



AGRIDEMO

Case study reports: Denmark CS₃



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1. Background

Programme

In Denmark, we do not have any specific programmes for demonstration activities. The demonstration for case study 3 was a part of the project "Buffertech" which conducts research into optimisation of the ecosystem services of buffer zones (nature, environment and production) by constructing them in a differentiated and cost-effective way in the landscape with the use of novel and innovative management methods and technological solutions. The project is primarily run by Aarhus and Copenhagen University in collaboration with local extension services etc.

Funding and Governance

The project is funded by The Danish Innovation Fund. Dissemination of the project's results is one of the deliverables in the project and all expenses for the event were thus paid by the project. The event was planned and organised by the work package leaders in the project in close cooperation with the local extension service.

Actors and networks

The project partners include universities, scientific and research institutes, extension services and private companies. One of the activities of the project was dedicated to the dissemination of the project's results, under which this demonstration has been set. The demonstration event has been planned and organised mainly by:

- The work package leaders of the project i.e. The University of Aarhus and the University of Copenhagen, both public institutions.
- The local private extension service

The project partners are:

Universities (Aarhus University, Department of Bioscience, Aarhus University – Department of Agroecology Section: Agricultural Systems and Sustainability, Aarhus University, Department of Engineering, Department of Food and Resource Economics; University of Copenhagen (IFRO, KU), Department of Biology, University of Southern Denmark; The James Hutton Institute; extension services (The Farmers' Union of Southern Jutland (SLF); The Farmers' Union of Western Jutland); and private companies (SEGES, Orbicon A/S, Arwos).

How it works

One of the deliverables in the project is dissemination of the project results. This is specified in the application for funds. This particularly event was held at a local extension service. Employees from the extension service coordinated the day and work package leaders from the universities presented their results from the project.

Event Farm and location

The first part of the day was held at the local extension service. Afterwards we visited different pilot areas from the project (wetland projects). Some of them was on land owned by the municipality others was on land owned by local farmers. The aim of the day was to discuss intelligent buffer zones (BS).

Event date: 18th of June 2018

2. Method

In line with the Methodological Guidelines, three main data sources are used: a background document and interviews at Programme and Farm level to analyse structural and functional characteristics, and event tools and surveys to analyse event level participation and learning, as follows:

1. A background document for every case study was completed by the AgriDemo-F2F partner who carried out the case study.
2. Interviews with representatives of programme/networks (level 1) and farm level interviews with demonstrators/hosts (Level 1) to reveal the functional and structural characteristics. How these functional and structural characteristics can enable learning is reported in Sections 3 and 4. Data is sourced from interviews with 1 Programme member, who was interviewed in May 2018. The analysis followed 4 themes: (1) Coordinating effective recruitment of host farmers and participants, (2) Developing and coordinating appropriate interaction approaches, (3) Planning, designing and conducting appropriate demonstration processes, (4) Enabling learning appropriate to purpose, audience, context, (5) Follow-up activities.
3. Event tools and surveys (level 3) to reveal peer to peer learning processes. Event details and analysis is reported in Section 5. This data is sourced from 10 pre and post demonstration participant surveys, 3 pre and post demonstration demonstrator surveys and an event observation tool completed by an observing researcher. This data is mainly used for the analysis of learning processes and learning outcomes related to the specific event and overall comments on the effectiveness of the event.

Finally, partners reviewed the case study reports to prepare their workshops with different stakeholders related to the case studies. These workshops aimed at validating the data presented in the case study reports and to discuss on key characteristics related to effectiveness of demonstrations. The workshop for the Danish and Swedish case studies was held on the 17th of October, 2018.

3. Structural characteristics

T1: Programme/network level

1. The main organisations and actors involved in the demonstration activities and their roles

In Denmark, we do not have any specific programmes for demonstration activities. The demonstration for case study 3 was a part of the project "Buffertech" which conducts research into optimisation of the ecosystem services of buffer zones (nature, environment and production) by constructing them in a differentiated and cost-effective way in the landscape with the use of novel and innovative management methods and technological solutions. The project is primarily run by Aarhus and Copenhagen University in collaboration with local extension services etc.

SEGES-project partner (one of the private companies)

SEGES is one of the three private companies (along with Orbicon A/S, Arwos) in the consortium of the "Buffertech" scientific project. Seges is a private organisation, which works as a knowledge centre to build bridges between research and practical farming, and seems to have been one of the main partners of the project.¹

According to the Programme interviewee, many people are involved in the planning of a demonstration. These could be Seges, farmers, advisors, scientists, people from the government. Usually there is one or two coordinators of the demonstration processes.

