted to their needs (Eastwood et al. 2022). Recognizing and empathising with the challenges of farmers can foster empathy and understanding among stakeholders, leading to more effective collaboration and support for nature protection initiatives (Lundholm & Stöhr 2014; Eastwood et al. 2022).

Nevertheless, one of the farmers did not contribute to the discussion at all, but instead actively engaged in the role of listener. Thereby, he acted against the expectation of farmers as active contributors to the dialogue. In a follow-up interview, he explained his more passive role with the irrelevance of the discussed topics about his farm. So, the farmer may have perceived his level of expertise or knowledge on the discussed topics as insufficient compared to other participants. Thus, he may have felt more comfortable observing.

In addition, active participation may also be related to the participant's familiarity with the project and the dialogue event. Two of the actively contributing farmers, whom I interviewed, have already participated in the dialogue event before, whereas the silent farmer was a first-time participant and did not know much about the project ECO2SCAPE. Thus, the farmer lacked the same level of familiarity and prior knowledge about the project and the dialogue dynamics compared to the other two farmers. This could have influenced his level of comfort, confidence, and willingness to contribute to the discussion.

Other participants, such as the local authority, conservation agency, and farmers association were also taking the role of active listeners, which may be caused by the nature of the co-design approach within the project and reinforced by non-verbal clues. Active note-taking during the dialogue event, for example, symbolised their role as active listeners and their desire to remember the communicated knowledge.

Moreover, the local authority reflected in the follow-up interview on the perspectives of farmers that were communicated during the dialogue event.

You notice more and more that it is more and more about surviving [financially] from [farming] in the agriculture sector. (Local Authority)

The reflection on the perspective of farmers by the local authority can be seen as an act of active listening from a symbolic interactionist perspective. It involves acknowledging and validating farmers' perspectives, engaging in empathy and perspective-taking, creating a safe and supportive environment, and fostering

mutual learning and collaboration. These active listening behaviours contribute to a deeper understanding of the farmers' experiences and can inform more inclusive and effective approaches to biodiversity conservation in agriculture.

Overall, the interactions during the dialogue were described as very positive, as everyone was able to finish speaking and it was talked factual. The representative of the farmer's association said that the exchange between farmers and nature protection is not so polarised anymore due to more exchange in the form of dialogues. The process of active listening and rational argumentation aligns with the principles of communicative rationality because it promotes a respectful and inclusive environment where open dialogue and mutual understanding based on rational discourse can flourish.

### 4.3.2 Potential for Improving Communication and Understanding

In the interviews, it was mentioned by the representative of the LCA that the presentations of the results are necessary to strengthen farmers' collaboration with the project and to adopt positive changes where possible.

Well, farmers are willing to take part in such trials. The farmers must get the results and have a reflection on what came out. And why something is done and then they try to operate accordingly within the scope of their possibility. (LCA)

The presentations were mainly directed to the farmers and they commented that the shared information was overall understandable and interesting. However, when it came to the theoretical aspects, it stretched his comprehension to its limits. Moreover, the farmers lacked sufficient knowledge about the plant and animal species that were presented.

[...] If it had become even more theoretical, then it would have been difficult to follow them. (Farmer)

I would say it was very technical concerning the birds and all the insects [...] I cannot know the plants to the smallest detail [...] So there is the information down to the last detail to be able to understand it or it was too technical to give such an overview. (Farmer)

Moreover, the English expressions and abbreviations as well as the qualitative research approaches were criticised as not being comprehensible or tangible. Thus, presentations should only be in German without any abbreviations. Moreover, it was perceived as difficult to understand the results of the qualitative research.

[...] That everything is being translated into English, [...] we live in Germany after all. [...] (Farmer)

[...] That was not tangible enough. That was not specific. That was like, it can be construed like that or can be construed like that. [...] That did not appeal so much to me, I have to say. So I could not get that much out of it. (Farmer)

When distinguishing between the different understandings and use of language between farmers and scientists, each group attaches from a symbolic interactionism lens different symbolic meanings and interpretations to certain concepts or terms related to their respective fields of expertise. There may exist pre-defined expectations and stereotypes of scientists so that farmers potentially conceive scientists in general as a group of people who use technical and jargon-heavy language.

