

i2connect

INTERACTIVE INNOVATION

Deliverable 2.3

First series of individual reports from
the field reviews of practical cases

April 2021



Task 2.5

Carry out field reviews of individual practical cases

Deliverable 2.3

First series of individual reports from the field reviews of practical cases

April 2021

This report only reflects the views of the authors.

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1. Introduction

1.1 Background

The aim of the i2connect project is to “empower advisors and their organisations to engage and support farmers and foresters in interactive innovation processes”.

WP2 focuses on analysing practical cases where experiences in interactive innovation support have been successful to identify the strategies, practices, actions, motivations and environment that constitute and support these good practices. This analysis is carried out through the field peer review approach drawn under T2.4.

Relying on the cross-fertilization of ideas and practices to develop actors’ knowledge and skills, the field peer review implements a multi-actor approach, which allow different players to experience and reflect on best practices in action in different practical cases and their contexts.

The field peer review is run on practical cases/projects of successful interactive innovation, which are identified by the i2connect partners in the different countries/regions and selected by a panel of expert members (T2.3), according to selection criteria aimed at ensuring fairness and value to the project (T2.1)

In July 2020, ten pilot cases were selected to participate in the first field peer review round (T2.5), addressed to test the review process to be implemented in two further selection rounds.

Drawing on the first draft of the field peer review methodology, T2.5 leader organized the peer review panels, assigning to each of them a practical case to analyse. A training session for the reviewers was held in November 2020 to explain the methodology and deliver the review support material.

The ten pilot Field Peer Reviews were carried out between 1 December 2020 and 15 February 2021. Due to the Covid-19 pandemic, all of them were conducted online.

1.2 The Field Peer Review methodology

The Field Peer Review consists of the **review of a practical case innovation** process, with a particular focus on advisory services, by colleagues (peers) from another innovation case, with the double purpose of investigating and learning from the way how innovation has been realized by others.

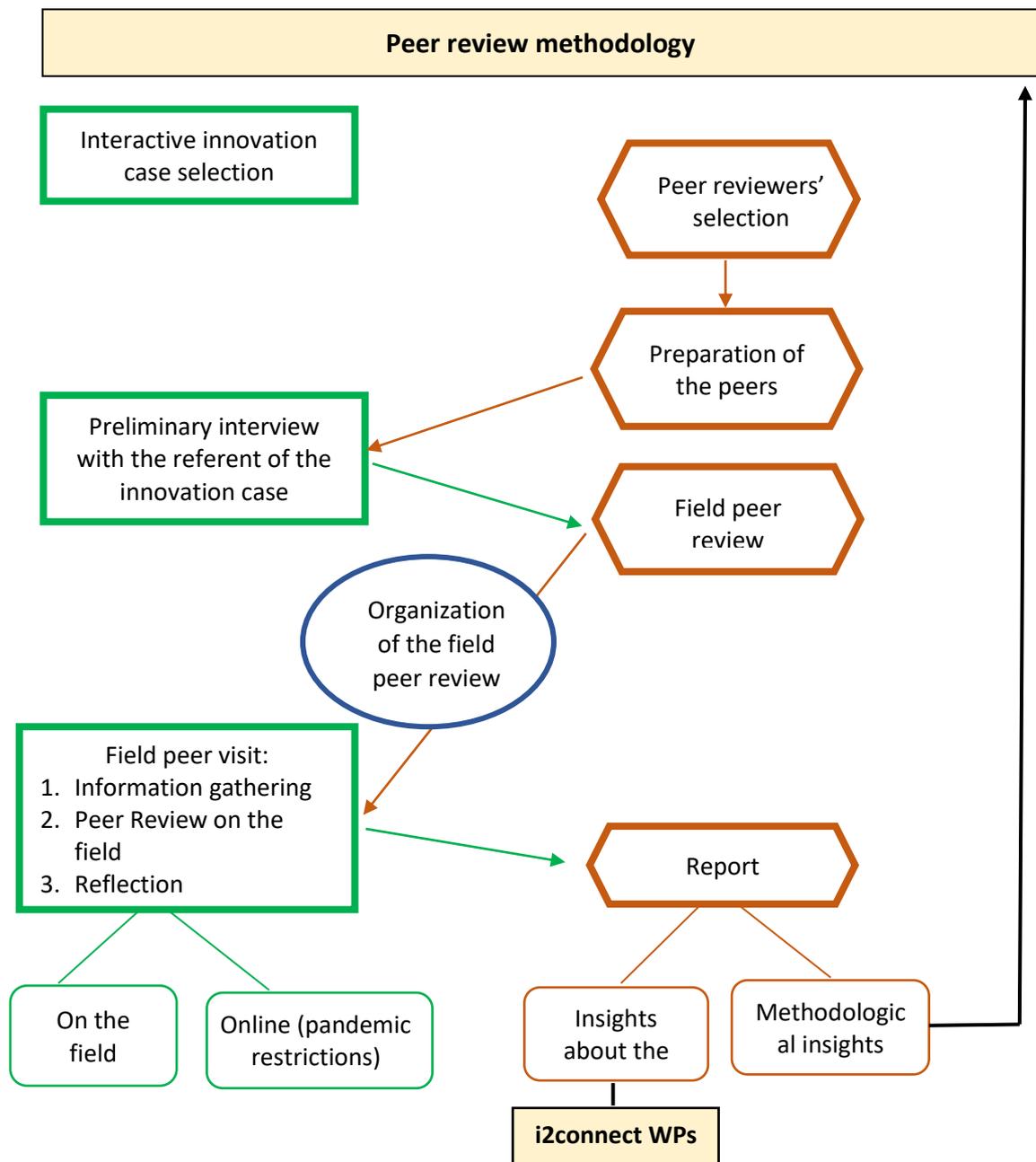
The Field Peer Review process contributes to the overarching goal of i2connect by:

- **providing a framework for analysing** the roles of various actors and policy instruments,
- **creating a thorough inventory of practices** (with a particular focus on advisory services) which define an enabling environment for interactive innovation processes,
- providing insights to **develop training programs, materials and tools** for capacity building of advisors, advisory teams, decision makers and managing authorities.

To fulfil these tasks, a comprehensive peer review methodology was designed, including both a detailed set of questions (analytical framework) and an exhaustive operational programme.

The overall methodology (fig. 1), which encompasses interviews, key actors' reflexive evaluations, peer observations and other evidences, draws on the cross-visits experience of the AGRISPIN project and the method of peer review of teaching, which is increasingly being used for managing and improving the quality of Vocational Education and Training (VET) organisations, as well as of services they provide.

Figure 1. Peer review methodology scheme



1.3 The framework of analysis

The set of questions through which to carry out the peer reviews has been developed laying on a careful literature analysis concerning the methods used for the assessment of interactive innovation. The analysis also included similar tools already used in other H2020 projects, such as AGRISPIN and LIAISON, and the Innovation Capacities Scoring Tool developed by FAO.

The question framework allows investigating roles, functions, skills and competences of advisors in supporting innovation processes, the effectiveness of this support and the enabling context within three different areas of interactive innovation, which correspond to the different dimensions on which a collaborative innovation partnership can generate effects:

- the first area concerns the co-operative processes and the approach and the level of interaction among partners of II (internal learning and coordination, the specific role of facilitators, etc.), which lead to co-produce practical solutions for farming;
- the second area deals with the strengthening of social capital and the ability to interact with local innovation systems, which, in the long term, contributes to boosting innovative capabilities in agriculture;
- the third area involves the scaling of the innovation, meaning the shift from the first circle of users/co-innovators to a wider circle of users.

It is worth noting that the terms advisor, advisory services and advisory system are to be understood in a broad meaning (i2connect D1.1). In the i2connect project, advisors are agents who assist clients in innovation processes, for example through linking clients to relevant knowledge and actors, and through facilitating the co-innovation process (i2connect D3.6).

The question framework builds on a complex analytical framework, sounded on a wide corpus of literature concerning advisory functions ((ADE, 2009; Allebone-Webb et al., 2016; Birner et al., 2009; Borrás and Edquist, 2013; Faure et al., 2016; Heemskerk et al., 2011; Howell, 2006; Kilelu et al., 2013; Kivimaa et al., 2018; Klerkx and Leeuwis, 2009; Knierim et al., 2017; Labarthe et al., 2013; Leeuwis and van den Ban, 2004; Mathé et al., 2016; Ndah et al., 2018; Röling and Jong, 1998; Steyaert et al., 2017).

Particularly, the key analytical concepts of the Field Peer Review are the Innovation Journey (Van de Ven et al. al., 2000) and the Spiral of Innovation (Wielinga et al. 2007). According to the innovation journey methodology, the innovation process can be understood as a challenging journey from the initial conception through to final implementation that demands a great set of skills for each step of the innovation process to make ideas thrive. The innovation journey approach has been adapted to interactive innovation by matching with the seven-phase model of the Spiral of Innovation (Wielinga et al., 2007; AGRISPIN project), which is used to orient free actors within different steps in the innovation process, namely the initial idea, inspirations of supporters, planning, developing new ideas or practices, implementation, dissemination and embedding changed practices into the institutional environment.

Basing on these concepts, the i2connect framework of analysis focuses on three main issues:

- The contribution of advisors in supporting individuals or groups involved in interactive innovation. The leading evaluative questions are: which support is being (or should be) offered? By whom? Through what methods and tools?
- The effectiveness of advisors in innovation, that is how this support helps the process to move to the next phase.
- The conditions, both internal (advisor's characteristics) and external (environment), that enable the specific actor(s) to play support functions.

The analytical framework follows the "best fit" approach (Birner et al., 2009), aimed at identifying elements that "fit for" specific cases and the environmental conditions that enable them, rather than those that are indifferently defined to be "best practices". Therefore, the enabling environment, in terms of innovation and agricultural policies, but also mind-sets and attitudes and practices, are intrinsic parts of this framework. Moreover, the assessment of the effectiveness of advisory in innovation is carried out by using the reflexive evaluation methodology, aimed at triggering a collective reflection on the results of actions undertaken within the innovation case under review.

Given the diversity of practical cases to be reviewed, the dynamics and the actors involved, the design of an outline for the interviews has not been considered appropriate, preferring to leave the peer panellists to design the most suitable interview scheme. However, interviews must allow obtaining a standardised classification of collected data and asking the right questions in the right order.

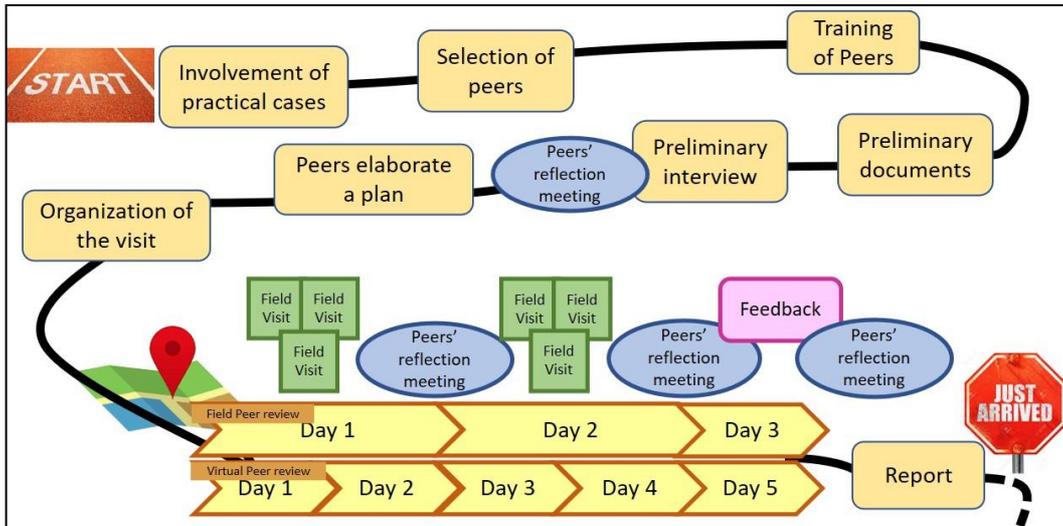
To allow a correct use of the question framework, avoiding poor drafting of the interviews that could lead to practical problems during data processing, a flow chart and a checklist to be used to check what information has been collected and what is still missing and to reflect on relevant elements for the assessment of the best practices, have been drawn.

1.4 The steps of the Field Peer Review

The peer review process (fig.2) consists of 4 steps which take about two months to be prepared and organized:

1. peer reviewers' selection and training;
2. preliminary interview/documents and organisation of the field visit;
3. field visit;
4. peer review report.

Fig. 2 Field Peer Review process



1.4.1. Peers selection and training

Field Peer Reviews are carried out by teams of 3-4 peer reviewers. The field review panel consists of one farmer, one advisor and one i2connect partner or third-party organisation.

The i2connect partner plays the role of **peer coordinator**: he/she **organises** the peer review activities, **facilitates** the interaction, **records** the outcomes of the field reviews and **drafts the Field Peer Review Report**.

The **farmer** and **advisor** reviewers are chosen from each of the selected practical cases (but not from the same case). They are expected to assess the practical case from their own perspective, based on their own experiences and impressions and should actively engage in exchanging questions and answers with the practical case.

A second person from a partner or third party of i2connect may participate as an observer, to record the field peer review from a **quality control** perspective. In view of testing and improving the methodology, at least one i2connect partner participated as an observer in one out of ten pilot Field Peer Reviews.

The peers' assignment is to: 1) read the provided documents and collect the preliminary information, 2) elaborate a plan for the peer review (who is to be interviewed, questions to be asked to each subject, etc.), 3) conduct the Peer Review (collect information, conduct interviews, analyse results, provide feedback, etc.) and draft the final report. They also must attend the "Peer Training Program" aimed at providing them with the information needed for the job of reviewer.

1.4.2. Preliminary information gathering and organisation of the field visit

A key factor for maximizing the effectiveness of the Field Peer Review lies in motivating (encouraging) the participation of all actors involved in the practical case. To this aim, the case representative is promptly informed about the goals of the Field Peer Review: a

common understanding on key substantive issues to be addressed and information to be gathered needs to be developed between the practical case and the peer group.

On the other side, each selected practical case is asked to identify one farmer and one advisor to act as peer reviewers of other cases, and a facilitator to provide support to the peers during all phases of the review process.

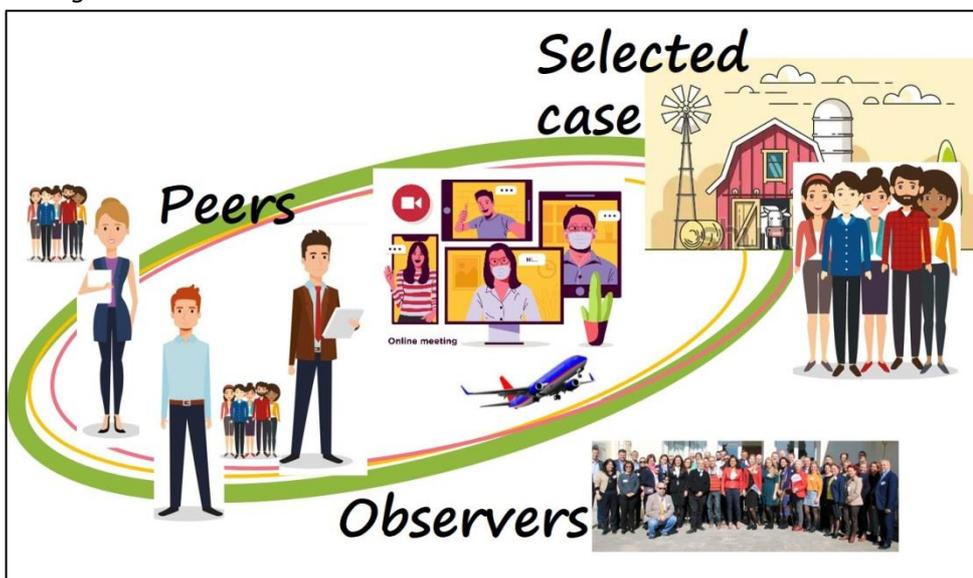
The peers gather preliminary information about the selected case through: a) an Initial Information Sheet, that includes contact information and details concerning all persons involved in the practical case; b) documents concerning the practical case, including previously assessments and reviews, which are already available in English language; c) a preliminary interview (using a common outline) with a key actor to gain an overview of practical case in its complexity.

Based on this data gathering, the peers develop a review plan which defines: i) the subjects to be interviewed (specific actors or typologies); ii) the questions to be asked to each actor/group of actors, according to the role played in each phase of the innovation process; iii) the methods of collecting information (e.g. how many individual/group interviews, guided visits, etc.); iv) the estimated time for the visit.

1.4.3. The Peers' Visit

The *Field Peer Visit* is the core activity of the Peer Review procedure.

Fig. 3. Actors involved in the Field visit



Due to the Covid19 pandemic, the visit is carried out online (*Virtual Peer Visits*). The Virtual Visits are challenging because they seriously reduce the possibility to interact and customize the relationship with the people involved, as also the use of some information collecting tools, such as observations and guided visits. The development of a methodology as successful as possible requires a careful observation of the pilot Peers Visits and will be implemented by doing.

The review approach is built on interviews (individual or group), focus groups and observations. Peers discuss and compare all the data collected in each activity, to assess

its relevance and representativeness, immediately after its conclusion. The discussion is structured around the question flow and the peer review checklist, whose questions drive the reflection towards the final assessment.

At the end of the Peer Review, the Peers schedule a feedback meeting to share the results with the reviewed practice case and request for further explanation, while stimulating a reflexive assessment by the actors. The core objective of this verbal exchange is a complete understanding of the feedback. The visit ends with a final retrospective examination of the Peer Group.

The time frame of the visit depends on the complexity of the reviewed practical case (type and number of involved actors, innovation typology, etc.), even if short visits or online sessions spread over several days are recommended.

1.4.4. Report and feedback

The findings of the Field Peer Review are presented through a Field Peer Review Report, which is drafted according to a provided outline. The goal of the report is to provide a short narrative of the innovation case by following the questions flow and articulating around the different phases of the innovation process.

The Report includes the peer reviewers' reflections about the practical case and the key findings concerning interaction between actors, the support actions performed, the conditions, both internal (advisor's skills and capabilities) and external (environment), that enable the specific actor(s) to play support functions.

Reviewers' feedback on the field peer review process is shared with T2.4 and T2.5 leaders within dedicated workshops, aimed at highlighting strengths and weaknesses (bottlenecks, dead times, lack of time, communication difficulties, language issues, etc.) and providing insights for the improvement of the methodology.

1.5. Data privacy

In line with I2Connect deliverable 7.1 Ethics a sorrow data privacy protocol has been established for conducting the filed peer reviews.

Before the panels started all participants were asked to fill in an online informed consent form. A minority of the given consent have not been received appropriately and/or in time. This shall be repaired with the panellists involved as this is needed to remain compliant with the GDPR and therefor data may be used for further research within this research. If for some reason the consent for a panellist cannot be repaired, this data will be removed from the dataset. The project assumes that this will not be necessary and it will be resolved promptly and in accordance with requirements through earlier agreements with the panels involved.

Literature

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2. Field peer review reports

In Task 2.5 during the first round ten pilot cases were selected to participate in the field review. All 10 cases have been conducted, however the report of the case on Contract rearing group Co. Leitrim will be included in the next round of pilot cases.