In my world more people are involved in the planning of a demo but one or two are the main coordinators that controls the planning..... Seges, farmers, advisors and scientists (are involved). And sometimes people from the government (boards). And it is very good when the ones who decide what the farmers should do also come out and see how things work in practice and how to carry out the initiatives. (Programme interviewee).

Seges people work hard to find suitable host farmers for demonstrations. On the other hand, Seges has several criteria for choosing a farmer to host an event, the ability of the host farmer to devote his time for demonstration activities being an instrumental one. The host farmer's willingness and personal interest are equally important, as (s)he has to share more or less the same visions and directions with Seges. Finally, the host farmer must be friendly and good communicator of the common principles.

Q: How do you target farmers to host demonstrations? R: We chase them. Sometimes I take a map and look at the landscape and then I call or visit the farmers and ask if they want to participate. Usually they want to participate. Sometimes we work with farmers in the different projects and then they volunteer to host the projects. (Programme interviewee).

Demonstration activities are important but it is difficult for farmers to find the time to participate. You need to work with those you have the possibility to work with.... It is always a good thing if people are friendly. (Programme interviewee).

¹ As only one programme level actor who works as an environmental consultant at Seges has been interviewed, it is rather difficult to have the overall picture of the demonstration programme level processes through this interview. Sometimes the programme level interviewee talks about the project, other times about other partners and sometimes about Seges activities. Secondly, although Seges is an active partner of the project, the project is primarily run by Aarhus and Copenhagen University in collaboration with local extension services.

I think that you work with the ones who wants to participate. They are positive about what you want to demonstrate and when they implement it then they neighbour will do the same. You cannot pressure people. That does not make any sense. (Programme interviewee).

You need to choose hosts that aren't negative of our projects. If we want to go in one direction we cannot choose a host that is against this. So, if Seges wants to go in a specific direction we need to find farmers that will go in the same direction. You cannot just choose anybody as a host. Some farmers are better communicators. (Programme interviewee)

Seges employees have both the knowledge and the know-how of specific topics because they work on them. They select also innovative topics in order to present something new to farmers. While following a mainly top-down approach, farmers are generally not excluded during the topic selection process.²

At the specific demonstration event, the topic was selected by the project partners. In this case, the initial aim was the presentation of the project results, which determined a lot the demonstration topics (Poster).

Q: How do you identify/select relevant topics that will interest farmers? R: It must have a news value. (Programme interviewee)

You cannot come as an advisor without have an opinion. We want the things we work with here at Seges to be implemented. So, it has to be top-down. But the farmers must be involved. (Programme interviewee)

All interviewed demonstrators agreed that participants (farmers, advisers, researchers etc.) were involved in the overall development of the specific demonstration, without though any detailed reference to specific roles participants held (Post survey demonstrator data).

Extension service (The Farmers' Union of Western Jutland)

The event was planned and organised by the work package leaders of the project, in close cooperation with the local extension service (main organiser). Moreover, the local extension service employees coordinated the demonstration event (presentations and site visits). During the event, there was one employee of the extension services who run the facilitation/coordination process.

The first part of the day took place at the local extension service where work package leaders from the universities presented the project's results. Afterwards some visits to different pilot areas of the project (wetland projects) took place. So, at a first level, the local extension service hosted the event (Background info).

A woman, working part time at the extension service and part time at the municipality, coordinated the day. She coordinated the different presentations, the questions and the tour to the different sites, and kept track of time. (Observation tool)

The extension service uses their homepage and newsletters and/or the local newspaper to disseminate information on scheduled demonstrations.

The most effective way is to give them a call. The average of farmers is relatively high. And they are a generation like myself that prefers talks. They don't always read their emails. But it is difficult and time consuming to call everyone so that is not how it really gets done. The local extension services advertise on their homepage, their newsletters or in the local newspaper. (Programme interviewee)

Q: Are participants targeted in demo recruitment? R: Don't know.... Often the extension service does the advertising. (Programme interviewee)

² There are no further data concerning the topic selection, the decision-making process and the extent of farmer's involvement in it.

Host farmer

As already mentioned, the first part of the demonstration day was held at the local extension service, where work package leaders from the universities presented the project's aims and results. Hereafter, participants went by bus to see three different at some pilot areas/wetland projects at the local area. Some of these pilot areas were on municipality owned land and some others were on land owned by local farmers. The host farmer to whom observation tool is referred to, is one of those local farmers. During the specific event, the host farmer did not participate in the demonstration at all.