Thus, it is essential to enhance the collaboration with, and between scientists and farmers (Maas et al. 2021). The increased cooperation can contribute to reducing stereotypes and biases. Moreover, it could enhance farmers' engagement to familiarise themselves more with scientific findings and results that would subsequently bridge communication gaps (Maas et al. 2021).

Besides, learning and capability-building processes could enhance the communication process (Eastwood et al. 2022). The limited comprehension of scientific results suggests that farmers may require additional modes for receiving in-depth information. Furthermore, it indicates a general need for farmers to acquire more knowledge about plant and animal species.

In addition, the dialogue format of scientists presenting information and the traditional question-and-answer dynamics between farmers and scientists may have reinforced the supremacy of scientific knowledge (Davies 2013). As this type of format was necessary in this case, it needs to be ensured that scientific perspective and expertise may not receive more prominence compared to the local knowledge of farmers. To build an understanding of complex issues farmers must engage in the co-design and learn along the process (Eastwood et al. 2022).

Throughout the dialogue, I also observed that questions were asked whenever something was not fully understood. One of the farmers also asked about the meaning of one abbreviation and commented that the abbreviation could have been written out. Also, the interviewees were satisfied with the format of the dialogue and recognized that questions were asked whenever something was not understandable and directly answered. As the language and understanding were most of the cases clear for farmers and scientists appeared to be aware to present understandably, the dialogue was inclusive and transparent, promoting mutual understanding.

#### 4.3.3 Balancing Emotional Expression and Rational Discourse

Throughout the dialogue event, corrections and disagreement were expressed by stakeholders from the conservation agency and the LCA, representing rational attempts to provide factual information, expertise, and guidance to ensure accurate

understanding. Thereby it may facilitate an informed and balanced discussion based on openness and equal participation, according to the ideals of communicative rationality.

The conservation agency, however, also critically reflected on the information shared by scientists and farmers. She compared it with her knowledge and beliefs and integrated it into their understanding of the topic. In the dialogue, the agency questioned certain statements. She asked, for example, to reconfirm information, stated by the scientist, with an ornithologist related to the resettlement of a specific bird and corrected one of the farmers' statements, as he misconceived a certain goose as invasive. Thereby, the importance of expert perspectives and the validation of information from a trusted source were symbolised.

From the farmers, on the other hand, I got the impression that they communicated more emotionally, due to the verbal and non-verbal cues expressed during the dialogue event. It was noticeable, for example, that especially one farmer was speaking first loud and agitated when he contributed to the discussion as well as hitting his pen on the table, which could be interpreted as a signal of frustration. Moreover, the communication was more subjective by expressing that they have bad dreams when they cannot make a financial profit.

Nevertheless, the farmers also posed critical questions which symbolised farmers' understanding of the issue at hand and their desire for clarification and validation. The questions shape the ongoing dialogue process by triggering further discussions, challenging assumptions, and contributing to the co-construction of shared meanings and the negotiation of knowledge. Thereby, farmers also engaged in rational discourse according to the principles of communicative rationality and promoted a more inclusive exchange of ideas with other participants.

Even though the farmers were personally deeply invested in the topic of nature protection, there was a balance between emotional expression and rational discourse. Combined with the objectivity and factual accuracy of advocates representing nature protection, this created an environment that promotes constructive dialogue, shared understanding, and informed decision-making.

Nevertheless, the exclusive emphasis on rationality may not make the dialogue more effective. It is crucial to recognize and acknowledge participants' experiences, motivations, and attitudes to build a more empathetic, inclusive, and trust-building environment for the participants. Understanding and addressing the emotional dimensions of dialogue can foster deeper connections and thereby enhance mutual understanding and collaboration.

#### 4.3.4 Role of Authority in Open and Honest Dialogues

The dialogue event was generally observed and described as an open space to express themselves freely, as there was enough time and a general openness

among the participants. The farmers said that they communicated their priorities and concerns and also the representative of the LCA and farmers association had the impression that there were no problems from the farmer's side to express their opinions.

However, farmers expressed that the ability to freely express themselves was somewhat restricted. Some of the farmers explained that they are telling their opinion, but there is no room to fully express everything, or they at least think about the exact phrasing before saying something.