Table: List of panels

Panels and country	Panel Coordinator
AGROSYL: feed autonomy and animal well care, thank to wood and forest: France	CRA Occ.: Marie Boitelet
DIAL: Local agroecological innovation system to stimulate emergence and conception of innovative feed autonomy systems: France	AGRIDEA: Bänninger Alfred
Star'Terre, la plateStar'Terre, la plateforme agri-inno-alimentaire de l'arc lémanique – Switzerland	CRA Occ.: Marie Boitelet
Sustainable Uplands Agri-environmental Scheme (SUAS) EIP – Ireland	OMKI: Laszlo Gabor Papocsi dr.
TRAS.IRRI.MA project: " Transfer of validated technologies irrigation management and protocols to optimize irrigation" - Italy	SEASN: Mateja Gorse-Janezic
The use of alternative forage in cattle feeding, conservative maize stripping, immediately after catch crop as an alternative source of income: Poland	TEAGASC: Jane Kavanagh
Sharing best practice in discussion groups - Finland	TEAGASC: Jane Kavanagh
Dan tehnik / Technique day - Slovenia	CREA: PATRIZIA PROIETTI
Tracking high breeding value Hungarian grey cattle in pastoral livestock management using IoT technology – Hungary	CDR: Kasia Ambryszewska
Contract rearing group Co. Leitrim - Ireland	PRO-AGRIA: Terhi Taulavuori

Field Peer Review Report

AGROSYL

France



Marie Boitelet – Peer review coordinator

With contributions from

Nelson Guichet (AGROSYL, France)

Marcel Authier (AGROSYL, France)

Mireille Lafouge (DIAL, France)

Astrid Gerz (Star'Terre, Switzerland)

Urs Zaugg (Star'Terre, Switzerland)

February, 2021

1. Methodology

In the context of COVID-19, we used videoconference (ZOOM) to prepare and fulfil the field peer review. In the 10 practical cases selected in 2020, three of them were French speaking: Star'Terre (Switzerland), DIAL and AGROSYL (French). So we decided to organize our field review together, following this methodology:

Preparation of the field peer review

Participants: Alfred Bänniger (Panel coordinator for DIAL), Marie Boitelet (Panel coordinator for AGROSYL and Star'Terre), Astrid Gerz (Star'Terre coordinator)

Meeting (date and duration): 27/11/12 (1h), 17/12/20 (1h), 06/01/21 (2h)

Content:

- Definition of objectives,
- Definition of methodology for peer review,
- Creation of the presentation for the preliminary interview,
- Coordination for each field review.

Preliminary interview

Participants: Marie Boitelet (Panel coordinator Star'Terre), Astrid Gerz (Star'Terre coordinator), Urs Zaugg (Star'Terre actor), Mireille Lafouge (advisor from DIAL), Nelson Guichet (advisor from AGROSYL)

Meeting (date and duration): 12/01/21 (2h)

Content:

- Tour de table
- i2connect project presentation
- Peer case study presentation
- Presentation of the AGROSYL case
- Questions and Answers
- Organisation of in-depth study

Field peer review

Participants: Marie Boitelet (Panel coordinator Star'Terre), Astrid Gerz (Star'Terre coordinator), Urs Zaugg (Star'Terre actor), Mireille Lafouge (advisor from DIAL), Nelson Guichet (advisor from AGROSYL), Marcel Authier (farmer from AGROSYL)

Meeting and topic:

- 03/02/21 (2h): The interplay of actors within the project and the life of the project: relationships and roles between stakeholders, successes and blockages in relationships, advice and things to avoid
- 05/02/21 (2h): Testimony of a farmer: feedback from Marcel Authier on the project and the relations with the different actors?
- 05/02/21 (1h): Communication and dissemination of project achievements and results: what has been done and what remains to be done?

2. Factsheet of the case

Quick presentation

Over the years, agriculture and forestry have undergone a certain split that has led to specialise spaces (mechanisation, reduction of labour), in their uses. Agroforestry is attracting a certain amount of interest among farmers, especially in arable farming. The latter pursue different objectives: thermal regulation, erosion control, biodiversity, production of timber and fuelwood, fruit, heritage vision, etc. These plantations have their place in livestock farming, but their development has not yet been observed in the field. At the same time, silvopastoralism needs to be rethought, integrating new technical solutions.

Agroforestry and silvopastoralism have their place within a suckler cattle system extensive mountain or piedmont: production of animal bedding, contribution to food and fodder self-sufficiency (forest fruit supplements and ground fodder), diversification of marketed production and sources of income (sale of wood). Environmental benefits are also cited, such as reduction of erosion or nitrogen absorption, animal welfare. These are all avenues worth checking out.

Description of the project and its activities

- Action 1: construction of a system for experimenting with technical solutions: diagnosis of groups of farmers, state of the art on proven solutions, setting up of pilots.
- Action 2: capitalisation of results: monitoring-evaluation of the pilots, marketing study (potential for commercial development), comparison with similar projects, and construction of a support offer (agro-silvopastoral advice).
- Action 3: dissemination of results and implementation of innovations: coordination of the GO, dissemination, awareness raising and training (farmers and counsellors).

Objectives of AGROSYL

Five objectives were identified for the development of agroforestry on the participating farms:

- Promote food self-sufficiency
- Improving animal welfare
- Diversify income,
- Reduce external purchases,
- Improving herd management

3. The initiation period

The initial objectives of the project were to respond to the issues of food autonomy and animal welfare. These two issues had been raised significantly over the past 5-6 years by the department's¹ farmers, both livestock and cereal producers, particularly in the context of climate change. This change has observable effects on farms.

One of the responses that was identified is the integration of trees in farms. Agroforestry could be one of the levers for adapting farms to climate change.

To answer these questions, the AGROSYL project was submitted to the GOPEIs (ie. EIP-Agri Operational Groups)². Thus, farmers are directly involved in the search for solutions through scientific protocols and analyses.

The initial idea was taken from the field. Then the concept and the methodology were namely set up with research institutes. The farmers carried out the experimentation part on their farms based on the protocols established by the researchers.

Partners and governance

This project has therefore involved a wide range of partners:

- Chamber of agriculture in Ariège (5 staff involved),
- INRAe (National Research Institute for Agriculture, Food and the Environment)
- IDELE (Institute of Animal Husbandry)
- CRPF (Regional Centre for Forest Ownership)
- CNPF (National Centre for Forest Ownership)
- IDF (Institute for Forest Development)
- Farmers; in view of the objectives, the project integrated livestock farmers, but not cereal farmers.

The objective of the Chamber of Agriculture, which is the project initiator and manager, is to integrate forestry cultivation into the farms. The objective is to show interest in animal food autonomy and well-being in order to enhance the value of this resource.

The innovation in setting-up the project has been to integrate the farmers in the steering committee. This gave rise to a lot of discussion with the other partners, which were more research-oriented, especially important negotiations on the research protocols.

¹ A French "département" corresponds to the NUT3 level in the Eurostats classification.

² European Commission in 2012. The Europe 2020 Flagship Initiative "Innovation Union" specifies European Innovation Partnerships (EIP) as a new tool for speeding up innovation through linking existing policies and instruments.

The EIP-AGRI has been set up as a new tool to help create an innovation culture in the agricultural and forestry sector with the aim of fostering a competitive and sustainable sector that "*achieves more from less*" and contributes to

- ensuring a steady supply of food, feed and biomaterials, and
- the sustainable management of the essential natural resources on which farming and forestry depend by working in harmony with the environment.

To achieve this aim, the EIP-AGRI brings together innovation actors (farmers, advisors, researchers, businesses, NGOs, etc) and helps to build bridges between research and practice.

Starting the project

What was the project method?

- Level 1: questioning farmers to identify the needs of the field
- Level 2: answering to questions by building protocols with research and technical institutes
- Level 3: Dissemination of the research results to as many farmers as possible so that they take ownership of the results and implement the practices.

The project started in 2015. In order to identify how wood can promote food self-sufficiency, the Chamber of Agriculture first wanted to find out how livestock farmers perceive the issue. Therefore a survey was realised, which received 62 responses with the following results:

- Many perceive the tree as an asset on the farm for landscape and soil protection, and especially in livestock farming
- Constraint in terms of yield loss
- Decrease cost of maintenance

In response to this questionnaire, 34 technical solutions were considered and 4 were chosen to be tested (litter, mulberry, silvopastoralism, fruit trees enhancement).

Following this, the protocols were set-up with the different project partners and the experiments started in 2017.

Main actions

- Animal litter: 2 farms have experimented with 2 different methods
- White mulberry tree: 1 farm has experimented to have a fodder and food bank or food reserve for animal feeding.
- Silvopastoralism: 3 farms involved
- Valorisation of tree fruits as food for feeding animals on the farm: 1 farm involved

Budget

EIP-AGRI

Original budget comes from GOPEI (or EIP-AGRI OGs in English):

Managing budget

The Chamber managed the entire project set-up and economic management as coordinator (fund management, deliverables, etc.). It has a dedicated department that took care of the financial management throughout the project, so the advisor was relieved of these tasks.

During project construction, it is asked to partners to target the actions, who carries them out and how much it costs. The envelope is predefined with the number of days and the expected expenses. There have been some modifications along the way, due to a reorientation related to the possibility of developing a white mulberry nursery. Project leader predefine the budget in advance, but it can be modified along the way with supporting documents.

4. Planning and development

Organisation among partners

At the launch of the project

Which are the challenges for the Ariège Chamber of Agriculture? How to answer all the technical and scientific questions in order to be at the same time a supporting structure, a disseminating structure and an intermediary for the questions and issues addressed?

Composition of the Steering Committee (COPIL): Ariège Chamber of Agriculture which represents the Chamber and the participating farmers, IDELE, IDF, INRAe and DRAAF, Agrooof which is an association, AFAP, Pamiers agricultural college.

- COPIL (2015 to 2017): construction of experimental specifications.
- From 2017 onwards: subdivision according to project actions

As this body is very top-down, the partners' expectations towards the steering committee were rather to give orientations and take decisions on the steps/measures to be taken. Once the framework was set, they discussed together the concrete experimentation options & tasks and dispatched them according to the specific skills of each partner involved.

- IDF (technical approach and basic research): experimentation on silvopastoralism, fruit production and forest production
- IDELE (applied and fundamental research): study on the aspect of fodder resources to be quantified and qualified.
- INRAe (fundamental and in-depth research): establishment of protocols, particularly on the aspect of the mulberry fodder tree
- Ariège Chamber of Agriculture :
 - Project engineering : machine start-up : Mehdi Bounab
 - Communication, experimentation, implementation, follow-up: Nelson Guichet

Each entity had its own competences and the Chamber of Agriculture of Ariège came in support, with the skills of the forest and fodder teams. The Chamber acted as a link between each of the entities. The Chamber had more weight than the other partners. The project was launched and managed vertically according to the objectives and the financial means. As facilitator and coordinator, the expectations of the other partners were higher for the Chamber of Agriculture.

The work on the different themes was much compartmentalised: the partners worked on their experimentation but did not exchange between them. For some experiments, there was strong support, for others it was less developed.

Evolution during the project

There has been a change of project coordinator, Nelson Guichet has taken over from Mehdi Bounab.

The tipping point of 2019:

- The animation (facilitation) system was turned from top-down to bottom-up. In order to create the AGROSYL project's framework, protocol and structure, first project manager held few but long meetings up to 4 or 5 hours. Nelson meetings took about 20 minutes, no more, with the idea of getting to the essentials and if there was a need to go deeper,

he would do so afterwards in bilateral meetings. Nelson's meetings were more about facilitating a project that had already a good framework.

- Reinforcement of the IDELE and INRAe teams working on the project with more staff on the project and some WhatsApp groups.
- Nelson tried to set up a real sharing: he invited partners to do sessions and assist in experimentations in the field. In this way, the vision of each party changed and communication became more fluid and concrete.

A look back at this change:

- Creation of WhatsApp groups: on different topics
- New blood gives new impetus to the project

Blockage or misunderstanding in the project?

There has been misunderstanding among farmers and researchers. They are two parallel worlds and the Chamber of Agriculture has had the role of mediator. It was difficult to make the researchers understand that the laboratory aspect where everything is framed is not adapted to the reality on the field and difficult to implement on the farms. There is a certain amount of randomness.

As far as livestock farmers are concerned, it was necessary to accompany the experiment in order to produce concrete results that would enable technical solutions to be found.

The biggest difficulty occurred between the researchers that wanted to keep the mechanisation for harvesting the mulberry production from the trees (farmer does not have this kind of material) and the breeder who was not equipped to do so. For a year, there were some communication difficulties. Indeed, the INRAe researcher did not understand the farmer's initiative to change the protocol to make it more feasible in the field. This created a chill at the beginning. However, the initiative taken by the farmer not to follow the protocol with mechanisation but to let the animals graze in mulberry plots proved to be very conclusive. With this convincing result, the research and the farmer were able to discuss this new experiment.

For the other parts of the experiment, there was no conflict, as the practices were already known and managed by the farmers. The mulberry tree, on the other hand, was completely new to local practices. It is on very innovative, little-known subjects that there might be difficulties. At the beginning, farmers had some difficulties with experiment on silvopastoralism, but thanks to the Chamber's support, new practices have been implemented and realized an unseen experiment.

In fact, each stakeholder projects himself/herself according to his/her interests and this creates friction points when it comes to putting it into practice.

Moreover, the staff of the partners involved in the project did not necessarily have an sensibility to agriculture, which could have been a hindrance in their engagement and their immersing in the agricultural reality.

How to manage the conflict?

- Dialogue
- Explain the reason for decisions
- Propose a follow-up
- Do not criticize
- Provide a solution

Learnings

The touchy points and successes made it possible to identify the good practices in the project: the do's and don'ts to ensure smooth functioning between the partners. Failures are also results that should be valued. Moreover, the experiment on the white mulberry tree, whose protocol was adapted by the farmer, which created tensions with the researchers, was one of the most conclusive actions. The fact of being flexible on the fixed actions also makes it possible to make positive discoveries.

Following the facilitator's (Nelson) arrival and after conflict management, communication became more fluid. The partners now respond quickly when they are asked to do so by the Chamber.

FOCUS on a flagship action: the white mulberry tree

How did they come up with the idea of white mulberry as a food resource?

- In the project team, a Cuban researcher from INRAe in Montpellier had already worked on the subject in Latin America and in the INRAe centre in Lusignan, which worked on tree species.
- Mulberry: from an ecological point of view, it responds well to the future "Mediterraneanisation" of the département/region (ie. the fact that climate is evolving in the Mediterranean way)
- In terms of feed response, it is the best solution regarding fodder resources, and it has a very good digestibility.

Testimony of Marcel: farmer having developed the mulberry tree action

- 400 ha UAA (Utilised agricultural area)
- Working in GAEC³ with his brother and a self-employed person (which is not part of the GAEC but comes to do some task on the farm) for maintenance every morning.
- His motivation: child who will take over the farm and his own curiosity & conviction for more sustainable agricultural practices.

Origin of participation in the project: an opportunity

Marcel would never have thought of going into mulberry growing, just as he would never have thought of switching into organic farming 20 years ago. He contacted the Chamber of Agriculture to find out more about agroforestry and then Mehdi, the initial coordinator of the project, contacted him to get him involved in the experiment. He then participated in several meetings with the Chamber and INRAe to discover and finalise the protocols. Thus, Marcel's participation was "by chance".

³ GAEC : Groupement Agricole d'Exploitation en Commun. This is a legal status that allows several farmers to group themselves in one legal entity in order to share property, work and resources on the farm.

Farmer's objective: For Marcel, the stake was to have more food autonomy towards his livestock.

Course of the project

Marcel took part of the experimentation. However, part of the protocol was not suitable: it had been decided that the white mulberry tree would be harvested to make silage. However, Marcel was not equipped to do the harvesting. He doesn't have a machine which permit to harvest leaf of the mulberry. So he tried, in secret, to have the cows graze in the meadow: it worked very well!

That's where some tension with INRAe came from: the change in the protocol initially drafted. However, the grazing proved to be very conclusive. So Marcel's decision was decisive in the success of the mulberry tree experiment.

Marcel, mulberry tree pioneer

The experimentation carried out at Marcel's has been a real challenge: the grazing of cows in plots or mulberry hedges. Advisors from Normandy Region asked Nelson for advice on how to set up the practice. In Ariège departement, at first the other farmers or advisers ask questions, and then they think about adapting it at home.

However, he notes that interested farmers or advisors come mainly from other areas or even other regions: experimentation seems the most innovative as it is far away from our places. In the proximity, there is sometimes more scepticism.

Marcel's feedback on the project

For him, there is a strong stake in mulberry and trees in agriculture in general. He would like to develop this production on his farm and will replant next year. He is going to change the technical itinerary and the nature of the soil. By rethinking the way of planting, Marcel also wants to reduce the costs of this production.

There are farmers who take more or less risks; the innovators are those who take the real risks. In this case, the risk is positive, as far as the technique provides a lot of benefits to the farm.

The research was done on the farm. There is an impression of anticipating change and adapting to new methods. He considers himself as a pioneer, a forerunner, but he prefers being a forerunner instead of instead of being told what to do. It's better!

5. Implementation

Success factors

- Team working,
- Convincing results
- The pronounced personal investment in relation to the partners,
- support from institutes, particularly for dissemination,

- The climate played in favour at a huge point: in July 2018, the second heatwave of the year, all the grass was toasted and it was in the middle of a very high green mulberry tree. The video of white mulberry tree in standing pasture in the middle of the heat wave when all the grass around it was burnt showed the possibility of having a fresh resource in the middle of the heat wave. It was at this point that the dissemination really took off. They had 10,000 views on video and the phone calls exploded,
- The project theme makes sense for farmers in the context of climate change.

Recognition of results

The success of the project and the convincing results of the experiments were widely recognised. There is scientific, political and, more broadly, widespread recognition from the agricultural sector. On the political side, this can be seen at the level of the elected representatives who define the strategy of the Chambers of Agriculture: they have shown a strong interest in this project, which shows that the bet has been won.

Finally, Nelson has had requests from abroad, so there is international recognition of the project.

The involvement of the project leader

If the formal time dedicated to the project was 50 days, there were about 100 days of (informal) time spent on the project. There was involvement of the advisor beyond what was foreseen in the project and this allowed the development of actions beyond the expectations of the project.

What is gratifying for the facilitator: the positive feedback from farmers and partners, the numerous requests from breeders interested in the actions set up, who are outside the study area.

Regarding the farmers who are experimenting the measures on their farms, they are not legally partners of the project. There is therefore a strong investment by the advisor to accompany them: planting mulberry trees, testing mulberry tree nurseries... The technical support provided by the advisor is a compensation to the fact that there is no financial support to the farmers.

Evolution of the role of the advisor / facilitator

The advisor's role has evolved: technician → facilitator → project leader → agitator

The partners' view about the project activities has evolved over time, especially before and after the change of coordinator at the Chamber of Agriculture. In the beginning, the advisor's work was not as much recognised, but as the project and its successes evolved, the recognition has grown steadily. Moreover, when Nelson took over the coordination of the project, the listening to what he was saying was completely different.

From now on, there is scientific recognition of the practices developed and the skills of the advisor. However, his attitude towards farmers and their vision of the advisor has not changed.

Though, Nelson notes that if he had started as a facilitator, he would not have had the necessary background to bring a technical perspective to the experiments. Moreover, he does not see himself doing project facilitation without going into the field and doing technical work. The advisor notes that he has found a balance between project management and technical skills and advices. This also allows him to clarify where he is heading for the next steps.

From now on, his role is to disseminate while continuing to test and improve what he disseminates.

“I have learned a new job: project management with group facilitation, file preparation, experimental set-up and system monitoring. From a personal point of view: I had to take the project in hand and train myself on certain aspects.”

Recognition of work

What recognition of the structure?

- Salary increase
- From a confidence point of view: Nelson’s manager had confidence in him as a technician right from the beginning. When the position of project leader became available, they trusted him to take it over.
- Recognition gives the possibility of having free hand on important issues.
- Recognition from all the persons interested in planting mulberry: farmers, advisors, agricultural media ...

Communication and dissemination

Communication about the project

The “**Bois Paysan**” Facebook page is the main dissemination medium. Advisors take videos and photos when they have made the statements and publish them live on the page. Facebook is a tool that many farmers have mastered, sometimes better than the advisor. This support allows farmers and the general public to be informed and kept in touch.

What has allowed us to go further: **technical days, professional networks**: it allows us to be sprawling and to go on research, technique and the general public.

There is also the **training aspect**, which is one of the aims of the project. The training must permit to make farmers want to and able to grow mulberry trees. Training is based on the experiments and practical results of the project. Beyond the Ariège département, Nelson acts as a trainer. After the trainings, the farmers directly subscribe (or join the Facebook page) to the Facebook account “Bois Paysan”.

The results were disseminated via **videos, slideshows, technical days...** At the project closure, **technical sheets** will also be produced. The idea is to disseminate as widely as possible the techniques tested and the results.

Finally, Nelson receives requests for information via various channels: the radio France Inter, local press, technical organisations elsewhere in France or internationally. In terms of the press, the Chamber had put together a press kit for the paper press. For the visual press, the images on the plots speak for themselves.

A BRAKE: The closing seminar, which was supposed to be held in person, was postponed because of COVID. The idea is to postpone it in order to have all interested partners and actors present on the day of the seminar.

Organisation of communication

Planned communication at the launch

Dissemination has 2 levels:

- Scientific dissemination that takes a long time to achieve (article) that speaks more to the scientific world,
- Intermediate dissemination for the regular sharing informations from the Chamber of agriculture, which is weekly or monthly, which is less in-depth and drain more people.