One of the intelligent buffer zones was located on a farmer's property. But he did not participate and he was not involved in the event at all. (Observation tool)

Host farmers are one of the main people involved in the demonstration activities between other actors. However, their role is not very well defined.³

Q: Who are the main people involved in the demonstration activities and what are their roles? R: Seges, farmers, advisors and scientists. And sometimes people from the government (boards). (Programme interviewee)

Sometimes the host farmers are involved in the development of the individual demonstration activities in the frame of Seges. What Seges claims, is that the cooperating farmer has to have a real interest and active involvement in the decision-making process.

You need to be sure that the farmer is interested in the initiatives we want to try out at his farm. He must be able to see himself in the project and to have a feeling that he is involved in the decisions. You must always involve the ones you cooperate with. (Programme interviewee)

As far as the host farmer's involvement in the development of the overall demonstration programme is concerned, Programme interviewee said that sometimes this happens. However, this happens only when host farmer is a member of the sector board of Seges. The sector board of Seges consists of farmers only. The board has an indirect influence in the decision making of the organisation i.e. projects applied, demonstration activities etc.

The sector board at Seges consists only of farmers so indirectly they decide which projects we apply for and thereby indirectly which demonstrations that are held. But if the host farmer isn't a part of the board, he is not involved. (Programme interviewee)

According to Programme interviewee, there are two important types of the host farmer's involvement: First, the implementation of new practices and second, to talk about their own experience to other farmers. It is pointed out that the host farmer must do the talking as much as possible, regardless of the demonstration topic.

There is a task to get people to start doing these things they haven't done before. The crucial part is to get the first farmers to do it, otherwise we won't get any further. And then we use these farmers to tell other farmers what they have done. This is the pinnacle when it comes to agricultural extension that you let the farmers do the talking. (Programme interviewee)

I usually use the method where I get the farmer to do the talking regardless of the topic. (Programme interviewee)

Advisors

Advisors are one of the main actors involved in the demonstration activities, and according to the Programme interviewee, their interaction with farmers is very important during a demonstration. However, their role is not sufficiently defined in the interview. On the other hand, many of Seges employees and extension workers are advisers. In that way, we assume that some of the main roles mentioned in the frame of Seges or extension

³ The programme level interviewee had some general references to the involvement of host farmers to demonstration initiatives, without being more detailed. Most probably, the programme interviewee is referring on how Seges manages demonstration activities. Again, we have to highlight that we cannot make clear conclusions in relation to the specific project or demonstration event through this interview.

services employees, have to do with the advisers' roles and responsibilities, which probably explains the presence of many advisors in the event.

According to the Programme interviewee, local advisors are adequately experienced and skilled to plan an event for the variation in learning capacities and learning styles of individual farmers.

It is intuition. You need to meet the farmer at his level. When you talk with them you get the feeling of where they are. It is a very human quality. Most of the local advisors have this quality. Otherwise, they would not survive in the agricultural extension. (Programme interviewee)

Demonstrators

As mentioned earlier, the host farmer is expected to do the talking/to be the demonstrator (or one of the demonstrators) during the events when organised by Seges. In this specific event, however, none of the five demonstrators involved was the host farmer or farmer in general. Their occupation and experience vary i.e. advisers, project partner members, researchers etc., who participate as demonstrators between 5-50 times per year, one between 0-5, and one to more than 50 events per year (Pre survey demonstrator).

The work package leaders from the universities presented the project results. They were the main demonstrators of the event held at the local extension service's premises. Researchers gave several presentations, using slideshows, all of which required a high level of prior knowledge.

Hereafter participants went by bus to see three different wetland projects in the local area. At these sites, there was a facilitator-demonstrator by the local extension service, who coordinated the tour to the different sites and kept track of time (Poster + Background info). A few posters were used at the sites of the intelligent buffer zones to get an overview of the layout (Observation tool).

None of the demonstrators of the case study has ever received any training in order to be demonstrator (Pre survey demonstrator). Moreover, all demonstrators strongly agreed that they could benefit from some extra training as a demonstrator (Post survey demonstrator).

Researchers and scientists

Researches and scientists are extensively involved in the demonstration activities, both in terms of organising and in participating in organisation of the event. This is probably because the meeting was planned in a scientific context with its primary aim to present the project's results. It was stated that the interaction between researcher and farmers is quite rare and maybe problematic, as researchers are often too distant from/approach too theoretically the real farming world (Programme interviewee).