[...] I never tell everything, it does not work at all, but I was able to communicate what was important to me and some things are simply not said for tactical reasons. That's just the way it is. [...] Well, the thing is that in the future I still have to work together with the local nature conservation for a while. [...] (Farmer)

As the farmer must cooperate with the conservation agency, he might be reluctant to express criticism or provide negative feedback.

From a symbolic interactionism lens, the presence of the conservation agency influences farmers' communication during the dialogue, as the conservation agency represents a figure of authority and expertise in the domain of nature conservation. Through the conservation agency's ability to enforce regulations and policies over farmers, it exerts influence and power over them. In response, farmers adjust their phrasing to align with the norms set by the agency.

The careful consideration in their phrasing can also be seen as an attempt to maintain a positive relationship with the conservation agency so that they behave within the framework of communicative rationality. Thereby, they strive to engage in a constructive and respectful exchange of ideas to maintain a productive and inclusive dialogue and to ensure mutual understanding, so that common ground can be found.

Nevertheless, the presence of the conservation agency may restrict participants' willingness to engage openly and honestly in the dialogue, because of the potential risks to farmers' relationship with the conservation agency or possible consequences for their livelihoods. Potential restrictions on open dialogue could be mitigated by creating an atmosphere of trust, actively encouraging and valuing diverse perspectives, and providing opportunities for anonymous or confidential contributions.

Trust is an important pre-condition to facilitate honest and open communication. There is often a lack of trust between farmers and government agencies, but it is important for enhancing the quality of communication and promoting a more productive and collaborative relationship (Burke & Running 2019). By investing in trust-building activities, the conservation agency and farmers can work together more effectively towards shared conservation goals.

#### 4.3.5 Seeking Consensus between Nature Protection and Agriculture

The dialogue was primarily perceived as an exchange of information and ideas than a discussion, due to the absence of conflict. While the absence of conflict was neither perceived positively nor negatively, it may indicate a deviation from the principles of communicative rationality. However, one can also argue that the dialogue did not serve as a platform for conflict or confrontational interactions. Instead, the dialogue was often classified as a platform for finding solutions.

One of the aims mentioned by the LCA was to find practicable solutions, which was confirmed by the farmers as well as the representative of the farmers association. However, the solutions did not necessarily need to be a compromise. The farmers rather described it as consensus and emphasised the importance of acceptability. The representative of the farmers association also added that mutual understanding is important.

I think with most of those who were there, you could have talked about everything, every point, and always could find a consensus. [...] It's more about looking at what the right solution is and [how] you could bend the solution a bit so that it suits one or the other better and seems worthy of implementation. (Farmer)

Well, the goal is always to find consensus. Whether that is ultimately a compromise is [something different]. But, yes it usually is [a compromise]. It should always come out. [...] (Farmer)

[...] It does not have to be a compromise, but mutual understanding. And [that]we then agree that together we will go in the same direction and achieve something. (Farmer's Association)

The drive to seek consensus between agriculture and nature protection is according to the ideal of communicative rationality but is criticised as being utopian (Tewdwr-Jones & Allmendinger 1998). The conservation of biodiversity is characterised by different values due to varying levels of expertise and knowledge and different economic and social contexts. It is challenging to achieve a consensus that satisfies all parties involved because the conservation of biodiversity rather implies trade-offs and compromises.

The desire of farmers that there is consensus and acceptance for their perspectives and interests is understandable, but may not be feasible and suppress some other viewpoints. It is questionable whether full consensus and acceptance can ever be achieved. Embracing compromises and recognizing diverse perspectives can lead to more sustainable and equitable outcomes that balance the diverse needs and interests of farmers, environmental conservation, and broader societal goals.

Nevertheless, consensus and compromise are not mutually exclusive concepts. One of the farmers desires consensus but describes it through the process of compromising within the above-mentioned quote. Moreover, the valuation of mutual understanding contributes to the development of compromise and consensus by enabling the participants to develop a more nuanced and empathetic idea on an issue at hand.