Communication was organised, at the beginning of the project, within the Chamber itself:

- Mehdi: communication with the media,
- Nelson: Facebook publication and articles for local newspapers + communication at events related to the project.

For Facebook publication: no rules but publications according to news and visits to the plots.

Evolution of communication

Communication has developed strongly from 2016 onwards, as before there was little dedicated time and little political impetus. Then they developed the Facebook tool and Nelson spent more time on project communication.

Feedback about communication

The success of the communication lies in the feedback from actors far from the project zone. This has worked very well, in particular thanks to the "Bois Paysan" Facebook page.

The advisors have no competence as such, but function according to their appetite for the tools. They learn by doing. So Nelson trained himself using internet resources and in-house colleagues. He developed communication "on instinct" without too much formalism. It works well. Finally, there is support from the communication officer of the Chamber of Agriculture.

The most difficult thing is internal communication to give information to other colleagues who are not involved in the project or agroforestry.

The best success was the video made in July 2019: good subject, good timing and a lot of views. They did not expect such a success: there were more than 10,000 views in less than a week.

Continuation of the communication

Nelson now delegates some of the communication and must guide his colleagues on the appropriation of the project files and communication. However, it is complicated to accompany because it takes time, colleagues have varying degrees of ease with communication tools and the idea is that he should train himself as much as possible.

Internal communication

Overall, it was carried out by Nelson as project coordinator. WhatsApp groups were set up for each experiment. Nelson held short and regular meetings for each experiment with the project partners.

For the white mulberry part, the farmer involved set up a WhatsApp group which was immediately adopted.

Next step

Actions

- Continue the actions in another format than AGROSYL,
- Continue to disseminate results and practices as widely as possible,
- Dissemination of results in the agricultural world

The experiments have given good results, but for the mulberry trees experimentation, the financing part needs to be improved.

The farmer who worked on the mulberry tree, the "star" of the project, has joined a regional network of farmers who disseminate their practices to other farmers and the general public: the Innov'Action Ambassadors.

In the AGROSYL project, the partners started from scratch and conducted tests that serve as a basis and springboard for new projects. Experiments lead to new questions to go further.

The idea is to carry out new tests on other sectors and other productions.

In addition, the Chamber's advisors carry out interventions in other geographical areas and have gained recognition for the practices they have experimented with.

6. The AHA-Erlebnis: feedback on the gained insights

In the beginning the parameters were not optimal: there were independent silos.

The chamber had to make the partners work together. For peer projects, they sometimes have the same design and it is necessary to save time by having people close to the agricultural sector and working close together.

Nelson understood the improvement of the situation and he pushed to see more exchange. Coordination is crucial, but the animation part is also very important in order to move the project forward.

The challenge of making agriculture and research talk together is very interesting: the facilitator felt the need to break down these silos in order to move forward. He nevertheless managed to de-compartmentalise these two sectors.

There is one observation in several projects: the importance of complementary skills and the need for teamwork are, most of the time, factors of success. However, this is dependent on the teams, on the personality of each team-member.; the human level and interactions are important.

Complementarity: technical, human ...

Remarks on Marcel's testimony:

- Dynamic agriculture aspect: Marcel has evolved over time and farms are changing very quickly. It is interesting to see how he evolves, it is a good example of the adaptability of farms.
- The project allows farmers to test alongside current production in order to move forward,
- Good will of Marcel, to help the advisors and researchers who still have questions about the ideas applicable or not. Marcel has taken risks on a personal and economic level, he must be valued and taken into consideration for future projects,
- A lot of admiration for Marcel's very entrepreneurial and innovative spirit, who wants to anticipate rather than suffer.

7. Lessons Learned

For Nelson

Going back to the future, i.e. re-establishing a calendar of what has happened, and the project allows Nelson to project himself on the farms he will accompany. He identified certain issues that were not done with Marcel and on which the project actors must be vigilant for the future. Marcel's viewpoint during their exchanges revealed to him that it is necessary to accompany the project leaders more intensively.

In terms of time spent: Nelson spent much more time on the farm than defined in the protocol, because he enjoyed working with Marcel.

The peer evaluation exercise allowed him to refocus on the project and to have a mirror effect to see what could be improved.

Concerning communication, Nelson became aware of the need to better frame and monitor the trainings, as well as transmitting a part of the project communication to colleagues.

For Marcel

What is gratifying is that others are going into practice. You have to find the right routes and solutions to be credible. He also notes that there are a lot of expectations from non-innovative farmers towards innovators.

For Urs

Due to the greater distances, communication was digitalized at an early stage (social media). Thus, the project and its impacts were disseminated at an early stage which helped to make progress the project (pull and push effect). Facilitators to “translate” the concepts, languages and cultures of the different actors (researchers, farmers, grand public) are essential.

It seems that there is still a lack of systematic to ensure this (which means to have capable facilitators) on an institutional level – the part of “luck” was rather high (researcher’s knowledge of Cuba, change of facilitator, engagement and understanding of farmer, etc.) in this project. But it seems, that the actors caught the luck and build on it. Maybe that can be taken into account when designing new project opportunities on FR or EU-Level.

It was great to see the common understanding of the different partners of the project – even if they had different roles. Regardless of the objectives, in the centre of all activities should be the entrepreneur (farmer). Finally she or he is the one that makes the difference. If a new technology, methodology or whatever is not accepted in the field, research and or advisory services (“vulgarisation”) has no impact. The project has shown that to ensure and enforce this common understanding is crucial. Congratulations and good luck.

For Astrid

Studying AGROSYL project was very interesting and challenging research and farmer in order to make them exchange seems to be crucial to go further on farming innovation. Project leader has succeeded in the big task of making research and farmers speak and build innovation together.

Our exchanges on AGROSYL case, that can be connected to Star’Terre case study, showed clearly that complementation of skills in project is key succeed factor. There is a real complement and importance of human and technical skills. Many links have been done between those two projects, AGROSYL and Star’Terre, about management, success, difficulties and reflexion.

Marcel’s testimony was very interesting because he permit us to understand why a farmer decided to get involved in such a project. Moreover, it seems that advisor and farmer developed a real strong and trustful relationship.

Field Peer Review Report

DIAL Project

Department Aveyron, France



Main author

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With contributions from

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Astrid Gerz, AGRIDEA, Star'Terre project

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1. Introduction

Peer review is defined as the evaluation of a work by one or more people with similar competences as the producers of the work (peers) (Wikipedia, 2020). This evaluation yields feedback from people within the same discipline which is used to improve quality standards and performances.

The main objective of the i2connect Field Peer Review is to assess roles and function of advisors in supporting innovation processes, the effectiveness of this support and the enabling context. Therefore a comprehensive peer review methodology has been designed to accurately assess the advising practices within interactive innovation cases under review. This includes information about roles and functions, skills and competences, key actors' reflexive evaluations, peer observations and other evidence.

Source: i2connect: Field Peer Review - Methodology document and Guidelines, Patrizia Proietti, 2020

The Peer Review originally conceived as a field investigation took place under the specific conditions of the COVID-19 pandemic. Therefore, all contacts, training, the preparatory interview and the 3 in-depth peer review sequences had to be conducted online in the form of GotoMeeting sessions. Nevertheless, these meetings quickly resulted in a good and confident exchange between the project representatives and the peers. Some topics were sometimes less clear due to the on-screen exchanges. However, the team was able to interview a very competent and well-prepared project manager. The four interview sequences lasted about 90 minutes each. Compared to an on-site visit, these were relatively short but very focused and intensive conversations. However, it was more difficult for our partners to include farmers.

Name	Name-First name-Project
Panel coordinator	Alfred Bänninger (AGRIDEA)
Peer Panel	Astrid Gerz (Star'Terre /AGRIDEA) Farmer Berthe Darras (Star'Terre) Advisor Nelson Guichet (AGROSYL)
Case study	Jean-Marie Tomaszuk (DIAL)

2. Factsheet of the case

This project aims to set up an innovative mechanism for consultation between partners who contribute to the development of innovative and agro-ecological practices implemented by farmers in southern Aveyron.

On the other hand, it aims to promote the emergence, design and development of local agro-ecological innovations based on "the feed autonomy" of farms.

The South Aveyron is a territory with a lot of livestock (90% of the turnover of agricultural production), poultry, pork, cattle and milk for Roquefort cheese. South Aveyron is the terroir of Roquefort AOP.

The project seizes the opportunity to bring together several agricultural and regional actors of the South Aveyron for cooperation and thus also to intensify the common exchange. DIAL is a multi-skilled approach to serve the agro-ecological transition with partners, farmers and other invited experts.

The 7 partners of the DIAL project

	Institution du projet	Name of the people working in the DIAL project	Steering Committee	Cellule de réflexion	Technical Committee	Farmer	Technician	Manager, facilitator
1.	Chamber of Agriculture of Aveyron	Jean-Marie Tomaszuk, jean-marie.tomaszuk@aveyron.chambagri.fr	X	X				X
2.	National Institute for Agronomic Research INRA - UMR AGIR	Vincent Thénard, vincent.thenard@inra.fr	X	X	X			
3.	Regional Natural Park of the Grands Causses	<i>information will follow</i>						
4.	AVEM (Association of Veterinary Breeders of Millavois)	<i>information will follow</i>						
5.	EPLEA Lycée Agricole La Cazotte	<i>information will follow</i>						
6.	Roquefort Confederation, Breeding Service	<i>information will follow</i>						
7.	UNOTEC Ovine and Technical Union (a producers' organisation of sheep farmers)	<i>information will follow</i>						

The challenge is to develop innovative and agro-ecological techniques in cooperation with various actors in research, extension and agricultural practice, to evaluate and discuss them, optimize them and disseminate those using appropriate methods. In a sector subject to economic and social pressures, the objective is to jointly develop and implement innovative and agro-ecological solutions. In this way, farm emissions and

certain aspects of biodiversity should be increasingly balanced. Tangible and foreseeable climate impacts must be taken into account.

The approach is to address and implement the problems in a clear and balanced project, in particular with the participation of farmers. In this way, a top-down approach, which would not be supported and accepted by farmers, can be avoided.

What is new in this project? Although sometimes in competition, organisations work together on a project and thus come closer to each other in terms of problem analysis and exchange.

3. The initiation period

Initial idea

Where did the initial idea come from? The Aveyron Chamber of Agriculture and the National Institute for Agricultural Research INRA - UMR AGIR had the initial idea: In the years 2015 and 2016 there were opportunities for a local authority - the Regional Council of the Occitanie Region - to set up operational groups (EIP, European Innovation Partnership). Within the perimeter of the Regional Natural Park of the Grandes Causses several collectives of farmers are working on the theme of agro-ecological transition. This region includes about a hundred municipalities. INRA had contacted and solicited the Chamber of Agriculture. Faced with the observation of a lack of sharing of practices and weak interactions between these collectives, the idea was to create an innovative mechanism for collaboration between partners contributing to the development of innovative and agro-ecological practices. With the objective of "feed autonomy", they wanted to address several issues: climate and economic aspects, fodder inputs, control of feed rationing.

Several stakeholders with different interests expressed their willingness to participate in the project. The collectives of farmers from UNOTEC and the Chamber of Agriculture decided to participate. Also the EPLEA La Cazotte agricultural school was interested in collaborating to exchange on agricultural issues.

Before the project, there was relatively little exchange between some of the partners and situations of strong competition existed.

<p>The role of research, extension and farmers ;</p> <p>Results for i2connect</p>	<p>The research gave impetus to the project through addressing the lack of sharing practices and weak interactions between the collective. The research and extension services (Chamber) sat down together and exchanged views on the situation and the analysis of the problem. They quickly agreed that the problems were relevant and established initial contacts with relevant actors in the region (farmers' organisations and collectives).</p>
<p>Methods :</p>	<p>Conversations, Project outline</p>

Inspiration

It was a 3-4 month stage on 3 levels: Within the perimeter of the Grande Causses Regional Natural Park, several farmers' collectives were already working on the theme of agro-ecological transition. So they were already a little familiar with the subject.

- INRA was already working with some people who were involved in research projects and got in touch with them.
- The Chamber of Agriculture has contacted the territory ;
- The Regional Natural Park has contacted theirs farmers. They had also already worked with AVEM, UNOTEC and the Chamber of Agriculture. At that time, they were already somewhat used to exchanging practices.

The role of research, extension and farmers	The advisors (and researchers) were immediately able to make use of their good territorial network. Together, they concretised the first project idea and then contacted the relevant actors in the territory (farmers' organisations and collectives).
Methods :	Conversations, e-mail contacts

4. Planning and development

Planning

Planning took place, as is very often the case for projects to be supported by a programme, during the design and formulation of the project application.

The project proposal was drafted by the Chamber and INRA, and elaborated with the other partners. Next, a budget and a financing proposal were also drawn up. In this process initial reflections on the structure/organisation of the project started.

There are two decision-making bodies: the Steering Committee and the Technical Committee. The actors have developed this in an improvised and evolving process. To accompany the process, they have worked with a facilitator from the Chamber of Agriculture.

COPII, Steering Committee

The tasks of the elected representatives of the organisations are, to decide on strategy and budget, conventions, communication towards other actors in the territory. They have meetings on average 2x per year.

The Steering Committee is made up of a pair from each partner: advisors and technicians who are directly involved in the action. Different sizes of partners:

- AVEM has 4 employees (3 veterinarians, one agronomist, one person was involved in the project),
- Chamber of Agriculture (has more than 100 employees): 4 people involved, including the project manager. In the Committee: 1 technical person and one

from the administration (Jean-Marie Tomaszuk) who could engage the management or the board of directors (the structures of the elected representatives).

- For INRA: A manager of the administration
- Farmers elected to the boards of the organisations. People who could make decisions and engage partners (not technicians but decision-makers).
- Farmers representing 3 farmers' collectives (informal groups) who were already accompanied on the territory. To position farmers, independent of organisations and also representing farmers' collectives. One of the collectives was accompanied by the Chamber, another by AVEM and a third by UNOTEC. They did not have any particular mandates, they had been designated by their farmers to participate in the Steering Committee.
- 3 representatives of the project's funders: 1 representative of the Regional Directorate of Agriculture, 1 representative of the State (co-financer), 1 of the Occitan Region, which manages the European fund.

Objectives of COPIL: To select the areas of work (not necessarily the technical themes) and to validate the themes. The Committee's positions: Feed autonomy, prospective on the future of the territory and the axes to be worked on for agro-ecological transitions. Their thesis with participatory prospective methods is: "How to increase the number of active people in agriculture to boost the territory, while developing sustainable agriculture? »

An element is this is to validate the communication towards other actors of the territory: Syndics, Mayors (the Communes), and representatives of the State Department; validate technical topics, then organised and realised by the TC.

Technical Committee, TC

The Technical Committee brings together the advisers directly involved in the project. Meetings are organised every 3 months. Advisors and technicians represent each COPIL partner. One person per partner, and sometimes guests are invited, depending on the theme (e.g. Pastoralism -> joint training of partners, because young farmers know less, as knowledge is lost. The theme is important for agro-ecology and feed autonomy. The COPIL has validated this. An actor organised the training).

The TC works on technical themes and the preparation of topics for COPIL. Exploring topics, but not making decisions. Sometimes difficult to assess or prioritise themes. Meetings by theme or by project. E.g. Sylvio-Pastoralism: Undergrowth as fodder material: COPIL gives the ok. The school has worked on this axis. The TC has a certain autonomy to analyse existing experiences, etc. (in the implementation).

The working groups

The roles for the working groups were set according to the needs of the steering committee.

E.g. Discussion with farmers and advisors: What is the impact of a change in practice (such as no-till) on the farm? How should advisors take this change into account?

The day-to-day operational manager of the project

The day-to-day operational manager of the project (from the Chamber of Agriculture) was responsible for carrying out the operational aspects and liaising with the partners, mobilising them, building actions in the field: identifying innovations, working with farmers, setting up dissemination days/publications. This is an important role.

<p>The role of research, extension and farmers ;</p> <p>Results for i2connect</p>	<p>The advisers and researchers considered the possibility of implementing the project through the EIP programme. Thus, they carried out the first written preliminary work on the design and formulation of the project: initial situation, objectives, project activities, partners and their competences, division of tasks, project structures (bodies), project stages, budget, financing.</p> <p>The project (application) provides an important basis for discussion with the partners. In this phase, there is a high degree of flexibility with regard to the design of the project. The more prospectively the project application is formulated, the easier it will be to implement the project later on. The practical implementation of the project organisation takes place after the project has been approved (in the development phase).</p> <p>The important role of the operational project manager (Chamber adviser) is that of a contact person, communicator, networker, organiser, facilitator of meetings and workshops, mediator of ideas, etc. The operational project manager is a key player in the project. For major events, he or she is supported by the “senior” project manager.</p>
<p>Methods :</p>	<p>Project application, discussions, emails, meetings, site and field visits, workshops, web-based document sharing.</p>

Development

How was the project coordinated?

Reflection cell

After 10 months the initiators of the project also created a **Reflection cell**, which provided elements and bases for the COPIL and TC decision-making bodies. The strategic decisions were taken by COPIL. The strategic decisions were prepared and proposed by the Technical Commission and the Reflection cell.

The Reflection cell is composed of the initiators of the project from the Chamber (project management) and INRA (scientific partner), 2-4 people, who observe what was being done and how, at 2 levels:

- On the technical content (e.g. erosion: safe scientific methods and can it be communicated?)
- How did it go between partners (and between competitors)? Who is active?

In the beginning the initiators did not foresee this. The need for a time of reflection between the initiators and to re-regulate. To manage the innovative aspect of the project (at partner and technical level). The need to take a step back from the subject of the project: Is a topic really innovative? Is it possible to disseminate a result like this? Need: To bring complementary elements to help the TC and COPIL to decide. To facilitate the work of identifying the innovation.

The functioning, the decisions between these bodies?

"The decision making is a bit cumbersome, but it's important to avoid cutting ourselves off from farmers and elected officials. It is difficult to mobilise farmers for reasons of time, the COPIL only meets twice a year.

Note from the farmers: It's an intellectual work, we don't understand, how will it be concrete for us (prospective thesis, some innovations)"? Soil conservation, positive feedback from farmers and application of methods. Make sure to involve farmers; sometimes they were wrong, sometimes they were right. A committee that brings together technicians risks missing the farmers' opinion. These COPIL exchanges are important, they bring the project actors back to the concrete.

How has trust between partners been created and boosted?

Interactions were created with the project. This brought trust between the partners:

- It's about working together and sharing common issues.
- Prospective work: Debates between actors on the challenges of the future. Today, all the actors say that there are things that must change in the future (production system, climatic effects, energy,...) and that there is no single model of exploitation. This was not the case at the beginning. The technicians and also the farmers, plus some of the elected representatives discussed among themselves (the presidents also as representatives). They agree on what is at stake. (it is a learning process...)

- What binds them together today is the common issue and that there is interest in talking amongst themselves. This is the cement of the next AGRO ECO LAB project.

Example in communication: DIAL did not create a website for the project, but the partners communicated themselves, using the DIAL logo. The partners kept their visibility. It served to build partnership and trust.

<p>The role of research, extension and farmers ;</p> <p>Results for i2connect</p>	<p>The senior advisor and the senior researcher have an important function as coaches of the whole project by keeping the overview and guiding the actors to develop solutions, implement their tasks and thus achieve their goals. Good preparation and guidance of organisational and technical decisions by the project managers are very important.</p> <p>Facilitating discussion and exchange on important issues facing farmers, extension workers and researchers in this context enables the whole project community to move forward and ultimately achieve a higher level of common understanding and action.</p>
<p>Methods :</p>	<p>Classical methods: conferences, meetings, workshops</p>

5. Implementation

Realization

The day-to-day operational manager of the project

The risk of difficulties and conflicts arises at the start of the project, when there is a need to work together concretely between the partners (time, etc.). It was important to be in regular contact with the partners, 2-3 days/months of communication/networking. Interaction with partners on a bilateral or sometimes multi-partner basis. Contacting by phone is very important. It takes time for these contacts, to listen to them, to motivate them again when engagement decreases (moreover in 2020 with COVID-19). The project had 3 people as operational manager in three years.

The definition, planning, implementation, monitoring and evaluation of the areas of work

The planning work was carried out using a common Excel spreadsheet: Project, work, institution, person, and calendar: This made it possible to share it in a transparent way between the actors.