Q: Who are the main people involved in the demonstration activities and what are their roles? R: Seges, farmers, advisors and scientists. And sometimes people from the government (boards). It is easy to sit at the office in Copenhagen and make theoretically decisions but they also need to come out in the real world. The interaction researcher-to-farmer is almost non-existent in Denmark, but I would like it to be more extensive. Many of the scientists in Denmark want to hide at their institutes but they need to come out and feel what is happening. (Programme interviewee)

Networks

The researchers from the universities have a wide nation-wide network with other universities. Furthermore, they often get tasks from governments and boards to provide data that can assist them in new legislation. The universities and Seges often work together, and Seges and advisory services has a close collaboration, since Seges develops decision support tools for the local advisers. While it would be safe to expect that most of the project's partners⁴ would be well linked to national and international networks, one cannot assume if those are

⁴ Aarhus University, Department of Bioscience, Aarhus University – Department of Agroecology Section: Agricultural Systems and Sustainability, Aarhus University, Department of Engineering, Department of Food and Resource Economics, University of Copenhagen (IFRO, KU), Department of Biology, University of Southern Denmark, The James Hutton Institute), extension services (The Farmers' Union

on demonstrations, as there are no relevant info provided. The Programme interviewee refers to his/her organisation's participation in several EU funded projects, without again detailing if those are on demos or other issues.

Some of the projects only concern Denmark but for example Interreg and Horizon-2020 projects they are international and here you meet other experts like yourself from other countries. This is where you make the networks. It is very difficult to make these networks yourself. (Programme interviewee)

Moreover, most of the demonstrators that participated at the event were also not part of a network. Only one referred to his/her role in a network, in which s/he holds elected or appointed role, in a committee as a special consultant. However, s/he did not specify the name of the network (Pre survey demonstrator). Strangely enough, though, at the post demonstrator survey, all demonstrators agreed that many of the participants were part of the same network as themselves (Post survey demonstrator). I guess the reason why they answered this is, that they are not involved in a more official network. However, they work on the same subject/projects and are a part of a network in this way. The researchers (who are the main respondents and attendees at the demo) are in more unofficial networks in the academic community. Thus, we believe the confusion about being part of a network or not originates in taking informal networks into account or not.

2. Funding arrangements

The demonstrations of Seges are funded by different sources both national and international. Seges also offers some kind of incentives to farmers to host demonstration activities, while in some cases Seges gives some kind of compensation upon host farmer's demand. The compensation is mainly for when Seges wants to use the farmer's land for research (for example when for the establishment of buffer strips).

They are financed through different funds both national and international. (Programme interviewee)

I paid one person because he demanded payment. And I think that is quite fair. In the EU projects, we are not able to give gifts or money to the farmers and that is simply wrong. I always bring something for the farmers for their troubles. (Programme interviewee)

The specific project was funded by The Danish Innovation Fund. One of the deliverables of the project concerned the dissemination of the project results, as specified in the application for funding. It was in the context of these project's requirements, the specific demo event was organised, and consequently all relevant expenses were covered by the project (Background info).

3. Goal/ objectives

This specific demonstration was organised in the context of the dissemination of the scientific results that emerged from the project. Thus, the goals of this demonstration are identical to project's goals, which fall around the optimisation of the ecosystem services of buffer zones (nature, environment and production).

The objectives of the demonstration event were to discuss the effects of buffer zones on retention and removal of N and P and their importance for biodiversity and ecological benefits in watercourses. Another important objective was to prepare the Danish farmers for the new regulations. In that vein, getting farmers interested in environmental initiatives and the reinforcement of the discussion between scientists and farmers were some additional objectives (Poster).

The Programme interviewee works as an environmental consultant at Seges and her/his main goal is to promote work on environmental projects concerning wetland quality and nutrients reduction.

of Southern Jutland (SLF), The Farmers' Union of Western Jutland) and private companies (SEGES, Orbicon A/S, Arwos) (Background info)

Q: What are the overall goals/objectives of the demo farm? How are these decided? R: I have mainly worked with big wetland projects and smaller environmental projects. We have mainly worked with establishment of environmental initiatives at the end of the drain pipeline. All my work is concerning the environment and the reduction of nutrients. (Programme interviewee)

T2: Farm level (event) level

1. Event farm location and layout

The demonstration event (Debate meeting, Buffertech) was held on the 18th of July 2018 at a local extension service of Jutland's region. As stated earlier, the first part of the day was held at the local extension service where scientific presentations were given. Afterwards participants visited different pilot areas (wetland projects) which were part of the project. Some of these intelligent buffer zones were on municipality owned land while others were on land owned by local farmers. (Background info)

The Programme interviewee stated that in general, demos organised by their organisation fall in-between single focus and whole farm approach. On the specific event, the observation tool notes that no notion of whole farm approach was demonstrated but only isolated practices, with one demonstrator confirming this statement. Another demonstrator claimed that s/he aimed to apply a 'whole farm approach' during the demonstration.