#### 4.3.6 Representations and Diversity of Perspectives

The farmers acknowledged that time constraints are a significant factor that limits their ability to attend dialogue events. Despite these limitations, the farmers who participated in the dialogue demonstrated their commitment and dedication by making time to engage in the discussions. However, it is important to recognize that the time constraints may have prevented other farmers from attending and contributing their perspectives. The limited availability of time poses a challenge to ensuring more inclusive participation from the farming community in dialogue processes.

I do not like doing that because we have the cows at home, the animals are still there, and everything just has to stay within reasonable limits, so that you can still get on with the actual business. That is important to me. (Farmer)

While the participants appreciated the exchange and different perspectives, the representatives of the local authority, LCA, and farmers association would have preferred that more farmers participated to receive more input.

But there is also a broad mass of people who – let me just say – where you do not know how they, e.g. in northern Saxony, cultivate areas and all that. It would have been nice if you had seen more of the farmers, who could then share their experiences and opinions. (Local authority)

It would have been nice if more farmers came along (LCA)

There could always be more farmers – practitioners – in it. That would be great if more practitioners were involved. (Farmer's Association)

The representative from the LCA suggested that the dialogue happened too late in the year, as a dialogue event in February would have been more suitable.

However, the pure presence of someone does not automatically imply that the perspectives are shared. Participants may feel hesitant, uncertain, or uncomfortable expressing their viewpoints due to judgment, potential conflicts, or the perceived power dynamics within the dialogue. They may also be influenced by social norms, group dynamics, or a desire to maintain positive relationships with others.

Besides, there is also no guarantee for the consideration of more perspectives with the participation of more farmers. With a larger number of participants, the dialogue process may become more complex to manage and more time-consuming. Consequently, farmers would have less time to engage in the discussion and have less time and space to reflect and articulate their perspectives.

Nevertheless, the dialogue was initiated as part of a co-design approach so that farmers can share their perspectives not only during dialogue events but also at other points during the project. During the dialogue event, the representative of the LCA answered sometimes for farmers, as she works closely with the practitioners as an advisor for nature protection.

One of the farmers also would have preferred more stakeholders participating, however, he considered that farmers were already sufficiently represented, so a wider range of participants from other disciplines would have been better.

I would have wished for a larger group of participants. [...] Maybe it would have been more exciting but everything was fine [...] I thought the spectrum was lacking. [...] The advantage would be if there is a larger committee, there's also more input [...].  
(Farmer)

The representation by the LCA and the farmers may provide valuable insights, however, they may not fully capture the diversity of perspectives. It is important to acknowledge that most of the participating farmers were already involved in biodiversity protection or were active as volunteers in the LCA. Thus, the perspectives of farmers who are not actively engaged or motivated in nature protection had been missing.

Further limitations on the inclusion of diverse perspectives can be seen from the side of nature protection. When reflecting on its representation, I believe that the conservation agency does not fully represent plant and animal species. The administration may be highly subjective and influenced by political incentives. In the end, nature protection can be represented by a diverse stance of stakeholders.

While more voices from nature protection could have been included, it is questionable whether nature protection can ever be fully represented, as its conservation highly depends on in-depth knowledge of rather complex ecosystems. Therefore, no dialogue event can fully encompass or represent all aspects of nature protection. However, this also applies to farmers' perspectives, there will always be aspects, perspectives, or voices that may not be fully represented or included.



## 5. Conclusions

Dialogues are important when it comes to environmental problems that are not solvable that easily and it comes along with other advantages, such as strengthening collaboration and relation among different stakeholders. Thus, there is a lot of faith put in them, however, it is important to look more closely at dialogues to identify their potential and limitations to support biodiversity protection in agriculture.

The theory of symbolic interactionism uncovered different meanings of biodiversity protection, roles, and identities in the dialogue. The findings showed that farmers identified as business entrepreneurs and victims, while also being perceived as environmental stewards or biodiversity villains. The identity may influence farmers' decisions about biodiversity protection. On the one hand, it is recommended that biodiversity aligns with farmers' entrepreneur identity by making biodiversity protection more profitable. On the other hand, it is also important to promote positive identities such as environmental stewards and challenge negative perceptions.