Results of the DIAL project

Knowledge sharing between actors

- A regular sharing of each partner's productions, reflections or observations: Results of trials, observation of farming systems (remarkable, innovative), learnings from training courses, seminars, suggestions for joint actions (AAP,...): Training on Pastoralism for advisers and farmers.
- The organisation of joint events
The relay of information or knowledge in the respective networks
Thanks to DIAL the events were open also for participants outside of the associations. So much more information was shared between the actors of the territory.

Technical aspects

- Field trials and demonstrations
 1. Winter entry, a tour of the plains of the various plant cover crops: what technical itineraries?
 2. Plantain and chicory in your meadows!
 3. Sowing legumes under cereal cover in organic farming.
 4. Combating erosion and soil cover: Trials of different planting methods and different types of cultivation in the Rougiers
 5. Direct sowing of alfalfa/sainfoin/plantain in Rougiers spring 2017
- Two technical seminars:
 - The management of the herd soil balance: 120 participants;
 - Soil protection: 200 participants

There were different levels of partner involvement e.g. in the Chicory trials, monitoring the crops, organising a site visit, 2 big days with the farmers (with all the partners, specialists, also farmers on the platform), planned 6 months in advance with a project team.

The prospective work in workshops and the maintaining of links need a lot of time, but thanks to DIAL without competing with other tasks.

Conflict management

1. *Between partners/structures :*

Two organisations providing technical support to herds were competing in a call for projects on health monitoring of livestock. This created tension. There is a challenge to share the project results. So the elected members of the Chamber discussed with the leaders of the two partners. It's important to have interaction between the elected representatives and the leaders on this issue. So the challenge was to find themes where these organisations were complementary.

A conflict between 2 organisations: One working for a long time on a subject (1). The other (2) wanted to take action on this subject and work with a competing association on this subject, - a real conflict. They tried to understand what had happened. Communication error within the organisation (2). The decision-makers did not realise. So they put this subject in brackets and worked on the others. They tried to do some sequencing work (define clear work packages for each partner) to separate the issue of the conflict from the rest.

2. *Conflicts over technical assumptions: e.g. " Feed autonomy "*

- "With my soil potential I will adapt my herd to this (de-intensify).
- "For my milk market (quota), I'm going to produce with all my ewes that I have. Same with the land I have. I will buy the necessary complement".

It created debates of ideas. The project goes all the way with the 2 strategies/hypotheses, it didn't close the door, - it's an open collective.

3. *Conflicts between partners: How does the facilitator deal with them?*

At the time the project had 3 different personalities as facilitators. "It's a very central role: Listening, having time, kindness, posture in communication with partners - it counts as much as agronomic experience!" says the initiator. This is one of the very clear lessons of the project.

Project reporting

Partners have budgets and record working hours. There have been no discussions or difficulties (over- or under-consumption) regarding funding.

European resources: Some organisations had little or no experience with this funding. The final reporting with 7 partners was a little more complicated.

The role of research, extension and farmers ;	Important roles of extension and research in technical production issues and in exchanges with farmers.
Results for	In the event of conflicts, the operational project manager, the reflection cell and the heads of the organisations/partners involved are called upon to exchange views, analyse the conflicts and find solutions. One solution is to use sequencing

i2connect	to separate the conflict topic from the rest of the work. For the project managers "Listening, having time, caring, posture in communicating with partners - it counts as much as agronomic experience!" This is one of the very clear lessons of the project.
Methods :	Field trials, field visits, workshops, seminars, interviews, mediation, thesis

Dissemination

Dissemination to farmers

DIAL has used traditional communication channels to reach the 7500 farms in the Department, to disseminate information about DIAL: diary/events, news, advice...:

- Le Journal " Volonté paysanne de l'Aveyron " printed at 7800 copies weekly, 14 pages;
- The Chamber of Agriculture has its own magazine with 2000 copies, subscribers, published 6 times a year, 24 pages;
- DIAL has also taken advantage of the different channels of its partners: AVEM newsletter, UNOTEC and Roquefort monthly, the Regional Natural Park, the Lycée communicates with the students.

The network has worked well in reaching out to farmers about DIAL events:

- Field trials on forage varieties: Open doors, corners of fields, in different cultivation periods or at the end.
- Technical days: 10 - 15 farmers, half days, participatory
- Seminars with round tables

In addition to the paper and online articles, seminar slides were distributed. The project did not create its own website. But communication of the partners with the DIAL logo. This served to build partnership and trust. The partners kept their visibility. The DIAL experience has made it possible, for the Agro Eco Lab project the COPIL has ordered a website. A page on the Chamber's website. An Agro Eco Lab logo will be created.

What worked: technical days, seminars, ...

In the eyes of the farmers, the fact that the organisations are working together is very positive! That was one of the results. Especially for clients of organisations that were in competition with each other. Because farmers use the services of several actors and they see the different skills. Farmers were open to these partnerships. Rather between partners there were brakes.

There was interest in sharing topics and sharing concerns. Working together gives a more comprehensive approach to the topic. Very positive feedback from farmers.

A maximum number of dissemination and mobilisation channels: Thanks to the project there were more participants reached.

The project distinguishes 3 categories of farmers within the perimeter:

- Participants in all topics
- Participants 1-2 times
- The silent majority, never present :

Actors are concerned about this mass of farmers who do not come to events. How can they be encouraged to come? How can we reach them, widen the points of distribution? Are all the partners' collaborators updated, are they able to disseminate DIAL's achievements, to talk about agro-ecology with farmers? Raise awareness among other dissemination people? Here there are two types of important actors:

a) *The downstream sectors* (buyers of agricultural production): The ewe's milk sector and the operators (Roquefort cheese dairies, etc.).

Involve them in the work. Because demands from them can go against certain evolutions of production systems.

b) *Accountants and bankers* in contact with farmers (management board).

Can be trusted by farmers. Through the farm figures they can show that there are inconsistencies on a farm. They can push farmers to participate in innovative technical events.

Responsiveness to current or economic issues:

- Experience in a neighbouring Dept., apple production: Network of open farms, which welcome farmers all year round and not only at events and are ready to communicate. Additional information updated in the fields by QR-code. The farmer as a vector of communication and access to trials throughout the year.
- The technical data sheets often come out with a little delay to the problems that arise. How can experts react faster to questions? By radio? Via YouTube? Farmers can ask questions (e.g. one evening) to an expert table.
- Also to make the topic playful: e.g. "Sherlock Sol" as a police investigation about soil issues that attracted young people.
- How can advisors answer both short-term and long-term questions of farming?

Internal communication

The actors were caught by the fact that they were spreading a lot externally. Internally, it is different depending on the partners. At INRA, with their internal operating structure, the two researchers, plus the person who wrote their thesis, followed the project, they were a research unit. They regularly wrote and disseminated a lot. They had a recognised dissemination system. In the AVEM with four employees, the information passed fairly quickly. A little faster than in the Roquefort Service or the Chamber of Agriculture, where the volume of advisers is much greater. In the Chamber,

the people in charge of the project disseminated information to the employees. But they didn't spend as much time. From their point of view it was a failure, they didn't have integrated or prioritised the discussions on this issue. There was some dissemination of the articles made available. But they did not directly involve managers or people with technical resources. That was underestimated by the project managers.

<p>The role of research, extension and farmers ;</p> <p>Results for i2connect</p>	<p>Farmers have been well reached by the different agricultural communication channels. Thanks to this broad communication via partner organisations, more participants were mobilised. Finally, there remains a large silent majority of farms (but at least reached by the print media and the Internet) that do not participate in the events. One of the challenges is how to mobilise these farms.</p>
<p>Methods :</p>	<p>Publications in print and on the Internet, events, networking, use of new means of communication (radio, YouTube, ...).</p>

Embedding

The implementation of agro-ecological practices

Farmers expect simple answers, but the solutions are complex. Agroecology needs a multifactorial approach to achieve sustainability. But there are actors in the market who sell "miracle" solutions. E.g. cattle, fodder: Buy renewal (young cows) from outside. But if everyone does this, it doesn't work anymore. DIAL organised a day on "How to buy renewal? ». The day included questions on health, buildings, etc., and also addressed the other DIAL issues.

The project must have farmers, elected representatives, who are present, who give the strategic direction, who legitimise the action and who represent the project. Avoiding to fall into a project that is only piloted by advisors/experts from the different organisations. Strong leadership with a farmer who represents one of the institutions is needed.

The exchange at the level of the different Chambers of Agriculture on learnings? It is not structured for all themes. There is an organisation that allows this exchange of information and practical experiences.

A prospective study with a broader perspective

Within the framework of a thesis, with participatory prospective methods: "How to increase the number of active people in agriculture to make the territory more dynamic, while developing sustainable agriculture?" This process has made it possible to open up other themes. The aim is to set up concerted actions between the actors of the territory.

The DIAL project ended in 2020. Today it continues evolving under the name **AGRO ECO LAB**, with:

- More partners, economic operators (upstream and downstream) have joined the project, agricultural/phytosanitary marketing companies, also an organisation that develops organic agriculture.
- Taking into account the animal aspect (ewes..., sanitary aspects, the project was very vegetal at the beginning);
- A field laboratory centred on La Cazotte farm (Agricultural High School) with 6 test themes. It is open to farmers and partners.
- A tool for highlighting and promoting innovation (through communication).

<p>The role of research, extension and farmers ;</p> <p>Results for i2connect</p>	<p>The project has been completed and is now entering a new phase under the aegis of the initiators, with a broader thematic focus.</p> <p>Training and further training of agricultural advisers in Aveyron: The training of young agricultural advisers is the responsibility of agricultural and university educational establishments. However, the ongoing training of extension agents in technical and methodological matters is the responsibility of the various agricultural extension organisations. There is no common supra-regional institution, e.g. publicly funded, which supports advisers in their further training (courses, training, publications). Comparable institutions would be TRAME or AGRIDEA (Switzerland).</p>
<p>Methods :</p>	<p>prospective study, thesis</p>

6. The Aha-Erlebnis: feedback on the gained insights

The peer reviewers' reflections about the practical case, - the key findings.

The main success factors of the case

- Benevolence is a very important attitude of the project managers and the facilitator. Importance of the profile of the facilitator (benevolence is important, a catalyst for innovation, a guarantor of meaning and objectives, organised, etc.). Always keep in touch and try to understand the actions.
- Aura-leadership: the importance of having a leader who can mobilise people.
- Separation between facilitation and techniques: Someone is needed who has a coordinating role and time and who does not necessarily enter into all technical debates.
- Remain focused on the objectives and framework of the project, regardless of the vagaries of relations between partners.

- Begin with a common and mobilising subject. It is important that all project partners feel that there is a return on investment for them. Start where there is a return on investment and where all partners are winners.
- Capturing a maximum of ideas and proposals, agreeing to test them and confront them with reality.
- The time factor: Giving yourself time to take care of contacts, animation, development, etc. (also thanks to external funding).
- Farmers, and therefore elected representatives, must be present in the project structures, which give the axes and legitimise the action and represent it. Avoid having a project that is only steered by advisors and experts from the different organisations.

The main obstacles to be overcome or which have led to setbacks in the process

- Rivalries and conflicts between partner organisations working in the same field in the project area.
- The mobilisation of the vast majority of farm managers who do not participate in the events is a challenge. However, information can be disseminated using both traditional and new communication tools (new ones such as the Internet, videos and social media). However the active participation of farms cannot be imposed.
- Discussions on the meaning of the concept of feed self-sufficiency / autonomy.
- Internal communication in large organisations, with their own experts who were not directly involved in the project. This internal communication must be given sufficient weight as early as possible so that all employees can support the project and its results.

The project outcomes, as a result of these success factors and/or barriers

- The project brought together different actors from a region on an innovative topic. Thanks to this project, the cooperation between these (research and advisory) organisations could be revived. Professional synergies could be used and trust could be established.
- The project structures ensured the mandatory participation of farmers, advisors and researchers.
- Practical solutions have been researched, developed and tested with the participation of farmers.
- The results of the project were presented at events, discussed and disseminated through other communication channels.
- The project has created confidence and thus also the basis for a joint discussion on the future of agriculture in the region.
- The project's actors work according to a holistic approach, which takes into account the conditions for sustainable agricultural development. This fosters common understanding and trust.

7. Lessons Learned

This section is based on the reflection of the peer reviewers on the field review process.

What did we learn from the case to enhance interactive innovation?

- Consistent involvement of agricultural and regional organisations and farmers directly in the project and process of innovation development and implementation.
- Coherent decision-making and project structures that ensure participation down to the farmer level.
- The project makes use of the various existing organisational and professional infrastructures.
- This cooperation allows a new level and quality of common objectives and service delivery to be achieved.

What did we learn from the Field Review as a process to learn about interactive innovation?

- Thanks to the commitment of the people involved, an online Peer Review provides an in-depth view of the project and highlights the lessons learned.
- The peer review is a very efficient method. It enabled a good exchange between the peers and the project. The participation of the peers in several projects made it possible to make comparisons between the projects and to draw lessons for one's own project.
- The objectives of a Field Peer Review must be clear to the peers. The better prepared and trained they are for this, the more specifically they can analyse a project.
- In terms of time and effort, an online Peer Review is probably more effective than a real Field Review. But the visual and emotional impressions of a project visit are somewhat lacking.

Role of research, extension and farmers

Project phase	The role of research, extension and farmers ; Results for i2connect	Methods :
Initial idea	The research gave impetus to the project through addressing the lack of sharing practices and weak interactions between the collective. The research and extension services sat down together and exchanged views on the situation and the analysis of the problem. They quickly agreed that the problems were relevant and established initial contacts with relevant actors in the region (farmers' organisations and collectives).	Conversations, project outline
Inspiration	The advisors (and researchers) were immediately able to make use of their good territorial network. Together, they concretised the first project idea and then contacted the relevant actors in the territory (farmers' organisations and collectives).	Conversations, e-mail contacts
Planning	<p>The advisors and researchers considered the possibility of implementing the project through the EIP programme. Thus, they carried out the first written preliminary work on the design and formulation of the project: initial situation, objectives, project activities, partners and their competences, division of tasks, project structures (bodies), project stages, budget, financing.</p> <p>The project (application) provides an important basis for discussion with the partners. In this phase, there is a high degree of flexibility with regard to the design of the project. The more prospectively the project application is formulated, the easier it will be to implement the project later on. The practical implementation of the project organisation takes place after the project has been approved (in the development phase).</p> <p>The important role of the operational project manager (Chamber adviser) is that of a contact person, communicator, networker, organiser, facilitator of meetings and workshops, mediator of ideas, etc. The operational project manager (Chamber adviser) is a key player in the project. For large projects, he or she is supported by a professional moderator.</p>	Project application, discussions, emails, meetings, site and field visits, workshops, web-based document sharing.
Development	<p>The senior advisor and the senior researcher have an important function as coaches of the whole project by keeping the overview and guiding the actors to develop solutions, implement their tasks and thus achieve their goals. Good preparation and guidance of organisational and technical decisions by the project managers are very important.</p> <p>Facilitating discussion and exchange on important issues facing farmers, extension workers and researchers in this context enables the whole project community to move forward and ultimately achieve a higher level of common understanding and action.</p>	Classical methods: conferences, meetings, workshops, (reflection in retreats).

Realization	<p>Important roles of extension and research in technical production issues and in exchanges with farmers.</p> <p>In the event of conflicts, the operational project manager, the Reflection Cell and the heads of the organisations/partners concerned are called upon to exchange views, analyse the conflicts and find solutions.</p> <p>One solution is to do a sequencing to separate the conflict theme from the rest of the work.</p> <p>For the project managers "Listening, having time, caring, posture in communicating with partners - it counts as much as agronomic experience!" This is one of the very clear lessons of the project.</p>	<p>Field trials, field visits, workshops, seminars, interviews, mediation, thesis</p>
Dissemination	<p>Farmers have been well reached by the different agricultural communication channels. Thanks to this broad communication via partner organisations, more participants were mobilised. Finally, there remains a large silent majority of farms (but at least reached by the print media and the Internet) that do not participate in the events. One of the challenges is how to mobilise these businesses.</p>	<p>Publications in print and the Internet, events, networking, use of new means of communication (radio, YouTube, social media).</p>
Embedding	<p>The project has been completed and is now entering a new phase under the aegis of the initiators, with a broader thematic focus.</p> <p>Training and further training of agricultural advisers in Aveyron: The training of young agricultural advisers is the responsibility of agricultural and university educational establishments. However, the ongoing training of extension agents in technical and methodological matters is the responsibility of the various agricultural extension organisations. There is no common supra-regional institution, e.g. publicly funded, which supports advisers in their further training (courses, training, publications). Comparable institutions would be TRAME or AGRIDEA (Switzerland).</p>	<p>prospective study, thesis</p>

Star'Terre

The intercantonal agri-inno-food platform in the Lake

Geneva region, Switzerland



Marie Boitelet – Peer review coordinator

With contributions from

Nelson Guichet (AGROSYL, France)

Marcel Authier (AGROSYL, France)

Mireille Lafouge (DIAL, France)

Astrid Gerz (Star'Terre, Switzerland)

Urs Zaugg (Star'Terre, Switzerland)

Caroline Coquerel (Star'Terre, Switzerland)

Magali Estève (Star'Terre, Switzerland)

Berthe Darras (Star'Terre, Switzerland)

1. Methodology

In the context of COVID-19, we used videoconference (ZOOM) to prepare and fulfil the field peer review. In the 10 practical cases selected in 2020, three of them were French speaking: Star'Terre (Switzerland), DIAL and AGROSYL (French). So we decided to organize our field review together, following this methodology:

Preparation of the field peer review

Participants: Alfred Banninger (Panel coordinator for DIAL), Marie Boitelet (Panel coordinator for AGROSYL and Star'Terre), Astrid Gerz (Star'Terre coordinator)

Meeting (date and duration): 27/11/20 (1h), 17/12/20 (1h), 06/01/21 (2h)

Content:

- Definition of objectives,
- Definition of methodology for peer review,
- Creation of the presentation for the preliminary interview,
- Coordination for each field review.

Preliminary interview

Participants: Marie Boitelet (Panel coordinator Star'Terre), Astrid Gerz (Star'Terre coordinator), Berthe Darras (farmer from Star'Terre), Urs (Star'Terre advisor), Mireille Lafouge (advisor from DIAL), Nelson Guichet (advisor from AGROSYL), Marcel Authier (farmer from AGROSYL)

Meeting (date and duration): 15/01/21 (2h)

Content:

- Tour de table
- i2connect project presentation
- Peer case study presentation
- Presentation of the Star'Terre case
- Questions and Answers
- Organisation of in-depth study

Field peer review

Participants: Marie Boitelet (Panel coordinator Star'Terre), Astrid Gerz (Star'Terre coordinator), Berthe Darras (farmer from Star'Terre), Urs (Star'Terre actor), Mireille Lafouge (advisor from DIAL), Nelson Guichet (advisor from AGROSYL), Marcel Authier (farmer from AGROSYL)

Meeting and topic:

- 28/01/21 (2h) : The skills required for the entire Star'Terre approach and the relations between the different actors of the project

- 29/01/21 (2h): What next? What are the prospects and possibilities for perpetuating the Star'Terre approach, as well as the lessons learned?
- 29/01/21 (1h) : The selection process for projects benefiting from support (coaching and advice provided by a multidisciplinary team)

2. Factsheet of the case

Quick presentation

The Star'Terre project stands out, as it is not just an agricultural project, it links agriculture, food, entrepreneurship & innovation. This intercantonal agri-food innovation platform aims at creating an ecosystem to enhance the value of the territory's production and agri-food know-how by bringing the agricultural and non-agricultural sectors closer together. It is done through promoting collaboration between public and private organizations within the different ecosystems as there are not only agricultural advisers or farmers involved, but actors of the whole agri-food system in the territory. The idea here is to support the holders of local consumption initiatives & projects that need targeted resources to emerge and remain viable and create synergies between entrepreneurial and agricultural supports for more added value to producers, as well as making available support and tools to the agricultural sector which are little known. The platform was developed during a pilot project (PHR -local consumption in the Lake Geneva region) implemented with the support of the State Secretariat for Economic Affairs (SECO) in the framework of the PHR-Economy program, an instrument of the Swiss New Regional Policy (NPR). The objective was to create incentives for regional economic development, to test and strengthen economic exchange and food flows between urban and rural areas of Switzerland. The idea, after experimentation using this instrument, was to perpetuate the approach. From 2017 to the end of 2019, the Star'Terre approach was experimented and the partners tested it by accompanying pilot projects and consolidated the approach. The budget required for 3 years to test, experiment and innovate was €600,000.