Furthermore, demonstrations organised by Seges, are a mixture of exemplary and experimental approaches (Programme interviewee). The Programme interviewee believes that these mixed approaches are also more preferable. On the other hand, the event's demonstrators have been classified the specific demo event in a totally different way: one as experimental, a second as a mixture of approaches and finally a third as exemplary. It seems that there were differences in approaches in different pilots, or that those demo's situations are difficult to be classified in that way.

At the specific demonstration event, a tour at three different intelligent buffer zones in the local area (Western Jutland) has been organised. Comparisons between the different buffer zones have been made (Observation tool). There are no available data if those comparisons in multiple fields were following scientific protocols for cross-comparisons of the same practice under different multifactor situations, or if it was a typical proof of a concept i.e. simply displaying and discussion on different examples of the same practice under different situation.

2. Topic and group size

The topic was intelligent buffer zones. According to the observation tool, approximately 20 participants were present at the demonstration event. The participants were scientists, advisers, politicians. No farmers attended the event (Observation tool+poster).

3. Farms infrastructures, arrangements and size

The case study points out the importance of specific arrangements and options when organising a demonstration farm. It is important to select an impressive farm, from the very beginning. According to the Programme interviewee big impressive farms are more effective in attracting participants than the small ones.

Q: What do you think motivates participants to attend demos? R: A combination of impressive farms (mansions, estates) and environmental initiatives is what get people to participate. People rather wants to see estates than small farms. (Programme interviewee)

Moreover, catering and similar arrangements are often well received by participants. In this case study, the organisers offered food, refreshments and transportation facilities in order to move between different demonstration sites.

Started out by a light lunch and conversation at the tables. At one of the locations, we had coffee and cake and people had some time socialising (Poster + Observation tool).

Hereafter participants went by bus to see three different wetland projects in the local area (Poster).

4. Accessibility and Fees for participation

The travel time of participants to reach the demo farm, ranged from 0 to 140 minutes, with an average time close to 56 minutes (Pre demonstration survey participant). Six out of ten participants rated their travel effort to participate as no effort or very little effort. Only one participant (10%) rated his travel effort to participate as great effort.

Again, we cannot draw any clear conclusion in relation to the organisation of the specific event and the farm location. Some participants who travelled for 120 or 90 minutes, rated their travel effort to participate as no effort or very little effort and some participants who travelled for 30 minutes rated their travel effort to participate as quite some effort (Pre demonstration survey participant). So, the effort rate is maybe related to other factors i.e. participants motivations, free time etc., except travel distance. It is important to note that most of participants were colleagues and maybe project partners, so their attendance could be easily understood.

At the specific demonstration event, there were no fees for participation (Poster+ Post participant's survey). Moreover, participants did not receive any financial compensation for their attendance. Only one participant had her/his travel expenses covered. (Post participant's survey).

4. Functional characteristics

T1: Coordinating effective recruitment of host farmers and participants

1. Incentives

According to the Programme interviewee demonstrations were 'financed through different funds – both national and international'. In terms of the incentives offered to hosts, there was no clear arrangement in place. One of the Programme Interviewees recalled how he did end up paying one farmer, because they had demanded a payment. He expressed concern over the lack of incentives (monetary or otherwise) available to hosts.

I paid one person because he demanded payment. And I think that is quite fair. In the EU projects we are not able to give gifts or money to the farmers and that is simply wrong. (Programme interviewee)

2. Motivations for host farmers

In terms of the motivations for host farmers, the Programme interviewee recognised these could vary significantly. Despite this, they suggested that a desire to 'do something for the environment' was consistent amongst hosts, as well as a desire for recognition.