In addition, the findings suggest that the principles of communicative rationality were partially met in the dialogue. The dialogue was to some extent open and inclusive, but not entirely equal. Moreover, an understanding was reached, but mainly from the perspective of farmers. Another aspect that contradicted communicative rationality was that the dialogue aimed at providing information and exchanging perspectives instead of reaching a consensus.

Nevertheless, the principles of communicative rationality appeared to only be relevant to a limited extent to this case study. It needs to be kept in mind that the dialogue follows a co-design approach that aims at empowering farmers by including them in the decision-making process of agricultural policies. Therefore, it was intentional that farmers were active contributors to the dialogue, whereas other participants were active listeners.

Incorporating and validating farmers' perspectives and experiences are important for biodiversity protection. Creating a safe, supportive, and trustful environment in dialogue is essential so that farmers can share their experiences and knowledge concerning financial measurements for biodiversity protection. By promoting active listening, empathy, and perspective-taking, the event can facilitate mutual understanding and collaboration.

Further suggestions to enhance farmers' participation are to avoid an overly theoretical or technical presentation of information, create a balance between emotional and rational discourse, and foster trust-building. While constructive dialogue based on factual information is important, the acknowledgement and response to participants' emotional experiences can enhance empathy, trust, and collaboration. With increased trust, farmers may share their perspectives more openly, especially in the presence of the conservation agency.

As part of the co-design approach, it may have been inefficient to involve more representatives of nature protection. However, from my perspective, it is essential to also facilitate the understanding of nature protection in combination with the understanding of farmers.

Moreover, the understanding of nature protection and farmers' perspectives needs to be spread to the broader public and the shifting of responsibility needs to be avoided. In the end, promoting biodiversity in agriculture is not the sole responsibility of farmers or society. Action needs to be taken on different levels and thereby, sharing responsibility among society, individuals, politics, and farmers.

For future research, it may be recommended to focus on other dialogue formats that do not necessarily conduct a dialogue event as part of a co-design approach. Then it can be evaluated whether, in other dialogue formats, there is more equal participation according to the ideal of communicative rationality.

Moreover, in future studies, it can also be more focused on the dialogue by looking at its trust-building potential and how to improve the inclusivity of those dialogue events. It appeared that only farmers participated who are already active as volunteers or active in conservation measurements and thereby, not including farmers who are not active as volunteers or not implementing any conservation measurements. Thus, it may be beneficial to explore alternative formats or platforms that allow for broader participation.

In addition, it would be interesting to investigate the reasons for non-participation. It was assumed that farmers could not participate, due to time limitations on their side and more important responsibilities for their farms. However, it would be interesting to look more closely at the reason for no participation in those kinds of events.

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# Popular science summary

## **Exploring a Co-Design Dialogue for Biodiversity Protection Involving Farmers**

European farmers are significantly contributing to the decline in the variety of plants and animals in agriculture. Previous policy tried to address that issue without much success, as the financial support to apply nature protection measurements are often not feasible for farmers. Thus, the ECO2SCAPE project was initiated to involve farmers as equal partners in the development of more efficient solutions that serve as a recommendation for new agricultural policy.

While recognizing the undeniable benefits of conducting dialogue, it is crucial to approach such exchanges critically to improve dialogue events. Therefore, one of the annual dialogue events of the project was observed for this study. Later, six participants of the dialogue event were interviewed to gain further information on their experiences and perception of the dialogue event.

From the dialogue, it was evident that farmers are concerned about the economic losses for themselves and future generations that come along with biodiversity protection. Moreover, farmers reflected on the bad image that society has of farmers. Thus, the communication of positive results is important so that farmers do not feel like doing everything wrong and gain more motivation to protect nature on their farms. Thereby, the dialogue mainly served as a space for farmers to share their perspectives in a generally open, honest, inclusive, and rational environment to reach an understanding of farmers and common ground. Nevertheless, certain limitations were identified.

Possible recommendations to enhance comprehensibility are to enhance farmers' expertise and understanding. First, farmers' knowledge of birds and plants could be enhanced to increase their understanding of these areas. Moreover, scientific expressions and the use of abbreviations should be limited and farmers could be more familiarised with science by fostering the collaboration of farmers and scientists to make theoretical concepts more tangible.