The positive impact of the approach was widely observed and the partners were motivated to continue the adventure. From 2020 on, Star'Terre became a real start-up. Thanks to the support of the agricultural services of the 4 cantons Fribourg, Geneva, Vaud and Valais as well as AGRIDEA, the project has continued.

Knowledge of the landscape in terms of project and orientation in agrifood system is essential to track project and dynamic. At the start of the project in 2017, the team carried out a survey to identify local initiatives, which provided a comprehensive overview of what exists.

Objectives of Star'Terre

Star'Terre aims at a change of model:

- to bring the agricultural and non-agricultural worlds closer together, to make them better known to each other and to encourage collaboration.
- strengthening the entrepreneurial spirit of farmers, processors, distributors and sellers,
- support projects that are currently in a grey area in order to acquire new markets
- to develop an inter-cantonal approach in line with the coherence of the Lake Lemman area and thus be able to promote levers between the different territories
- identifying and sustaining specific activities and aid
- innovate

3. The initiation period

The aim of the project is to bring the agricultural and non-agricultural world closer together, in order to strengthen collaboration between the different sectors and promote synergies. The approach focuses on entrepreneurship and initiative for local consumption in the territory.

There are a lot of organisations to promote start-ups, but few that specifically support innovative projects and people involved in local consumption patterns and products, especially those on the borderline between the agricultural and entrepreneurial ecosystems.

The platform was developed during a pilot project (PHR -local consumption in the Lake Geneva region) implemented with the support of the State Secretariat for Economic Affairs (SECO) in the framework of the PHR-Economy program. This framework permit to develop all the actions and help start activities of Star'Terre, explained just below.

Partners and governance

Coordination: AGRIDEA

Project holders: services of agriculture of the 4 cantons (VD, FR, GE, VS) and AGRIDEA

Project team (operational level):

- AGRIDEA (3)
- SOFIES: (1)
- Ideix (1)

The authorities:

- Project team: 5 people = operational team
- COPIL: 5 people, 1 representative of each of the four cantons in the Lake Geneva region + 1 representative of AGRIDEA = skills to move things forward and define the framework of the approach.
- Expert team: 3 members of the project team and 4 external members = evaluation of projects responding to the defined criteria for benefiting from

support (coaching and accompaniment): received application documents as response of Call for project

Partners: various organisations from different sectors (cf. Website).

Main actions

Star'Terre, the main actions are:

- An existing and evolving network of multi-disciplinary skills: farmers, advisors, academia, training, research, training support...
- One counter: advice by telephone or physical meetings (for farmers and entrepreneurs)
- Time to coach projects selected by call for projects,
- Visibility: website, events...

Budget

5 main sources of funding (figures per year, in Swiss francs):

- Contribution from the 4 cantons involved: around CHF 95 000
- AGRIDEA contribution: basic mandate of CHF 60 000
- Swiss alternative bank: CHF 3 000
- Membership fees: CHF 3 000
- Membership fees: 2021 objective = CHF 3 000

Today 165,000 Swiss francs are insured, but there is a shortfall of 35,000 Swiss francs to operate normally on the annual budget of 200,000 Swiss francs.

Star'Terre has the some of the difficulties as the accompanied Start-Up : the finances are assured for a while, but other sources of funding have to be sought, in the case of Star'Terre namely private funding but also securing public funds in the medium to long term (at least a perspective of 3 years)

4. Planning and development

Organisation among project holders partners

Partners are mostly composed by the initial actors involved in the project. To make the project's actors work:

- COPIL: a meeting every two months,
- Operational meeting with the AGRIDEAs core team: Once a week,
- Coordination team session: kick-off at the beginning of each year, 3-4 sessions according to the actuality (communication, projects facilitating...)
- Regular bilateral exchanges.

Skills needed⁴ for the project

The approach accompanies a wide range of project themes, what are the skills most used by the structure and which made it possible to finalise the project?

Since the very first idea of the project, the skills and actions required were conceived as being multi-disciplinary and the project's objective covered several scales of action: inter-cantonal, inter-sectoral, etc.

Right from the design stage, several skills and resources had been identified as necessary and brought to bear: territorial services, coaching, project management, knowledge on marketing channels & the positioning of agricultural and local products, knowledge of financing, software expertise, business plan construction, networking... AGRIDEA as initiator and coordinator of the pilot project (2017-2019), surrounded himself since the first year of implementation with partners to complete the necessary skills, namely on issues related to circular economy (SOFIES) and to entrepreneurship and innovation coaching (ideix).

Among the challenges the team faced, figures the acceptance of new forms of collaboration and approaches. Those were not always well accepted and their adaptation took time and required creativity and persistence on behalf of AGRIDEA's coordination team.

Development of skills during the project

The approach widened the network of actors involved with a multi-stakeholder and multi-disciplinary approach that has grown. Moreover, if the competence does not exist internally, it does not hesitate to seek external contributors.

⁴ Indispensable skills of team: attentive, caring, patient, sociable and rigorous; know-how and soft skills (behaviour, empathy); good mediation, communication, writing & networking skills; sense of analysis and negotiation; agile; project management, including financial management; pragmatic; structured; adaptability ; perseverance; agricultural, entrepreneurial, legal, pedagogical, political, economic, etc. meaning crosscutting knowledge covering the different ecosystems/sectors.

During the course of the project, there was also self-learning. Everyone developed new skills thanks to this innovative approach. They trained and coached each other in the project team.

FOCUS: Call for application part

Star'Terre is a concept of facilitating and guiding innovative project. To find, exchange and choose project Star'Terre team will help, there is a call for application. What is it? First, innovative project leader explain its concept and project in an application field. Second, project leader send the application to the Star'Terre team during a defined period. To end, a jury study all the application project and select the most mature project to integrate them in the Star'Terre process.

Organisation of calls for application

1. Publication of the call of project proposals
2. Application (simple document, either PPT or 3 pages Word) = Holders of innovative initiatives/projects or ideas
3. First review and clustering of the projects = Operational team
4. Presentation to the COFIL
5. Experts team (evaluation thanks to several criteria announced in the call for proposals(see PPT for details): moreover structure, SWOT analyse and governance)
6. Vote = COFIL
7. Communication about selected cases = Operational team

Contexte & critères



3 appels à projet

Critères

- Idée originale ou projet innovant qui existe depuis moins de 3 ans
- Lien avec la consommation locale, une filière ou le terroir agricole
- Augmentation de la consommation de produits locaux
- Augmentation du retour de valeur ajoutée aux producteurs
- Projet basé dans le canton de Vaud, Fribourg, Genève ou en Valais
- Marché potentiel qui dépasse l'échelle cantonale ou susceptible d'être reproduit ailleurs
- Différence avec des projets déjà accompagnés
- Adéquation de l'accompagnement Star'Terre

French schema selection criteria about the call for project

What kind of support is provided to project holders?

- As part of the support of the selected projects = individual coaching

- Within the framework of not selected projects = collective advices through cluster workshops or meetings

In addition, the counter opens its doors to non-selected project holders for 30 minutes of free advice.

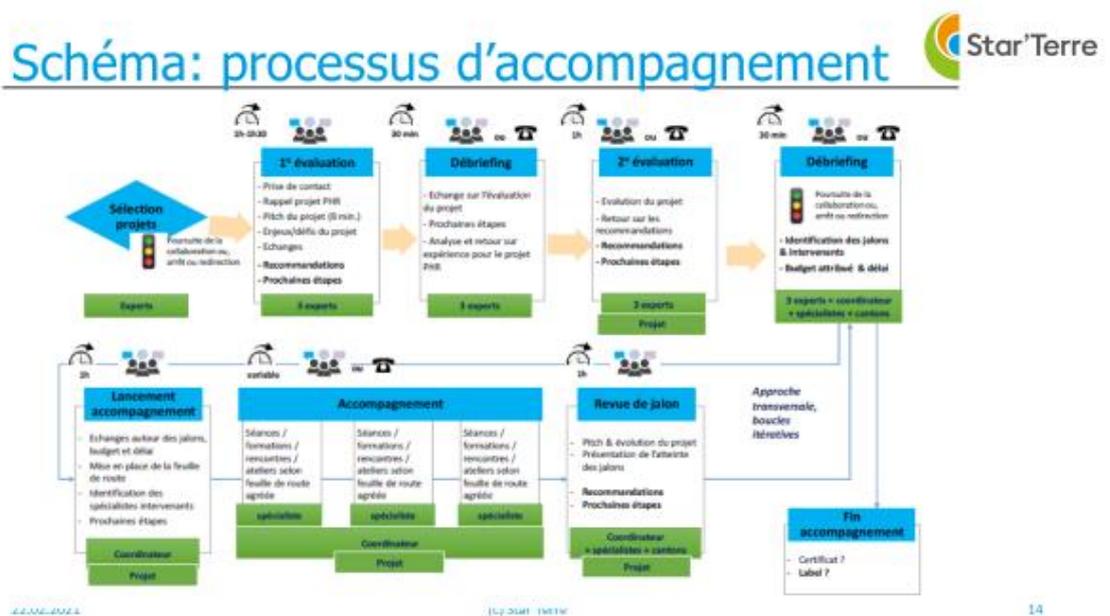
Project coaching:

For the part “Call for projects”, Star’Terre organised 3 calls: 2018, 2019 and 2020.

For all this calls, **88 projects** have applicate and **16 have been coached**. 5 new ones up to 2021

Once a project is selected, it is coached by Star’Terre team for a maximum of 3 years and in a limited budget of CHF 12’500 (which is coaching time only). The first step consists in the assessment of support needs and in fixing together the objectives of the support and the different miles stones to go forward and likely to contribute to the development and success of the project. The projects benefit from the approach according to their needs in all senses (legal, financial, technical, methods, tools, meditation...). At the end of the coaching, project holders have an end-meeting to identify learnings, appreciate the coaching process (what worked well and what could be improved) and what are the perspectives.

The idea is, that project holders will be enabled to develop their project as long as it makes sense for the 2 parties to collaborate. Once the project owners feel ready (sufficiently skilled) to continue on their own or if they fulfil the conditions to be taken over by other supports organisations (example Innosuisse), the support by Star’Terre will be finished. It is important to stress that Star’Terre compared to other support organisations, takes projects and initiatives in an “early stage” (not older than 3 years); moreover its simple procedures for accessing support differentiates is from other existing coaching and support instruments.



French schema of the coaching process

Coaching what is it?

Entrepreneurs are at the centre of the Star'Terre approach, which offers an "à la carte service". Once a project is supported, Star'Terre will not support a project that is similar (a copy & paste) to avoid any competition between supported projects.

What are the benefits for the project holders?

- Decompartmentalization and networking
- Advice and support not found elsewhere
- Door opening
- Contacts & networking of all actors
- Visibility and creditability
- Different points in the value chain
- Allows a hindsight on own project, provides an external viewpoint that allows to reconsider the project
- Coach play roles in structuring and dynamic of project
- Diversity of roles in coaching
- Mediation: bring them together to dialogue and look for tools to get out of a conflict situation.

Example of a project: "Lait equitable" (fair trade milk), by Berthe Darras

In Switzerland, there are problems concerning the price of milk. Indeed, milk should be sold at one Swiss franc, but this is not the case. Therefore, the Fair Milk approach is committed to remunerating milk at one Swiss franc.

The project will be launched at the end of 2019:

- There was a lot of work to be done and the project's actors have their heads in the sand and find it difficult to step back,
- There have been many difficulties in relation to the grassroots actors involved in the project,
- We had to step back to find solutions,

Berthe's project was supported on:

- Project management
- Mediation
- Connecting with other actors in the network
- For this, the project was accompanied by experts from Star'Terre and not an external expert

Star'Terre has made it possible to find solutions:

- Taking a step back to find solutions
- Networking to meet other actors who are very interesting for the project
- Providing legitimacy and visibility for the "fair milk" project

5. Implementation

Star'Terre : Key facts

- 4 cantons and AGRIDEA
- 200 ecosystem initiatives identified
- 69 applications within 3 calls of project proposals
- 16 projects supported (coached and accompanied)
- 4 major events with 135 participants

Factors of the project's success

- A strong and committed project team, with clear responsibilities and an efficient functioning (organised in administrative subdivision - coordination, finances, coaching/accompaniment, communication and network, with designed leads)
- COPIL is convinced and is the driving force behind the approach,
- Synergy with existing rather than adding new actions
- Switzerland is a small territory, so there is a good inter-relationship between the actors,
- Political impetus from the cantons needed: it exists a real political will to support and promote local products, in the territory
- The success of the actions carried out: when a project works well, it helps with everything: functioning, communication, impulse ...
- Agility and flexibility of the organisation and the team,
- Communication in the project,
- Perseverance and benevolence/goodness,
- Multidisciplinary & complementarity

Importance of the team and the people

Team's success

The team that set up the project was efficient, combines diverse, but complementary skills and know-how, and was very involved and motivated from the outset. This team also shared the view of the importance of entrepreneurship in agriculture, of the need to break down the barriers between the different sectors as a pre-condition for stimulating innovation in the agri-food sector. Moreover, the team was also unanimous in not wanting to add a layer on what exists in terms of support & tools provided by other organisations, but to fill a gap.

This core group, operational and decisional Star'Terre actors, was formed because the approach responded to a real need in the field and made sense in the territory.

It was necessary to determine the skills and possibilities of each person in order to define the possibilities of the project.

The team works well because:

- The members are complementary

- They pull on the same string (agree on the objectives, mission, vision and share the same values)
- Have defined responsibilities and processes
- Nobody is indispensable but everyone is specific and valuable,
- The team works hard,
- There is a horizontal structure

Success factors for internal communication and functioning:

- Transparency,
- Confidence & goodness
- Putting things on the table
- Communication tools (mail, WhatsApp, skype, phone, zoom),

Facing difficulties

There were disagreements in the project selection process and the governance structure at the beginning of the project, which could be resolved by transparent and constructive exchanges. Based on this, the strategy was adjusted to the new needs. It was not an easy moment to get through, but highlighting and resolving the difficulties strengthened the cohesion of the stakeholders and the basis of the approach. Thus, following lengthy discussions, the roles and the common objective were clarified.

This clarification took place in the COPIL thanks to multiple meetings that permit actors involved to present their point of view and clarify the aim of Star'Terre.

These difficulties made it possible to challenge the project teams and to create conditions for people to exchange both the positive and the negative. This awakened the creativity to find solutions suitable for the greatest number of people. There is work to be done and a posture to have to accept failure and criticism in order to move forward.

Seeing how the COPIL find out how to manage difficulties, the management and organisation keep going the same way, with exchange, discussion and question themselves.

Communication and dissemination

Communication about the project

What the dissemination plan of Star'Terre?

Several tools have been developed:

- Own website with its own identity (www.starterre.ch)
- Social networks (Facebook, LinkedIn)
- Newsletter (2 times per year)
- Testimony videos of projects holders benefiting from support/coaching (<https://www.starterre.ch/Medias/Les-news-de-StarTerre>)
- Partnership with media (newspaper and online articles)
- Communication channels (websites and social networks AGRIDEA, cantons and other partners)

The project is visible, which besides the fact that they are convinced about its approach and its usefulness, is a reason why the cantons are investing in it. Star'Terre is focused on an important topic of interest: local consumption and local initiatives as a cross-cutting approach; it is of interest for various actors: farmers/producers, processors, entrepreneurs, advisors, distributors, searchers, consumers... thus linking different sectors. There is a question of topic and timing to interest and take people along.

For communication, use of all the relays. "We try, we test and we learn". There are different types of communication:

- Star'Terre communication, which is aimed to all actors (publics & private) of the agri-food ecosystem and the entrepreneurship & innovation ecosystem (innovative farmers, processors, entrepreneurs.. in the whole value chain of local products & consumption.
- Communication towards agricultural actors (advisors, farmers, agricultural schools...) relayed via AGRIDEA, agricultural services of 4 cantons and other partners in the agri-food sector

Entrepreneurial communication: Ideix takes care making this link as far as it is part of the ecosystem of entrepreneurship & innovation; for instance startupticker.ch, the online platform for young entrepreneurs, innovators and supporters, relays news of Star'Terre in its newsletter.

The advantages of communication:

- Being agile and opportunistic, the complementary nature of the team makes it possible to use these different channels.
- The RS community is growing, we already do it ourselves and use our network.
- Many relays.

Communication about Call for projects proposals:

The communication of Call for application is done by:

- A video on the Star'Terre website explaining the procedure, criteria, benefits of support...
- Social networks (Facebook, LinkedIn)
- AGRIDEA'S website,
- Partners websites and social networks,
- Former winners (word of mouth and via their social media networks).

Appropriation

Exchanges between supported projects

There is also an exchange network between project holders supported by Star'Terre. Collaborations have been established between certain projects in terms of mutual advice, product/raw material supply or logistics share.

New solutions to build

Compared to the previous calls for proposals and the applications received, certain type of projects were recurrent, thus as for instance apps & software for product distribution, or e-commerce platforms. There are fashion effects, for example, in 2019 there was a whole cluster on participatory grocery shops. They had more or less the same challenges and concerns. As a result, instead of selecting just one, because they were very similar (same concerns, similar stage of development...) and to avoid the principle of competition between the projects selected, they found the solution to gather them in a workshop allowing them to bring up and discuss common issues and challenges. The 12 projects dealing with participatory grocery shops, shared their experiences and reflexions during a first workshop organised by Star'Terre, which resulted in the development and publication of a tool: a guide to create a participatory grocery shop. This tool was then shared among the participants during a second event and is widely disseminated through Star'Terre and other websites, media, articles.....

1. Next step

As time went by, the project's actors kept the actions that were working and making sense. There is a perpetual questioning of the approaches, measures and services provided to check what can be adapted and improved. Thus, for instance the project selection process following the call of proposals 2020/2021 has been improved (revised criteria and selection steps & better distribution and clarification of roles between the jury panels), or the internal governance system has been adjusted/lightened.

Actions

Star'Terre' coaching and support approach for selected projects has been strengthened and consolidated.

What is new is the counter that gives advice to farmers, entrepreneurs and any other actor in the food supply chain needing information and tools on topics at the interface of agri-food ecosystem and entrepreneurship, or contacts to other relevant structures. Since March 2020, about twenty people have been asking for information. It is also a service for project initiators or owners who have submitted a project but have not been selected for an accompaniment.

Star'Terre' also organises events for its network, gathering up to 80 people from the various sectors covered by its approach and topics, which aim above all to enhance networking (exchange of experiences & practices between the actors, encourage & set-up collaborations). Unfortunately, except Star'Terre' launch event in March 2020, this type of event was rare due to Covid pandemic. Events on more specific topics are also organised for a smaller audience bringing together project holders and other interested people. One difficulty consists in targeting the right audience and bringing more farmers to these events. Moreover, some actors are competitors, so it will have to be managed and make sure Star'Terre' selected projects don't get into competition with other project from the process. So, if a project holder on a specific topic is coached by Star'Terre', there won't be another selected project on this topic on the following year. In 2021, the team foresees also organising an event targeting specifically bringing together its members, partners and supported project holders in order to get better know each other and create synergies. Another objective is to do some groundwork to change agricultural mentalities and integrate farmers more into the entrepreneurship process.

The call of proposal provides a form of trend watch: this year, two projects on alternative proteins have been selected. The call of proposal is more valuable because it helps to define trends and support future ambassadors of Star'Terre'. It really has long-term effects for Star'Terre'. Projects could be more Ambassadors and perhaps share more about the project and all the coaching existing.

Budget

For the continuum of Star'Terre', actors involved develop a diversity of actions. This diversity permit to stronger business model and make it more stable, because financial sources come from several actions. The counter will bring money, bring projects, bring issues from the field, and visibility.

There is a potential to further develop paid membership and to increase the number of members with that enlarging the multidisciplinary network. These will be one of the measures to focus on in the next 2 years.

The issue still remains to shift from a project to a long-term business. At the moment, the perspective is only mid-term (one to two years). Based on the start-up that have been coached, new activities can be envisioned.

Follow-up of projects

It would be necessary to develop a systematic follow-up of projects, once they have finished benefiting from Star'Terre's support. After 1 or 2 years: carry out an interview or other assessment form to see how the project has progressed and is still progressing. Moreover, projects which had been coached by Star'Terre but which failed, should also be approached to assess the reasons of failure. This could be also a valuable source of lessons learnt for other innovative project initiators.