People are different and the motivations are different. But many farmers want to do something for the environment and they gladly want to show it. The agricultural community wants to be praised by the surrounding community and get some recognition. (Programme interviewee)

3. Motivations for participants

It was evident in the pre-survey that participants were motivated by a range of factors, including:

- information about the state of the project
- learn about some of the projects in the district + agricultural society
- I work with the subject
- Political interest
- I work as a surrounding area adviser
- I was asked
- Hear about the environmental initiatives
- I had to present

The motivations for participants also varied, but the desire to improve the environment emerged again. However, the Programme interviewee noted how new machinery was always more appealing than anything environment related. By recognising the attractiveness of machinery and technology, there is scope to use them to 'hook' farmers to events that tackle pressing environmental issues.

A combination of impressive farms (mansions, estates) and environmental initiatives is what get people to participate. People rather want to see estates than small farms. Curiosity. Environmental initiatives don't attract people as much as for example a new tractor. The environmental initiatives are more things that the farmers need to do. (Programme interviewee)

4. Target audience

The target audience was farmers, as well as advisors and other interested stakeholders. But as the Programme interviewee suggested, in the end, it is the farmers that should make these environmental initiatives.

5. Advertising and recruitment

The Programme interviewee was unsure of whether participants were targeted, but described a range of methods of recruiting participants.

The most effective way is to give them a call. The average age of farmers is relatively high. I think it is between 56 and 58. And they are a generation like myself that prefers talks. They don't always read their emails. But it is difficult and time consuming to call everyone so that is not how it really gets done. The local extension services advertise on their homepage, their newsletters or in the local newspaper. (Programme interviewee)

T2: Appropriate demonstration and interaction approaches

1. The nature of interaction

The Programme interviewee described the nature of interaction as 'Mostly top down'. He cited numerous reasons for this, including the role of the advisor and the source of the topics (Seges).

You cannot come as an advisor without having an opinion. We want the things we work with here at Seges to be implemented. So, it has to be top-down. But the farmers must be involved. (Programme interviewee)

It was clear that hosts were chosen to align with the aims and objectives of Seges projects.

You need to choose hosts that aren't negative of our projects. If we want to go in one direction we cannot choose a host that is against this. So, if Seges wants to go in a specific direction we need to find farmers that will go in the same direction. (Programme interviewee)

Despite this more 'top down' approach to demonstrations and demonstration topics, the Programme interviewee appreciated the need for farmers to have some ownership over the topic/project/content and to share it amongst their peers.

We use these farmers to tell other farmers what they have done. This is the pinnacle when it comes to agricultural extension that you let the farmers do the talking. (Programme interviewee)

2. Involving farmers in the learning process and the demonstration programme

The opportunity for farmers to be involved in demonstrations varied. Host farmers had good opportunity to be involved in individual demonstrations, and a select few had the opportunity to be involved in the design of the overall programme by joining the 'sector board'.

The sector board at Seges consists only of farmers so indirectly they decide which projects we apply for and thereby indirectly which demonstrations that are held. But if the host farmer isn't a part of the board, he is not involved. (Programme interviewee)

Beyond the 'sector board' there was no formal opportunity for host farmers and participating farmers to have input into the demonstration programme design.

3. Focus and Design

The Programme interviewee described the network as 'in between' a 'Whole farm' and 'Single focus' approach and felt it was 'A mixture' of 'Exemplary' and 'Experimental' in nature. They expressed a preference this middle ground approach.

4. Ideal group size

The Programme interviewee recommended small groups, claiming that a group size of around 10-15 allowed for conversation and dialogue.

Small groups are more effective. I prefer to work with small groups. In bigger groups people aren't present. You can work with 10-15 people. Then you can have a conversation. It is even better if it is only 5-10. But these big impressive events they are more of a show. I believe more in smaller groups where you can have a direct dialog at the scene. (Programme interviewee)

T3: Enabling learning appropriate to purpose, audience, context

1. Facilitating interaction and learning: structure, content and techniques

The Programme interviewee put a strong emphasis on seeing things and doing things.

The best way is when you go out and see the things with your own eyes and talk about. It is better than using PowerPoints. When you meet you can give a small presentation of what we are going to see. I prefer when you go out and see it. (Programme interviewee)

The Programme interviewee suggested that scope for 'Participants to ask questions and talk openly' was the most important characteristic of farm demonstration.

Here you have the dialog. People learn better when they are involved than if an expert comes and tell you exactly what to do. Maybe that worked back in the 50's but it does work anymore. The younger generation must be involved and come up with their own solutions. My theory is that your own ideas are more durable. (Programme interviewee)

2. Taking into account variation in learning

The Programme interviewee claimed that the programme was sensitive to variation in learning.