Besides, it is important to recognize other possible limitations on open, honest, and inclusive communication. A safe, supportive, and trustful environment is essential so that farmers share their opinions despite the presence of authorities who play a regulatory role in enforcing environmental and biodiversity protection policies. Moreover, the communication can be more inclusive by ensuring farmers' perspectives are

heard, despite time constraints, and including more representatives of nature protection. While it is important to facilitate an understanding of farmers' perspectives, it is also necessary to ensure the understanding of nature protection.

## Acknowledgements

Sincere thank you to Maria Lee Kernecker for your advice and support with background information on the dialogue event as part of the project ECO2SCPAE and your help with accessing the dialogue event.

I also want to address thanks to the Landscape Conservation Association of North-West Saxony and other project managers of ECO2SCAPE for allowing me access to the event.

Moreover, I am thankful for the cooperation of the stakeholders present at the dialogue and all the respondents interviewed for this study, without whom the study would not have been possible to carry through.

Then, I would also like to express sincere gratitude to my supervisor, Hanna Bergeå, who has supported and guided me through the research process. Thank you for your valuable guidance and expertise.

Last but not least, I am grateful to Andrea Knierim, professor of the chair of Communication and Advisory Services in Rural Areas at the University of Hohenheim, who provided me with the contact to the project ECO2SCAPE. Besides, I am thankful for the organisation of regular Colloquiums to receive valuable insights and feedback for my research.



# Appendix 1

## **Guiding Questions for Observation:**

1. Do participants contribute to the discussion?  
(e.g., answers)
2. Are participants interrupting?
3. Do participants ask or comment on something?  
(e.g., understanding, clearing up misunderstandings)
4. Are participants asking something to someone?
5. Are participants engaging in discussion?  
(Who? How many?)
6. Do participants attribute certain roles to themselves or others?
7. Can certain roles within the dialogue event be observed?
8. Are there negative attitudes among participants?
9. Are there positive attitudes among participants?
10. Do participants persuade or manipulate?
11. Do participants exchange information?  
(e.g., share personal experiences)
12. Do conflicts evolve?  
(e.g., discussion on different interests and roles)
13. Do participants express disagreement?
14. Is disagreement among participants further explored?  
(by e.g., moderators, farmers, or scientists)
15. Do participants appear to seek consensus?
16. Does the moderator appear to seek consensus?
17. Are different viewpoints and forms of knowledge expressed?
18. Are participants equally participating?
19. Are participants equally listened to?

# Appendix 2

## Interview guide:

### Questions to start the interview:

- Was this the first dialogue you took part in?  
→ Would you participate again?
- What was your reason and motivation to participate?
- Are you applying financial measurements (Directed to farmers)

### Question for getting more context:

- How was your relationship with the other participants? (e.g., LCA, scientists)
- What were your expectations before the event?
- Did you notice any roles or patterns in people's involvement during the dialogue?  
→ What are the strengths or weaknesses of certain roles? (What is your perception of this?)  
→ How did you see your role during the dialogue exchange?

### Questions related to how the dialogue was conducted:

- Can you describe your experience of participating in the dialogue?  
→ How were you able to express your views and ideas?  
→ What were the strengths or weaknesses in structuring the dialogue exchange  
→ How comfortable did you feel in contributing to the dialogue? / What restricted your contribution?
- How did you perceive moderation?  
→ What were the strengths or weaknesses in the moderation of the dialogue?

### Questions about how the dialogue should be conducted:

- In your opinion, what are important elements for a successful dialogue exchange and how does it relate to the previous dialogue event?
- How should be communicated in a dialogue and how was the experience in the previous dialogue event in relation to that?

- What rules should be followed in a dialogue event?
- How can the mutual understanding be improved?
- What aspects spoke in favour of dialogue at eye level? What aspects spoke against it?
- How important is/was disagreement? How was there space for disagreement?

Questions related to what participants value from the dialogue:

- Why was the dialogue important?
- What were the important results and advantages of the dialogue event?
- What were the limiting factors or disadvantages of the dialogue event?

Questions in the end:

- Based on your experiences of the dialogue event, would you have any recommendations on how to improve future events?
- Do you have, for example, any suggestions on how to increase participation?

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