In addition, a follow-up document should be created to capitalise on the lessons learned and the contribution of their coaching role.

Events

At the beginning of the events, there were people who had never met each other, neither talked to each other. There were a real enthusiasm that there was finally a space where they could meet, exchange and get to know each-other, which in itself was a success for the platform. For the 2021 events, besides a cycle of workshops on adding value to agricultural and food co-products and wastes, with a first workshop focusing on the farm level, there is also a big network event scheduled to further bring people together that are not used to meeting each other.

6. The AHA-Erlebnis: feedback on the gained insights

Peer comments

- Strength of Star'Terre: discussion and common consensus. The fact that Star'Terre team keep the human in the centre of the project make it stronger,
- Willingness to re-use these forces in one's own project.
- Same questioning between the different projects on the functioning, the method and the management.

Practical case comments

- Nice to talk about the project and relive the history of Star'Terre
- Interesting to get feedback from peers: to see the value of the process and to improve it.
- Interesting thought for Star'Terre
- One person cannot combine all the competences and it is the complementarity that is interesting.
- Different cases but similar challenges, for instance breaking the barriers between sectors (AGROSYL: between research and agriculture on the field,...)
- Communication is key. It does not matter to have a sophisticated communication tool, but find channels adapted to different targets.

7. Lessons Learned

AGROSYL testimonial

Defining a common base and a clear objective shared by all, and above all defined by all the partners, seems very important. For AGROSYL, the approach was rather top-down at the beginning.

STAR'TERRE testimonial

Star'Terre was one of many projects on a national level (PHR). After 3 years, regardless of the outcome, the national level was not willing to continue (bizarre setting as there was no incentive from the beginning to make the project a proven success). Instead of giving up, the project holders decided to go on and continue with their financial support. This gave the project partners and the Start'ups a perspective to continue, to foster the communication and thus the visibility and the credibility of their competences. Even under difficult conditions (COVID-19), the call for proposals in December 2020 was a success and the coaching and the enlargement of the network can continue. Besides, the project is now in the focus of the national level (Federal office of Agriculture) as a new approach to boost innovation in the rural area (c.f. OECD review). We try to leverage on that now.

Field Peer Review Report

SUSTAINABLE UPLANDS AGRI- ENVIRONMENTAL SCHEME (SUAS) PILOT PROJECT Ireland



Main author

Laszlo Papocsi, Hungarian Research Institute of Organic Agriculture

With contributions from

Domenico Laterza, Mihaly Csoto

1. Introduction

This report provides a review of a practical case, which focused on improving the effectiveness of discussion groups in Ireland. This case study was selected as an example of a successful interactive innovation by the i2connect partners. The field review process for this case study followed the framework and methodology developed by the i2connect project. The objective of the i2connect Field Peer Review is to:

- assess the roles and function of advisors in supporting innovation processes, and
- assess the effectiveness of this support and the enabling environment.

The Field Peer Review process aims to provide an inventory of practices (with a particular focus on advisory) that define and support an enabling environment for interactive innovation processes, providing a framework for analysing the roles of various actors and policy instruments. It will provide insights to develop training programmes, materials and tools for capacity building of advisors, advisory teams, decision makers and managing authorities.

An online video conference was used for the field review in two phases:

Preliminary field peer review (online), 2020.12.05. Participants:

- Declan Byrne, SUAS project manager
- Laszlo Papocsi, Peer Review Panel Co-Ordinator ÖMKI
- Domenico Laterza, Peer Review panelist, advisor
- Mihaly Csoto, Peer Review panelist, farmer
- Patrizia Proietti, observer, i2Connect project
- Jane Kavanagh, observer, i2Connect project

Field peer review (online), 2021.01.20. Participants:

- Declan Byrne, SUAS project manager
- Brian Dunne, Wicklow Uplands Council co-ordinator, SUAS project
- Helen Sheridan, School of Agriculture and Food Science, University College Dublin, SUAS Project
- Eoin Lynch, Student, SUAS Project
- Laszlo Papocsi, Peer Review Panel Co-Ordinator ÖMKI
- Katalin Szepkuthy, Peer Review Panel participant, ÖMKI
- Domenico Laterza, Peer Review panelist, advisor
- Mihaly Csoto, Peer Review panelist, farmer
- Jane Kavanagh, observer, i2Connect project

Besides the online discussions, editing of the Field Peer Review Report was significantly supported by the SUAS Project's practice of extensive data collection and publication of guides and reports to offer insight into the framework, objectives, and outcomes:

<https://wicklowuplands.ie/suas-reports/>

2. Factsheet of the case

The initiative is called Sustainable Uplands Agri-Environment Scheme (SUAS), which is a pilot project under the European Innovation Partnership (EIP) in Ireland, funded by the Department of Agriculture, Food and the Marine. The project is one of 12 successful groups chosen from across Ireland under the new European Innovations Partnership (EIP) initiative. The key objective of the five-year (2018-2022) pilot, is to develop practical and innovative solutions that will address the complex agricultural, environmental and socio-economic challenges associated with the land management of commonages and hill farms in the Wicklow/Dublin upland. The project is open to commonage and non-commonage areas in the Wicklow and Dublin mountains. The enclosed land in the Wicklow Dublin uplands is of high value for biodiversity and is of European conservation importance for habitats and birds. This is recognised by its designation of a substantial area of the uplands region as a Special Area of Conservation (SAC) and Special Protection Area (SPA). Operational Group of the project includes:

- **Wicklow Uplands Council (WUC)**, an independent voluntary organisation representing over 50 diverse member groups and individuals in the Wicklow Upland. It was established in January 1997 and became fully operational in 1999, with a mission „*To support the sustainable use of the Wicklow uplands through consensus and partnership with those who live, work and recreate there*”
- **Agriculture and Food Development Authority (Teagasc)**, the national body providing integrated research, advisory and training services to the agriculture and food industry and rural communities in Ireland
- **University College Dublin (UCD)**, a research university in Dublin, Ireland, and a member institution of the National University of Ireland
- The **National Parks and Wildlife Service (NPWS)**, which manages the Irish State's nature conservation responsibilities
- The **Local Authority Waters and Communities Office (LAWCO)**, a shared service working with Local Authorities and State agencies to meet obligations under the EU Water Framework Directive for the development and implementation of River Basin Management Plans in Ireland
- **Local farmers**
- **Specialists** (e.g. ecologist)

The complex challenges and problems associated with the land management of the Wicklow/ Dublin uplands can be traced back to various causes and local conditions:

- It is a very significant SAC special protection area and very sensitive habitats not only for production, but also for hydrology, carbon sequestration, and other ecosystem services. Consequently, it is difficult to manage the vegetation (e.g. uncontrolled burning occurs more frequently than should), and in some places

the lack of management has also contributed to the problem (partly because of inadequate agri-environmental policy measures)

- There are many commonages with a large number of farmers involved (also with many inactive farmers)
- Economics of farming – in the upland areas, the net profit of farming is very thin, which makes it difficult for farmers to make a living, especially through dry stock farming
- Timing of grazing is a significant issue in uplands, where frequently there are too many sheep during the summer months but insufficient numbers grazing over the year as a whole
- Open landscape (no fences, or boundaries)
- Work in upland areas requires certain fitness levels and awareness of additional hazards

The SUAS project is based around the idea of commonage management groups, which can be effective to deliver best practice management, a sustainable stocking rate and appropriate timing of grazing using appropriate breeds are needed to deliver best practice management of the uplands. To achieve this, ongoing knowledge exchange between advisors and farmers is needed for successful upland management. The main principles and ideas of the project are integrated into two SUAS Actions. The first action includes:

- The establishment of Commonage Groups (CGs), with their own constitutions, which will take responsibility for the development, implementation and delivery of their own Commonage Management Plans (CMP).
- Development of Commonage Management Plans, with the integration of environmental (biodiversity and water) and farming activities into a single document/guide.

The second action includes:

- The implementation, monitoring, updating and reporting of the CMP and Farm Management Plans, including the review of annual biodiversity performance data, the review of annual farm performance data and the review of water quality programme.
- The use of an auction-based payment scheme to incentivise the CGs to develop their own solutions to problems they identify on their commonage

The activities of the project are expected to increase the number of sheep on the hills and to extend the grazing period. The project can contribute to the maintenance of habitats in good condition (Favourable Conservation Status, FCS) as a key product of hill sheep farming. SUAS aims to raise awareness of the fact that the biodiversity and ecosystem services associated with uplands are valuable public goods, and to reward farmers financially for efforts that maintain and enhance them. With the wide range of education activities in the project, farmers and advisors will be able to develop and

demonstrate best practice management, along with associated cost-benefit analyses, and that will result in successful management of upland areas. The SUAS project also will create a Commonage Management Handbook, based on the lessons learnt that will provide policy makers and other upland communities with guidelines on designing and developing future locally led commonage/upland agri-environmental schemes. A further output of the project will be the development and evaluation of a smart phone application in 2021, which will enable farmers to record their activities and to collect data that will help in the development of a blueprint for a results-based payment scheme for upland biodiversity and also the production of cost guidelines for activities/measures relevant to upland environments.

To summarize, the main innovative elements of the SUAS project are:

1. The establishment of Commonage Groups (a new concept/entity), with their own constitutions, which take responsibility for the development, implementation and delivery of their own Commonage Management Plans.
2. Integration of environmental (biodiversity and water) and farming activities into single management plans.
3. The use of an auction-based payment scheme to incentivise the Commonage Groups to develop their own solutions to problems they identify on their commonage.

3. The initiation period

The project idea was developed over a number of years before the EIP-proposal. The WUC (a membership organisation with individuals and organisations committed to the sustainable development of the upland region, including farmers, landowners, recreation enthusiasts, environmental stakeholders) had several discussions concerning signs of increased land abandonment, a decrease in farmer numbers, and comments about uncontrolled fires (also from recreational visitors). Everyone felt something was changing, the membership had realised decline in the quality of habitat, and also in the numbers of farmers/farming activity. Many pointed to the legislation as contributing to the uncontrolled fires (there was an interval for controlled burning that was shortened and it was hard to burn in the legal season, which led to many illegal fires). Another problem arose around 2005 with the change in EU payment scheme from animal-based to area-based payments, and they no longer needed the animals, where it wasn't profitable and also hard to raise. Subsidy payments have a huge impact on farming, especially dry stock, where it can mean up to 100 percent of the profit. Some farmers receive agri-environmental payments, but it does not contribute to good management.

As the genesis of the SUAS project, the Council formed a committee in 2011 called the Vegetation Management Sub Committee (comprised of local upland farmers and representatives from WUC, NPWS, Teagasc and the Irish Uplands Forum (IUF). The main goal of the group's creation was to determine the causes of the decline and how to respond to it. A major driving force behind the establishment of the working group was a study trip to the BurrenLIFE (2005–2010) project, the first major farming for conservation project in Ireland and one of the few EU projects which put farmers at the centre of the conservation agenda.⁵ (The LIFE programme is the EU's funding instrument for the environment and climate action created in 1992. The general objective of LIFE is to contribute to the implementation, updating and development of EU environmental and climate policy and legislation by co-financing projects with European added value⁶.) The visiting farmers realised that if local farmers work together with ecologists, advisors, and if schemes are tailored to local issues the result fit better. The question was: *"There is an example of this thing working elsewhere how can it work for Wicklow?"*

Current SUAS current project manager Declan Byrne, who has been working in the area over 20 years and who studied commonages in 2001 (as part of a study course), was asked to command the committee. A number of activities were completed by the Committee toward attaining its goal (research, publications, meetings, workshops), and aimed to secure a project similar to the LIFE project in Burren. A significant achievement in 2013 was the completion of a report on the best management practices in upland

⁵ <http://burrenprogramme.com/the-programme/>

⁶ <https://ec.europa.eu/easme/en/life>

habitats in the county.⁷ The WUC commissioned this work following two public meetings held in 2011 which discussed recurrent problems associated with vegetation burning, as well as the advantages of a targeted agri-environmental scheme. The report was a collaborative project between farmers and stakeholders. Over 25 meetings were conducted between 2011 and 2012 with farmers and other local stakeholders. How farmers can contribute to habitat management was the main research question.

Upon completion of the report, the SUAS project was outlined for the first time, highlighting the need for targeted support of upland farming, as well as the fact that typical, “traditional” agri-environmental schemes do not work well in this area. The report was also a summary of the work that went into preparing for LIFE's project application. The LIFE project proposal did not receive any funding, and the idea was shelved; however, there have been ongoing efforts to at least realize some elements of it, and continuous effort to find alternative forms of funding.

Teagasc and UCD supported a student research project during 2015 to figure out what is really happening in the uplands and what are the components of upland farming practices. Based on student research, a M. Agr. Sc thesis was submitted to University College Dublin.⁸ The primary focus of the thesis was to establish how commonage land in Wicklow is used and to identify practices that could help maintain these commonage areas in Good Agricultural and Environmental Condition (GAEC). Another program Teagasc ran on the farms looked for the potential to raise farm profitability as well as the actual sheep management practices, and included a hill farmer from the Wicklow Upland area. This was one element (discovering and spreading good management practice) of the original idea. With the support of the local county council, an inventory of biodiversity in Wicklow and Dublin's uplands was edited and published in 2015, showing the areas' habitats and species. In parallel with these efforts, which did not directly target farmers, farmers were also given opportunities to learn about controlled burning in early 2016. During the same year, Teagasc also organised a demonstration event to demonstrate the alternatives to controlled burning, namely the mechanical methods of vegetation management. These events attracted great interest among farmers and kept them engaged to the project idea. Early in 2017, a follow up event was organized themed around the various sheep breeds, their attributes and types of sheep that can play a role in upland management.

Before applying to the EIP funding, the main characteristics of the SUAS project were outlined, based on the lessons learnt from the extensive work, efforts and experience of

⁷ Mary Tubridy (2013). A Study to Identify Best Management of Upland Habitats in County Wicklow.

⁸ Fergal Maguire (2015). Farmers attributes, management practices and attitudes associated with commonage use.

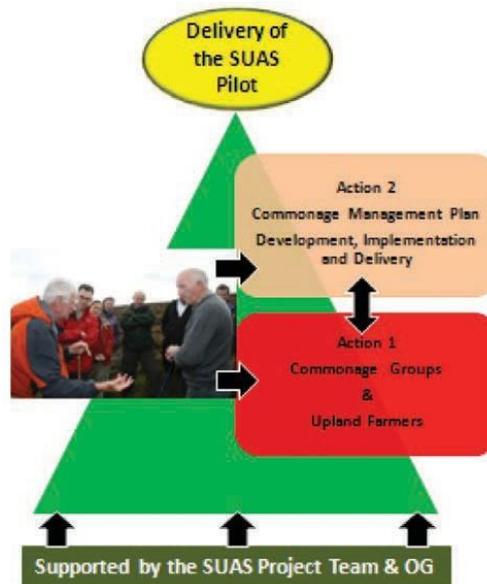
those concerned about the sustainable future of the uplands. The initiative focused on working with farmers (as a group) and stakeholders with ambitions to protect, restore and enhance land and water-based habitats, flora and fauna, as it takes a commonage and upland area (almost landscape rather than farm) approach, with the aim of developing the farmer's knowledge, capacity and confidence to take greater ownership of the management – a process in which advisors also play a crucial role.

4. Planning and development

Until the EIP application developed in 2017, the working group stayed together. There were two phases to the EIP proposal's development. In the first round, an Expression of Interest was required, and the selected projects had to develop the full proposal. This was a lengthy process. The Expression of Interest was submitted in 2016, and the proposal was accepted and the team was invited to submit a complete proposal after 4 months. It took four additional months (June-September, 2017) to develop the detailed proposal. During this phase the Department of Agriculture provided funding to the SUAS team, which was used to hire a writer to help develop the application to write up the final project application due to the time commitment required. This writer was a farmer/researcher with previous experience writing grant proposals and could also offer his own ideas. Two members of the original Vegetation Management Committee (Declan Byrne and Brian Dunne) and the hired expert, Owen Carton, wrote the proposal, building on the existing work with farmers since ca. 2010.

For almost a decade prior to this project, WUC was actively engaged with upland farmers and a number of stakeholder organizations, including the National Parks and Wildlife Service, Coilte and Mountaineering Ireland, to develop a consensus on the best management of upland habitats. A finished proposal was also presented to the farmers; whether it was in line with earlier thinking. Since it was a certain evaluation from the 2013 ideas (and the failed LIFE project proposal), the proposal writing also shaped the project. At this stage, WUC evaluated the options more deeply with the farmers (what is acceptable for them) in order to make sure they would buy into it. All the stakeholders agreed that the detailed proposal for the EIP was a major catalyst, and a huge leap from initial ideas to get everything down on paper for a concrete project. While crafting the proposal, it became clear that technical expertise and tweaks were needed, particularly in the context of agri-environmental schemes, finance, and communications—evolution of the program—since the original group alone would not have been able to put it all together. Several of the contracted experts and consultants became members of the project's Operational Group.

It is the Commonage Group which is the main innovation in the finalised SUAS structure, while other elements serve to help, encourage, and facilitate the commonage farmers to be able to achieve the objectives of the project, in which the advisor plays a vital role.



The main structure of the SUAS Pilot Project

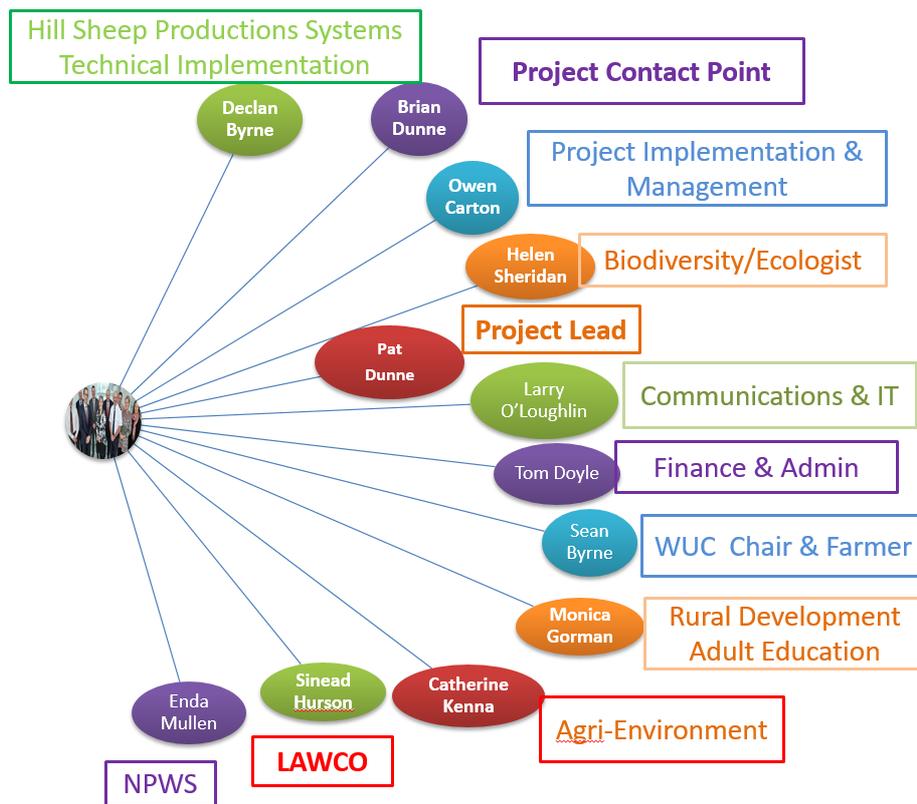
The major structure of the project is based on the following logic: Farmers in Wicklow and Dublin have stated that Commonage Groups can address their challenges, as documented by studies in the initial period. But recognizing the need for Commonage Groups and realizing them are two very different things. The first action focuses on bridging this gap through facilitating a series of meetings leading to the signing of a legal agreement by commonage farmers. To begin the development of the Commonage Management Plans, an ecologist is required to prepare a baseline report and management recommendations. Based on the analysis of the ecological and farm data, the development of the Commonage Management Plans can commence. The purpose of this process is to establish the targets, to manage, monitor and report the activities during the four hill management years of the pilot program. An ecologist is also necessary to explain the findings and recommendations to the farmers and translate this data into terms they understand. Once the Commonage Groups are formed and the Commonage Management Plans have been approved, the operations of the pilot focus on the management, implementation, launch of the Auction Payment Scheme (farmers are being paid after the executed work in line with the CMPs), as well as reporting and dissemination.