It is intuition. You need to meet the farmer at his level. When you talk with them you get the feeling of where they are. (Programme interviewee)

T4: Effective follow-up activities

1. Follow-up activities and materials

The Programme interviewees claimed that there was no attempt at continuing to engage participants after the event. They attributed this to being 'very time consuming and expensive'.

No follow up materials are provided to participants from the Programme level.

2. Assessing impact

The Programme interviewee claimed that the Programme Level assessed whether participants had engaged with or acted on things they had learnt in the demonstration, however, this was quite informal in nature. The Programme interviewee recognised how it typically took a number of years – sometimes a decade – to see the

impact, therefore it is hard to quantify during the lifespan of the programme. Once again, more informal methods, e.g. seeing what local farmers are doing on their land, is the best indication.

I always reflect on it, but there is a timespan that makes it difficult. The best indicator is when you have started an initiative at one farmer and you see that the surrounding farmers do the same. Sometimes it takes ten years before you see the effect. (Programme interviewee)

5. Event analysis: effective peer learning characteristics

Event details

The group consisted of 20 participants, of which 10 filled in the pre survey and the post survey.

	n° surveys	Fish farming + Restoration of waterways	(Environment) advisor	Politician + teacher	Production planner	Research assistant	senior lecturer	Unknown
<i>occupations</i>	10	1	3	1	1	1	1	2
<i>working area</i>	10							
local area	7	1	3	1	1			1
not local area	3					1	1	1
<i>gender</i>	10							
male	7	1	1	1		1	1	2
female	3		2		1			
<i>age</i>	10							
18-30	1	1						
31-40								
41-50	3		1		1	1		
51-60	3		2					1
60+	3			1			1	1

T1: Learning processes

1. Communication initiation by participants

When in the whole group or in smaller groups, between more than 50% of the participants had no problem sharing their knowledge and/or experiences related to the topic. Since almost all knew each other and knew the project in question, there was a lively debate and talk. Only a few of the participants did not share. There was a lot of time for questions, about 10% of the time, and a lot of questions were asked. There were a lot of participants formulating their points of view regarding the topic.

2. Interactive knowledge creation

Hands-on opportunities and other multi-sensorial experiences

There was no demonstration of any hands-on activity nor could participants try one out. Participants could not really have any multi-sensorial experiences.

Discussion opportunities and negotiating conflicting points of view

A woman, working part time at the extension service and part time at the municipality, coordinated the day. She coordinated the different presentations, the questions and the tour to the different sites, and kept track of time. One of the intelligent buffer zones was located on a farmer's property. But he, the host farmer, did not participate and he was not involved in the event at all.

Open discussions are stimulated and given a lot of time. Most participants are involved. Shared critical points of view were clarified/rephrased so more people could understand. Critical points of view mostly concerning politics were shared. It was a discussion between colleagues which made it a bit difficult to follow if you were not a part of the project.

	participant answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
In my opinion, there were interesting discussions during the demonstration.	0	1/9	5/9	3/9	0
If participants didn't agree with each other during discussions, somebody (demonstrator/other participant) tried to reach a consensus between them.	0	3/5	2/5	0	0

	demonstrator answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
In my opinion, there were interesting discussions during the demonstration.	0	0	1/3	2/3	0
If participants didn't agree with each other during discussions , somebody (me or somebody else) tried to reach consensus between them.	0	2/3	1/3	0	0

3. Engagement during the event

Participants act like a group of friends who know each other really well. The majority of the participants knew each other well and has worked together on this and similar projects. They also knew the demonstrator who acted like friends with the participants.

	participant answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
I felt actively involved during the whole demonstration process.	0	0	7/9	2/9	0
I felt like the demonstration increased my ability to rely on myself as a farmer.	0	0	0	0	6/6
I could relate well to other participants (because they have an agricultural background similar to mine).	0	0	2/7	0	5/7
A lot of the other participants are part of the same farmer network as me.	0	1/7	1/7	0	5/7
I felt like I could trust the knowledge of (most of) the other participants .	0	0	3/8	3/8	2/8
The demonstration felt like an informal activity to me.	0	0	5/8	3/8	0
I thought the host farm was comparable enough to my own farm .	0	0	0	0	6/6
I had the feeling the demonstrator was like one of us .	0	1/8	4/8	0	3/8
I had the feeling I could trust the demonstrators knowledge .	0	0	7/9	0	2/9
I got along very well with the demonstrator .	0	0	6/9	1/9	2/9

	demonstrator answers				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
Were participants (farmers, advisers, researchers etc.) involved in the overall development of this demonstration?	yes, through contributions in advance and active participation				
Most of the participants were well known to me .	0	1/3	1/3	1/3	0
A lot of the participants are part of the same network as me .	0	0	3/3	0	0
The demonstration felt like an informal activity to me.	0	1/3	1/3	1/3	0
I think the host farm was well suited for this demo.	0	0	1/3	2/3	0
I got along well with the participants.	0	0	2/3	1/3	0