The team responsible for the proposal noticed that other project operational groups mostly consisted of farmers, but if they want to be successful, they need to look at the skills needed for all activities and project management as well. People with the correct knowledge and/or access were invited after an initial thorough needs-identification. This included academic ecologist and agricultural ecology expert/lecturer, local advisory, environmentalists from the National Parks, and people with diverse skill-sets and credentials. Nearly all of the attendees were locals or have connections to the area, and this was intentional, and also an important criteria during the formation of the working

group. By reaching out to people with reputation and expertise on the mentioned areas, the project's operational group was completed and opened new doors to various organizations, especially academia, which helped make the proposal based on the best available science. Local farmers were also involved in the group, which makes it a mixture of guidance and bottom up-approach. A frequent question to the group is whether there are enough farmers involved. Their thought is that an operational group should not be exclusively farmer-led: the scientific side of the group should be as strong as the agricultural side. They need to know what should be done and why, as well as what the threshold of possible activities are.

An Operational Group of 12 members has been assembled to implement the pilot during the planning and development phase. Each member was selected on the basis of having the required technical expertise and experience in his/her specific area of responsibility, in the conduct and delivery of the pilot. Collectively, they cover

- Upland farming production
- Ecology and agri-environment
- Water quality and biodiversity
- Ecosystem conservation
- Upland farmers
- Rural development and adult education
- Communications and Dissemination
- Finance and administration



Members of the Operational Group of the SUAS project, with their institutions and expertise

After all the effort of proposal writing, the application went through, resulting in a 1.95 million budget project over a five-year period.

5. Implementation

The project was accepted by the Department of Agriculture, Food & the Marine in December 2017. In order to engage farmers and start recruiting applicants before the 2018 lambing season, the project started with an interim team of Declan Byrne, Brian Dunne, and Owen Carton as project managers. The interim arrangement continued until a project manager was hired.

Project Manager - There was an advertisement for the role of project manager, and Declan Byrne was appointed after a recruitment process. He was seen as an ideal candidate because he had been involved in the project's development from the start, and was able to start working immediately after his appointment. Moreover, he had already established a relationship with the upland farmers of Wicklow and with other stakeholders. The job description of the project manager gives an overview of the range

of activities that the project manager (an advisor) has to execute (highlighted *in italics* are the items that can support interactive innovation.).

- *Developing and maintaining a co-operative working relationship with participating groups and individual farmers.*
- *Facilitating and supporting the establishment and operation of commonage groups.*
- *Facilitating and supporting participating commonage groups and upland farmers with the development, implementation, monitoring and evaluation of their upland management plans.*
- Providing support and guidance to participating farmers to ensure that they are meeting their planned activities and grazing requirements
- Assisting participants with SUAS payment claims and the verification of payments claims to the Operational Group.
- *Organising training courses and necessary support required by participating farmers.*
- *Identifying and organising relevant study visits and meetings with peer groups and farmers to demonstrate the objectives of the SUAS project* (These are expected to be largely in Northern Ireland and the UK)
- Leading the delivery of the auction-based measures by *developing suitable proposals and innovative ideas with participating farmers.*
- *Working and liaising with the Wicklow Upland stakeholders* to achieve a successful and beneficial pilot outcome.
- *Organising the necessary dissemination activities* that are required to promote and engage shareholders locally and nationally.
- Meeting the pilot required governance standards.
- Organising and managing the activities of the Operational Group.
- Preparing and submitting the progress and annual reports to the DAFM.

Other important roles in the project are:

- Administrator - Due to the fact that it would be difficult to have continuity of earlier work if an administrator (who is possibly not familiar with the events and happenings of previous years) was hired for the project, this work is contracted out to WUC, who charge the project for the service. WUC also provides support and public relations assistance through its coordinator and communications officer.
- Facilitator - As part of the SUAS project, farmers are required to form a formal commonage group for the management of commonages instead of dealing with them individually. There were no guidelines for the formation of these groups since this is a new, innovative approach. An outline was devised by members of the operation group, and a skilled facilitator was contracted to help the project

manager develop a template for how these groups should be formed (The chosen facilitator is Bobby Lambert, AshDan).

- *Ecologist* - Several of the operation group members felt that the baseline surveys, which need to be prepared in year one and five would be a lot of work to complete and little work in the years between. In this context, instead of hiring a part-time ecologist, contracting out the ecological work was agreed (The chosen ecologist is Faith Wilson).

Participant Recruitment

As the project introduced new concepts to farmers, it was decided to roll out participants into the project in two tranches, incorporating lessons learned from tranche one as necessary for phase two. An initial rollout of the project involved three commonage groups and one non-commonage hill farmer, which were selected following the announcement of the project in early 2018. Based on forms being filled out correctly, accuracy of information provided, all shareholders consulted and issues known through local knowledge, the project management team screened the Expression of Interests (EOIs). In total, 20 Expressions of Interests for commonages were received, and 8 were invited for a meeting with the project management team. The project management team received seven EOIs for non-commonage upland areas, of which two were asked to attend a meeting. Before the selection process, a scorecard for assessing applicants' suitability was prepared by the project management team, and was used in their selections. After initial selection of one non-commonage upland farmer and one commonage, two more commonages with similar scores were identified. Following a recommendation for both, the project management team decided to take both into the project, making three commonages included in the first tranche (instead of the originally planned two). During the second round, which began in the Spring of 2019 and followed the same selection process (a modified score card was used in the selection process, giving higher priority to certain criteria to ensure diversity among selected participants), a further three commonage groups and two non-commonage hill farmers joined the project, bringing the total number of sites to nine. In total, 46 farmers are involved in the project after these two tranches (a total of seven commonages and three non-commonage upland farmers). All in all, the main criteria were to choose farmers who would cooperate for a shared goal.

The formation (with the facilitation process) and early operation of the commonage groups

After the selection process, all farmers with interests in each of the participating commonages were invited to a meeting to commence the process of forming their commonage groups. During the development phase of the project, a rough outline of

the process was developed by the operation group, which was refined by the contracted facilitator. The facilitator and the project manager prepared the agenda for the meetings. The project manager (because of his advisory background and working with farmer discussion groups earlier in his career) possesses facilitating skills, but working with an external facilitator together was especially helpful so that they could share responsibilities. The methodological side (developing the constitution of the Commonage Group, conflict management, and coordinating the group's activities and dynamics) and the farm-related activities (from a well-known, and trusted figure for the group) were separated.

In order to form these commonage groups, the Facilitation Team held a series of meetings with each commonage. The formation process originally consisted of at least 4 occasions (meetings and workshops), and during the first phase, an initial communal meeting for all three commonage groups together, followed by 2 meetings for each of the three individual commonage groups and concluding with a second communal meeting were organised. The Facilitation Team provided intensive support to each Commonage Group, and all the meetings went smoothly with good attendance and participation by members. During the process, a report was completed, with the findings being used to refine the process for taking in commonages in the second wave. The experience gained from the first tranche led to some slight modifications to the Commonage Group formation process, as four meetings proved to be too many, so a one-day workshop, plus two further meetings for the groups, were used in the second tranche.

Through the formation process, group capacity was developed notably through the dialogues and decision-making on the group constitutions. The Constitution was not created from scratch, but was modelled on a Welsh example, which was then modified to fit the needs of the Commonage Groups and the local circumstances. Each of the Commonage Groups developed its own constitution including:

- Purpose of the group
- Membership details, including who is entitled to be a member and conditions of membership,
- Powers and objects of the group
- Operation of the group, including meeting procedures (requirement: at least three meetings per year, to ensure regularity), election and functions of officers and voting structure.

The seven commonage groups that participate in SUAS finished the formation process and evolved into a formal commonage group with elected officers and a constitution. The project manager continued to supervise the commonage groups until the end of 2020, then they will be fully self-governed. SUAS has produced a guide on how to form commonage groups and a template for developing their constitutions.

In a masters project (titled “Capacity Building for Commonage Groups within the Wicklow, Sustainable Upland Agri-Environment Scheme”) sponsored by Teagasc & UCD, Eoin Lynch is currently working to examine the farmers' perspective, among project participants and also among upland farmers in general. Among the SUAS-participating farmers, 35 responded to the survey. According to the preliminary results from this part of the survey, almost all of the farmers thought the groups allowed them to work more closely together. Further, they find it especially useful to take part in the Commonage Group Meetings because of the activities that have been conducted there (talking, listening together, agreeing, co-learning, and collective understanding). According to the farmers of the commonage groups, the formation process was essential for the success of the commonage group (91%). They also expressed their need to meet with other Commonage Groups to learn from others. According to the general part of the survey (where the sample was not limited to SUAS participants), upland farmers believe that there is not sufficient technical information on upland farming and environmental management as compared to what is available on lowland farming. In addition to insight on farmers' needs, the general survey attempted to explain how knowledge could be transferred to them. Preliminary findings show that younger farmers prefer digital channels, while older farmers prefer traditional information sources. However, most regard other farmers as necessary sources of information.

Up till now, there was one major conflict/issue in one of the groups. One individual “did something that he should not have done” caused a difficult situation. The commonage group members are neighbours and fellow farmers and know each other well. For them, it is quite important what they think of each other, more important than what others think (the project management or experts) and that was sometimes hard to overcome by the project manager). The facilitation team helped the group to deal with the problem, the commonage group became an important forum or mechanism to solve the conflicts.

Commonage/Upland Area Management Plans

A well-respected ecologist, Faith Wilson, was chosen for monitoring and advising on the improvement of the ecology and water found on each of the nine selected sites over the entire duration of the project. She completed the baseline surveys during the summer of 2018 for Commonage Groups in the first tranche. The habitat conditions in each of the habitats were assessed after a number of monitoring stops. The habitat condition assessment map was then created. Following the division of the commonage into management areas, the ecologist developed management recommendations for each area (a so called “wish list” from an ecological point of view). The ecologist and the project manager executed a walk-through with the farmers on their commonage to discuss relevant environmental issues. The farmers followed up on this session by saying that this was the first time anyone had ever explained to them why their lands had received designations, what was actually on the area, and how they should manage

them. It was also an opportunity for the ecologist to hear directly from the farmers what they do on the hills (on the uplands it is difficult to gather information about agricultural practices), what challenges they are facing, and what they would like to do on the fields. The management options deemed feasible by the farmers and within the scope of the SUAS Project were agreed upon following the discussion between the project manager, the ecologist and the farmers.⁹ The agreed management plans were then submitted to NPWS for screening and for the relevant permissions for certain works. Upon completion of the process, the management plans were signed by the commonage groups so that the work could proceed.¹⁰

Training activities

Training courses are included in the project design in order to provide participating farmers with any necessary support they require in order to implement the measures set out in the management plans. It is very important for the farmers to be able to observe the benefits of the measures and implement them without “too much” expertise. The SUAS approach tries to be practical in terms of knowledge, centred around vegetation management.

The first training was on facilitation – how to deal with conflict during decision making in a group, which was somewhat a prerequisite to achieving a viable commonage group. Additional training includes an on-site demonstration and training on controlled burning which took place in February 2019, where SUAS provided training equipment and safety gear to the farmers involved in burning activities. Another important training area is controlling the growth of bracken on participating commons, using hand-held sprayers, tractor and quad mounted sprayers (to demonstrate the way pesticides are applied), or by using a bracken bruiser and introducing cattle and horses for grazing. The timing of grazing of upland areas, in addition to stocking rate, is also critical for maintaining their ecological integrity. SUAS is working with farmers to increase the number of grazing sheep over the winter months. Farmers also can and did initiate some training (e.g. tree planting) as well. The Covid-19 pandemic made the organisation of trainings difficult.

Monitoring the execution of the management plans

⁹ The project plan listed the following activities that the farmers can implement: controlled burning equipment, controlled burning operations, mechanical swiping/cutting of vegetation, creation of firebreaks, creation of fire control lines, providing infrastructure, shepherding, educational visits, cattle grazing supplement, study trips. There are also potential Auction Payment Scheme activities: the farmers can come up with their own ideas that can contribute to the fulfilment of the management plan.

¹⁰ The baseline reports for all the sites are also available on the SUAS webpage

As of now, farmers issue paper declarations and the project manager checks their content as it is a basis for payment to the farmers. In the early stages of the project, it is quite straightforward as the project manager also facilitates the implementation of those measures that are also financially supported by the project. SUAS pays only for the work completed in line with the management plans (based on an hourly rate for the number of hours committed to each activity e.g. spraying bracken with machinery, quad, or hand sprayer). It is considered that the project will introduce a more score/results-based payment system, but it is important to find a balance, as upland habitats are changing slowly - an activity element will also be needed. The ecologist of the project also does annual walkover checks on the commonages. According to the most recent annual report of the project, in 2019 the main farmer activities included mulching vegetation, controlled burning, bracken control, roadway repairs, shepherding and extended grazing.

A smart phone application is planned for development (by contract) in 2021 that will be used by farmers to record their farm-related activities on commonages. As a result, they will be able to send their declarations digitally. On the one hand, this can decrease the workload and paperwork of the project management, but – more significantly – on the other hand, it could help eliminate the lack of information about upland management practices and farmers could literally see what is going on on the commonage in real time and provide transparency for the project and for the farmers as well.

Dissemination activities

One of the key principles of the project is to be open and to share information and organize events continuously. The outbreak of a pandemic in 2020 made this very challenging, but project members organized and participated in a number of events during the first three years of the project:

2018

- Hosted visits by farmers from, Mayo and Achill Island
- Organised joint SUAS/Teagasc Hill Sheep Information Event in Blessington Mart
- Presented at Teagasc National Agri-Environment Conference
- Official launch of the project by Minister Andrew Doyle in November
- Gave talk to UCD Agricultural Science students
- Hosted visit from Tracy May, administrator for the Dartmoor Farming Futures project

2019

- Presented at meeting of the EIP Advisory Committee
- Hosted delegates from conference organised by the Standing Committee on Agriculture Research (SCAR) and their Strategic Working Group, Agriculture Knowledge and Innovation Systems (SWP-AKIS), held in Dublin in April

- Hosted Teagasc Hill Sheep In-service training session, with particular focus on upland habitat management
- Participated in a round table discussion at the Agri-Innovation Summit 2019, in Lisieux, France
- Hosted a visit as part of IFA Hill Sheep Conference being held in Wicklow
- Hosted a visit from CAFRE, as part of a Teagasc exchange
- Hosted a Teagasc discussion group from Waterford
- Attended launch of Droimeann Cattle Herd Book
- Attended National Ploughing Championships
- Participated in IUF Networking Workshop for Upland EIP's (Eip-Agri)

SUAS regularly plans two types of events: A farmer-centred event focuses on the practicalities of farming; another type is geared toward the non-farming, more environmentally focused audience. Farmers enjoy being on the ground, seeing things, and meeting people. Additionally, the project was covered extensively by local and national media (radio interviews; newspaper and online articles). By the end of the project, SUAS plan to publish a handbook on upland management practices, and a template for rolling out agri-environmental schemes.

Future prospects

The future of the concept/project is unclear at the moment. The SUAS and other EIP-related projects working on the uplands only recently began negotiations with the Department of Agriculture, but there is no concrete plan to extend the projects or reuse parts of them in the coming period of the CAP.

6. The AHA-Erlebnis: feedback on the gained insights

More than half way through the project, the Commonage Groups have officially been formed (they will meet independently from 2021) and have also agreed a Management Plan and have begun executing it. Moreover, SUAS is on track to achieve its objectives. Based on the Field Peer Review process, some important success factors (and challenges) can be identified:

- Due to its ability to bridge all relevant stakeholders (in this case, individuals and organisations committed to the sustainable development of the upland region), Wicklow Uplands Council's existence is an enabling factor, as it can establish a forum (e.g., the Vegetation Management Sub Committee) for solving problems impacting the whole community. Moreover, WUC also contributes to the harmonisation of activities of different actors, keeping a cause evolving when funding is not available to implement a major project as well as gaining continuous feedback from the stakeholders (in this case, for example directly target farmers and kept them engaged to the project idea). Before applying to the EIP funding, the main characteristics of the SUAS project were outlined, based on the lessons learnt from the extensive work, efforts and experience of those concerned about the sustainable future of the uplands. At the beginning of the project, there was a solid support network and farmers got constantly involved.
- It is important for successful concepts/projects to transfer to other places: the Burren Project has been the main inspiration for SUAS. The role model project's key concept was based on interaction between local farmers, ecologists, and advisors.
- It can be a challenge to acquire proper funding, and in addition, proposal writing has a significant influence on the project outline. In the case of the EIP and SUAS it was for the better. It is an interesting question how different programme calls can influence the evolution of project ideas by the applicants.
- From the proposal development phase, the project continuously monitored whether it needed external expertise and if it did, it contracted the required experts or included them in the project's operational group. In the proposal development phase, it was someone with previous experience writing grant proposals, and for the operational group, people with expert knowledge in agri-environmental schemes, finance, and communications, among others.
- A diverse, expertise-based operational group has been worked out during the proposal structure. The 12 different people come from different areas, but they all have the same goal, which has led to intense interaction and discussion, and according to some of the members, it is hugely beneficial.
- All of the experts involved were locals or had connections to the area. Besides the necessary technical expertise and experience in his or her specific area of

responsibility, it was a crucial criterion during the formation of the project's operational group and it can also open new doors to other organizations and stakeholders. Moreover, it leads to a sense of trust among members of the community and the participants.

- “The engine” - key players are important. In the case of SUAS, the project manager (who is also the Chairperson of the WUC Sub Committee and is working as an advisor for Teagasc) has built up strong ties with the farmers and relevant stakeholders, also has the practical knowledge and is passionate about the project.
- One of the main functions of the project manager/advisor is facilitation during the establishment of Commonage Groups. As seen in the pilot, there is a good dynamic created when there are two facilitators on hand. The project manager (also with facilitating skills and earlier experience with farmer discussion groups) was well known to the groups and was familiar with the local farming and technical issues of the commonages. The external facilitator brought expertise in facilitation, group formation, organisational development, governance – and also an external perspective. The team element was also crucial because it added a certain dynamic to the process.
- The experience of working with the ecologist, and the project manager/advisor during the development of the Commonage Management Plan was an enlightening experience for many farmers. They realised, that their action has a great impact on the habitat, and understood what was causing the land being designated. It was also an opportunity for the ecologist to hear directly from the farmers about the work they do on the hills.
- The advisor also provides a considerable amount of professional support during the implementation of the Commonage Management Plans.
- Farmers can propose specific measures under an auction-based payment scheme, but so far, few have presented any. To engage farmers, some preparation is needed, then at least some basic principles need to be proposed.
- Project design also includes training courses to assist farmers in implementing the management plans by providing all the necessary support, and it is worth noting that farmers themselves can and did initiate some training as well.

7. Lessons Learned

- *What did we learn from the case to enhance interactive innovation?*
 - The forming of local representative groups (as WUC) could be encouraged to have those local bodies as network-building entities in place and help them to develop over time.
 - Advisors are ideally placed in the innovation process in many aspects: they have the necessary technical knowledge and management capabilities, and also have relationship with the farmers and the relevant stakeholders. They are positioned in the right environment to look for “engine”-type of project participants.
 - Advisory organisation should be creating more of an atmosphere or better opportunities for advisors to get more involved in SUAS-like projects.
 - Once one interactive innovation process (or project) turns into progress, and farmers, advisors and other stakeholders start and maintain regular communication in a farming environment (related to the core project subject), it may constantly bring up new ideas, problems, needs and potential solutions, providing the pathway to new innovative activities, should they be related, or completely new directions, as compared to the original project.
 -
- *What did we learn from Field Review as a process to learn about interactive innovation?*
 - As interactive innovation itself, its peer review process can work well in real farming environment, the use of virtual communication channels makes the exchange of information much more limited.
 - The language barrier does exist, farmers and advisors (as “to be” participants of the peer review panel, coming from the other cases) barely speak English in many countries, but especially true in Central-Eastern Europe. It was not clear at the forming of the panel that fluent speakers are needed, as interpretation doesn’t work out well either in such situation (and no budget for it).
 - Compared to what was provided by the reviewed project in digital format (files, photos, videos, presentations) in advance, and what more could be extracted during the 2 online meetings organized, the additionally received information was not much.
 - The function and scope of the “preliminary interview” and the “field visit” was a bit blurred and overlapping.
 - The carousel of roles of different persons in different panels was sometimes hard to follow, leading to confusing situations several times.
 - The invitation of more project participants, stakeholders could provide good opportunity to give information from several different angles.
 - The field review process, according to the tested i2connect methodology required a lot of resource, asking the time of the farmer, advisor not only for the

2 online meetings, but also during the organization and preparation for the events, and some follow up discussion, and it required almost full time effort for 3 month from the coordinator, including the formulation of this report (ÖMKi has 0,35 man month altogether planned for the whole WP2)

- We cannot anticipate to find advisors and farmers being able to ask questions and communicate in English during several online meetings, and for it, also ask them to get prepared from the provided information in advance, on 'voluntary base', without establishing with them a work assignment.