T2: Learning outcomes

Knowledge was explained so that the majority of the participants (the scientists and advisers who work with watershed management) understood it clearly. However, I am not sure that the few politicians that participated understood the presentations clearly. If farmers had participated, as was the plan, the knowledge would not have been explained sufficiently. At the tour to the three buffer zones, some practicalities on how to conduct the buffer zones were mentioned and explained sufficiently.

The event solely looked at environmental initiatives and not farming methods, so common methods or ways of thinking on farming or thinking on learning were not questioned.

	participant answers				
What would you ideally like to learn today?	Updates and further explanation; Get some insight in the projects; Learn about environmental initiatives; The balance between agriculture and the environment/water courses; Basic knowledge of the subject; How the projects work: the effects and potential; Collaboration between nature and agriculture.				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
The demonstration met my expectations regarding what I wanted to learn.	0	0	7/9	2/9	0
The demonstration exceeded my expectations.	1/9	4/9	3/9	1/9	0
I felt surprised at some point(s) during the demonstration.	2/9	3/9	4/9	0	0
I obtained a clearer understanding of the topic(s) demonstrated.	0	2/9	4/9	3/9	0
I have the feeling I learned something new (knowledge, skill, practice, etc.).	0	1/9	6/9	2/9	0
I thought about how I could implement some of the ideas and practices on my own farm.	0	0	2/7	0	5/7
I reflected on my own point of view at some point during the demonstration.	0	0	5/9	2/9	2/9
I learnt about the principles underlying a practice.	1/8	0	6/8	1/8	0
I thought about how we learn something new on demonstrations (e.g.: teaching methods).	1/7	2/7	3/7	0	1/7
I thought about why I want to learn about the topic(s) of this demonstration.	1/7	2/7	2/7	0	2/7

	demonstrator answers				
what do you intend for the participants to learn today?	New thoughts; More knowledge about environmental initiatives; How we use marginal zones in the future in Denmark; To start a dialogue. Understanding of the cycle of nutrients.				
	strongly disagreed	disagreed	agreed	strongly agreed	not applicable
I think participants have learnt what I intended them to learn.	0	0	3/3	0	0
I tried to surprise participants with uncommon/new knowledge/new skill.	0	1/3	2/3	0	0
I felt surprised at some point(s) myself during the demonstration (e.g. by a question or discussion).	0	3/3	0	0	0
I obtained a clearer understanding of the topic(s) myself.	0	0	3/3	0	0
I have the feeling I learned something new during this demo (from participants, discussion...).	0	0	3/3	0	0
I reflected on my own point of view myself at some point during the demo.	0	0	2/3	1/3	0
I encouraged participants to reflect on their own point of view during this demo.	0	2/3	1/3	0	0
I encouraged participants to reflect on their own situation sometime during this demo.	0	2/2	0	0	0
I encouraged participants to reflect on how we learn something new on demonstrations.	0	2/2	0	0	0
I encouraged participants to reflect on why we are trying to learn about the topic of this demonstration	0	2/2	0	0	0

T3: Overall comments on the effectiveness of the event

Participants:

With an average of 3,8 on 5, participants rated the event overall as effective. 1 participants out of 8 answers would not recommend the demonstration.

As main effective characteristics of the demo participants mentioned: good introduction to the issues and pros and cons of the proposed solutions were explained. They also thought the mix between theoretical and practical was very good.

As a main improvement one participant mentioned missing more participating farmers.

Demonstrators:

As main effective characteristics of the demo, demonstrators mentioned: A tight control of the time, getting some background knowledge mixed with visiting the sites and getting the scientific results; getting a dialogue between researcher and adviser; local context.

No suggestions for improvement were made by the demonstrators.

Observed main strong points of the event:

The main strong aspect was that the topic was presented with perspectives from both science and more practical agriculture. It worked very well that all participants went together by bus and saw the buffer zones.

Observed main possible improvements of the event:

The objective of having a debate with the ones who have to implement the initiatives, the farmers, did not succeed. Most of these initiatives are imposed to the farmers and it does not improve their farm production. Maybe this is why no farmers came to the event.