Field Peer Review Report

TRAS.IRRI.MA (“Transfer of validated technologies irrigation management and protocols to optimize irrigation”)

Italy



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1. Introduction

The Field Peer Review process was supposed to be implemented face-to-face, on the field, but unfortunately, due to the Covid-19 crisis, this was not possible. Therefore, we had to adapt to the situation and conduct online interviews with representatives of best practical cases. The methodology and guidelines developed within the i2connect project (Outline for preliminary interview, Question flow and Check list) were of great help in the implementation of the Field Peer Review activities. It wasn't just about gaining knowledge about the way how innovation has been realised by others, but also about a whole new method, which is usually not used in the field of agricultural advisory. Peer review teams were put together in such a way that people from different countries and different practical cases found themselves in the same panel. The SEASN review panel consisted of a farmer from Slovenia (practical case »Technique day«), an advisor from Ireland (practical case »Sustainable Uplands Agri-environmental Scheme«), panel coordinators from Slovenia (CAFS) and observer from Italy (CREA).

The Field Peer Review process consisted of a preliminary interview with a representative of a practical case of innovation TRAS.IRRI.MA (Italy) and one peer review interview with five representatives of practical case. Decision about the number of interviews and the method in which they were conducted was made on the basis of a preliminary interview and on the basis of the number of people for whom our peer review panel considered their contribution was necessary. Both interviews were conducted using the Zoom application. To make virtual peer review more dynamic, SEASN review panel agreed to have a video with the farmer from the case to see the innovation on the field and to get the reflection from the farmers' point of view.

Picture 1: Virtual Peer Review interview, case TRAS.IRRI.MA (Italy), 19th of January 2021



2. Factsheet of the case

TRAS.IRRI.MA is one of EIP projects and is a part of AcquaBasilicata Operational Group (OG). It is located in southern Italy in Basilicata Region and brings together 11 partners:

- Asso Fruit Italia (lead partner; producers organisation with about 300 farmers),
- UNIBAS-DiCEM (University),
- CREA-AA (Public research centre for agriculture & environment),
- CNR-IMAA (National research council), ENEA (National agency for the new technologies),
- ALSIA (Regional agency for agriculture innovation), APOFRUIT Italia (farmers organisation),
- Viticoltori Associati del Vulture (farmers organisation),
- Grimolizzi Nicola (farmers organisation), RAPOLLA FIORENTE (agricultural cooperative),
- AGREEMENT srl (advisory service),
- BASILICATA basin authority.

Although the region Basilicata is relatively small, it has a rather complex hydrological system with a lot of available water for agricultural purposes. Despite the fact that the region is rich in water and shares its water resources with adjacent regions, it encounters the problem of water scarcity in the summer months. This problem has been particularly pronounced in the last 10 years due to climate change and higher temperature. Water capacity is a big problem not only in Basilicata region in Italy, but also in the whole southern Europe. The importance of water saving in agriculture was the main reason for starting this project. The project addressed this issue through the following activities:

- the implementation of an innovative water resource management;
- dissemination of sustainable irrigation practices;
- increasing knowledge of users (farmers) about automation in irrigation systems and to spread an automated and easy-to-operate irrigation facility model that will reduce the use of water resources, optimize fertilizer use, improve production quality and reduce costs;
- dissemination of tools and sensors for monitoring environmental parameters (soil moisture, rainfall, ...) – innovative and validated technologies;
- establishment and maintenance of OG AcquaBasilicata and relations with the European Water Network (EIP-WATER, EIP-AGRI, ERIAFF, etc.);
- dissemination of environmental certification scheme (Water Footprint, European Water Stewardship, etc.).

The main focus of the project is to improve the management of water and to increase sustainability in fruit production by introducing environmental friendly technique, in order to increase production and quality of fruit. Innovative technology is an instrumental part of the project, but the main innovation is in the way knowledge about water management is being transferred to the farmers and in the way researchers,

agricultural advisors and farmers are brought together to exchange knowledge. We are therefore talking about a new strategy of transferring knowledge about innovative approaches in water management.

Project TRAS.IRRI.MA was designed to have an interactive part in the first year of the project to decide the objectives and farmers' needs. The rest of the project is based on direct relationship between farmers, advisors and researchers and on dissemination of knowledge about water management and results, gained during the project. Given that the project aims to ensure that knowledge of innovative approaches in water management reaches as many farmers as possible, dissemination is the most important part of the project.

3. The initiation period

Initial idea

Initial idea for this innovative project came from the group of researchers, carried out by Basilicata University. The main idea leader, Professor Bartolomeo Di Chio, who chairs irrigation and water management sector at Basilicata University, participated in the European Innovation Partnership on Water – EIP Water, which was active between 2012 and 2020. The EIP Water facilitated the development of innovative solutions to address major European and global water challenges. At the same time, the EIP Water supported the creation of market opportunities for these innovations, both inside and outside of Europe. In this EIP Prof. Bartolomeo Di Chio with his colleagues from University and also from other regions of Italy and other organisations, including Asso Fruit Italia, made a good job in defining the guidelines for water application in agriculture. Based on the experience with EIP water, the idea was born to replicate this model, made at European level and to transfer it to the Basilicata region, where the need for more efficient water management has long been present.

It is important to point out that the initial period of this project involved people with more than 30 years of experience in the field of irrigation in the Basilicata region, whose expertise is known worldwide. In the idea for the project a professor, for whom Prof. Bartolomeo says is their scientific leader, was also involved. This professor is now retired, but still present in the project. However, Prof. Bartolomeo and the group of researchers organised all necessary activities to lead the idea from initiation to further development. One of these researchers from University also named the project TRAS.IRRI.MA.

Inspiration

Before submitting the proposal of this project, activities and different meetings took place at various levels, in which different stakeholders were involved. All the initial contacts with people from outside the immediate circle were made by Prof. Bartolomeo and researchers from Basilicata University. The first contact was Basilicata basin authority, who recognized the idea as an opportunity to build a connection between the work done at European level and the work that could be or should be done at Basilicata

level in the terms of water management. First idea foresaw the merger of two regions – Basilicata and Puglia, because these two regions share the same problem, the same needs and after all the same water. Due to some administrative obstacles in the terms of financing the operational group, this idea was then abandoned and activities continued only in the Basilicata region.

In this first step the University proposed the general topic about water management, but the actual topic has not yet been determined, as they first wanted to inquire about the actual needs of farmers under proposed general topic and find organisations, which can apply the idea of the project on operational level. To achieve this goal the Basilicata University connected with public extension service ALSIA, private advisory service AGREEMENT and farmers' organisation Asso Fruit Italia. They agreed on the idea and were prepared to collaborate. We can say that there was a match of the idea from Basilicata University and the needs of farmers, about which agricultural advisors (either technical advisors from Asso Fruit or public/private agricultural advisors) are already aware of for many years.

It is important to emphasize that Italy has a regionalised system. In each region, there is a “micro AKIS” and in all regions, MAA projects involving researchers, farmers and advisors are very common. Especially big farmer-based organisations, such as Asso Fruit Italia, have a strong link with University and researchers at regional level. This organisations usually act as an intermediate between farmers and researchers (they transfer the needs of the farmers to researchers). Within Asso Fruit there are a lot of private technical advisors, who have constant relationship with farmers and are therefore very aware of the problems they face because of water scarcity and water-related costs. Basilicata University already had the experience with Asso Fruit in other projects, including before mentioned EIP water, and fortunately at the same time this organisation includes a large number of farmers (around 300) who could be reached through the project tras.irri.ma. This are the reasons why Asso Fruit Italia is the lead partner of the project.

4. Planning and development

Planning

In the planning phase activities to determine the exact topic of the project were carried out. When the Region decided to launch the call for operational group, the actors of OG were given one year to discuss the problem and farmers' needs in the context of water management. These activities took place on two levels; on one hand, a number of meetings took place within the primary circle of actors, where they tried to determine how to organize the structure of the EIP operational group at the regional level, e.g. how to connect the knowledge of different stakeholders, how to combine researchers, technicians and farmers in OG, but most importantly how to introduce the innovation in water management to the farmers in order to help them and to steer them in that direction. This issue was discussed on many meetings and with the purpose to put together all the knowledge, other research institutes became partners in this project and their opinion was included in this phase. Also, three facilitators (two researchers and one advisor from public extension service ALSIA) were assigned to make an overview on actual needs of farmers in Basilicata region. Through direct conversations with farmers and farmer-based organisations the facilitators were collecting information about level of knowledge that farmers have at the moment in the context of irrigation, water balance, ..., how they are dealing with water scarcity, what are their needs, and so on. It turned out that farmers are very interested in precision farming and optimization of irrigation by using modern technology. Based on all the information collected through meetings within partners and with farmers objectives were set and the final proposal of the project was conducted. This is a process that many regions in Italy use when forming OG for EIP projects. We can say that in some way all the actors involved contributed to the definition of objectives, including the farmers, who actually indirectly formed the final objectives of the project with their experiences in water management that they shared with the facilitators (2 researchers and advisor).

It was important to define roles and functions of different actors at this point of the project to proceed appropriately. The main driving force in this phase of innovative process was still Basilicata University with its researchers. The group of actors, involved until that phase was having many meetings where they agreed on roles and the whole process. It was decided that Domenico Laterza, private advisor from AGREEMENT, would be the main contact person for all stakeholders (farmers) that were interested in the issue presented in the "preliminary call". It is important to point out that Italy does not have "usual public agricultural advisory service", which means that typically public agricultural advisers do not go to farms or are in any other way in direct contact with farmers. The task of the public advisory service is primarily to provide information. The farmers are in direct contact with private advisors and technical advisors from organizations such as Asso Fruit Italia.

The project is funded by the Rural Development Programme, in particular Measure 16 - Cooperation. Asso Fruit, as leader partner and organisation with many experiences with projects, was responsible for the communication between the project and the funding

body. OG AcquaBasilicata did not encounter any special problems in terms of financing, the only problem was that initial proposed budget was cut by the Region, because the funds on Rural Development Programme were not big enough. Despite the reduction in funding, all project objectives remained the same, the only change was a reduction in the number of meetings with farmers. We would think that the co-financiers of the project may also be providers of water management technology, but this is not the case, as the project partners decided to test the technology of a larger number of providers with the aim of gaining as much different knowledge as possible. The promotion of water management technology was not the purpose of the project. We would also expect that the participating (testing) farmers in the project would get some sort of discount adopting the technology they are testing, but the project does not envisage this. If the farmers want to implement the innovation, they have to apply for another call to receive public fund or use their own fund.

Development

OG Acqua Basilicata aims to transfer knowledge about innovative water management systems among different actors (researchers, advisors and farmers) in all directions. Since farmers are the main actor in the practical implementation of the project, they first have to get knowledge about water balance, which parameters have to be taken into control and which tools are needed for monitoring this parameters, because sustainable management in agriculture is possible only with continuous monitoring of parameters. In this sense the OG agreed that in the first step of this phase researchers and advisors will search and study all possible solutions available on the market related to irrigation systems (water management innovations) and after that they will pass the knowledge about existing technology to the farmers in such a way, that each farmer, included in a project, gives a piece of his land for testing purposes. Farms that were directly involved in the project were chosen by Asso Fruit together with researchers. They chose farms with different types of production to try to implement innovative technologies for water management in different situations of production. They also included apricot growers because they have the biggest problem with water. All chosen testing farms had a direct conversation with their advisors and decided whether they will cooperate or not. Advisors presented the proposal of the project to them and discussed about the further process.

Working group was coordinated together by producers' organisation Asso Fruit Italia (lead partner of the project) and advisory service AGREEMENT. As producers' organisation, Asso Fruit Italia is obliged to take action for water management - this is their internal formal rule. Asso Fruit started to be the main coordinator after the project was submitted. Before the submission the coordinator was Basilicata University with its representatives (Prof. Bartolomeo Di Chio and researchers). Private advisory service AGREEMENT was coordinator of field activities and administrative issues.

Farmers and advisors are the key actors from this phase of the project on. Actually the project TRAS.IRRI.MA was designed to have an interactive part in the first year to decide the objectives, farmers needs etc. The rest of the project is based on direct relationship between farmers and advisors, later also on dissemination activities.

There were no problems in stimulating interest among key actors, as on one hand farmers had a great interest in participating in the project, as they had a lot of added value in production, at least at the time of participation. They had the opportunity to test and use the latest modern and innovative technology for water management, and thus improve their yield. On the other hand, the advisors enthusiastically accepted their task in the project, because in contrast with the usual work of an advisor, where an advisor can transfer knowledge of one innovation (one advisor cannot learn how to use all available innovations to save water), working in a group gives a possibility to know and to transfer knowledge about different options in water management and to try all of them directly on the field with farmers. This project was a great opportunity for advisors to get a lot of knowledge about different technology for water management and how to apply them. Advisors wanted to get that knowledge, because in Basilicata region there is a great need for water saving in agriculture. This project is a very good example of joint learning between researchers, advisors and farmers in direction researchers → advisors → farmers, as well as in the other direction, farmers → advisors → researchers. From advisors point of view the cooperation in the partnership led to better results than working on their own.

During the innovation process all actors were aware of the tasks to be carried out. Asso Fruit organisation has a technical office with technician, who has a protocol of OG and from there all the project partners were coordinated and informed about activities to be done.

There were no disagreements or conflicts between partners in this phase of the project, all decisions were made together during regular meetings where all opinions and knowledge were taken into account.

5. Implementation

Realisation

In the realisation phase researchers defined demonstration fields and procured all the technical equipment which, according to conversations with farmers and their advisors, they concluded would be interesting and useful for farmers. All involved actors were very happy that the idea was being realised. This project is not a research or experimentation at high level, but is about introducing best models for irrigation management to the key actors – farmers. The technology used for this purpose is innovative, but the main innovation of this project is in the way knowledge is being transferred from researchers to the farmers and from farmers back to researchers and to other farmers, who are not directly involved in the project. The role of advisors in this story is very important, because they act as a connection between researchers and farmers. They help Basilicata University to communicate with farmers and to facilitate the transfer of work, done on the field to the farmers, who are not involved in the project by organising open events on the field and other dissemination methods. To perform their role as appropriately as possible, advisers needed to gain some additional knowledge on water management and technical equipment that was being used in the project. As already mentioned in the previous phases, in this project we are talking about the participation of different level of advisors; technical advisors from Asso Fruit organisation, private advisors like Domenico Laterza and also advisors from public extension service. University and research centre provided training for this advisors on technical aspect (how to use the technology that is being implemented in the project). Trainings are open for anybody, but are specifically addressed to the advisors. With the acquired knowledge, advisors were able to make decisions which solution for water management would be most appropriate/best for a specific situation or problem on a specific farm.

Farmers are the most important link for the realization of the project. Farms within Asso Fruit, which are also testing farms in the TRAS.IRRI.MA project, are differently developed, some of these farms are large and already have very good water management technology. These farms are important to the project in terms of transferring knowledge in the direction farmer → advisor → researcher. By working with such farms and also with farms that decided to test the technology, the conclusions about the best options for the specific needs of each farm situation were developed. We can say that realisation phase is actually a learning phase for all involved partners and all involved partners have a role to transfer acquired knowledge (that was the main idea and aim of Basilicata University from the very beginning).

Project partners did not experience any disagreement or conflict during the phase of realisation. As this is a very interesting and innovative topic, all partners are very interested in working on the project, especially farmers, who are very happy to test innovative water management technology. Some of these farmers have even decided to

purchase this type of equipment and are already using it on their farms, but other farmers are just learning what could be the benefit of such equipment. Maybe after some period of using this technology on the farm, not all farmers will be satisfied, but it is hard to say at the moment, because the project is still in the phase of testing the technology. Below you can see a picture from the video that CREA made for the purpose of the Peer Review interview. The farmer gave a very good reflection on the projects process from his point of view:

“TRAS.IRRI.MA solved our problem of optimization irrigation. The idea of the project was presented by advisor from AGREENMENT, with whom we discussed a lot of times. Advisor helped our farm to choose the best solution for irrigation and to calibrate the system. Now I am trying new technology for the last two years with the constant help of advisor. During the testing also some professor from University and researchers were involved. Some options were not considered at first, but this year we will try to implement the system for completely automated water management. There were also some changes in innovative technology needed, only a few modifications in order to adapt technology to our farm. This was done in collaboration with advisor and research centre. Interaction between participants has been constant, especially during summer, because this period of the year is very important for the management of water and it is necessary to test new technology during this period. My experience in OG is what I expected, because I think it is very important to transfer this technology to the farms and adapt it based on characteristic of the farm.”

Picture 2: Print screen from the video with Farmer Egidio Lardo (one of the testing farms)



There is no system to monitor progress towards reaching the objectives, because activities in this project are simple and already based on dialog, meetings, transferring knowledge within partners, discussion and interaction. However, they are supposed to present what was done in the project to the Region every three months. During

realisation phase partners realized that some alternative solutions have not been considered, so they are currently adding elements to the innovation.

Dissemination

Based on the tests made on farms, the best water management models were selected and also open field visits on the farms with best results were made. Open field visits are open and free for everybody in the Region. In this way other farmers can also come and learn which water management tools exist, how they work, what are their advantages and how to use them. They can see other farmers while using the technology and at the same time discuss about how to improve irrigation with advisors, technician and researchers. Farmers can choose technology that would be best for their farm based on the level of their knowledge. The effect of these activities have already been proven, as the farmers are asking for help in buying presented technology and also for help in introducing bought technology on the field.

Asso Fruit has received permission from all farmers - members to apply this project. Only few farmers are directly involved in the project, but all others want to know the results. Some farmers are open for innovation and it is easy to dialogue with them; a big challenge are those farmers who are less willing to innovate and need more support from advisors to start thinking more innovative. This is a big job for advisors, who are therefore spreading knowledge to such farms and are working on implementation of innovative tools to all other farms they work with and were not involved in the project or in open field events. For this purpose management protocols and guidelines for farmers were made. These protocols aim at continuous monitoring of soil moisture and to set up proper irrigation plans in order to improve awareness of farmers to better adapt to climate change. The goal is to reach as many farmers as possible, not only in Basilicata region, but also in other regions of Italy. Key actors in this phase of innovation process are advisors.

Moreover, there is a wide dissemination between different advisory bodies and with actors outside the project through activation of social channels, articles, journals and newspapers. Through the use of these dissemination methods, farmers are able to benefit from technological innovations, good practices, and facilitating their application to the farms.

Dissemination is a central part of the project TRAS.IRRI.MA and the main goal is to reach as many relevant people as possible. Since all project partners are involved in dissemination activities, they all had to deal with unexpected difficulties, related to Covid-19, in the implementation of this activities. Due to Covid-19, the original plan for carrying out essential dissemination activities had to change. Instead of real events on the farms with 60 people or more, they have to make webinar events, which, unfortunately, are not attended by a large number of people (around 10 people per webinar) and this is a big problem. They agreed to solve this problem by asking for extension of the project. The project was supposed to finish in 2021, but is now extended until 2022.

Embedding

The project runs smoothly, without complications. All partners are satisfied with the course of work and are happy to participate. The main driver in all phases of the project is to solve the problems of farmers in the context of water management, which has been one of the most important challenges in the Basilicata region for several years. For the innovation process in this project the most important network is an EU-wide EIP-AGRI network which enabled the formation of the OG.

After the project is finished, GO AcquaBasilicata is planning to continue with the work on this topic. Especially because there are other European projects in the Region and an important task will also be to systematize the results of all the activities of this GO with the results of the activities of the other GOs. There is a lot of opportunities to link with other groups of innovators, because tras.irri.ma is actually only one part of big research idea and other connected project are also already in act. Domenico Laterza, an advisor and a main contact person for the project tras.irri.ma, is involved in other projects about water management and is discussing with other projects members how to find other funds and continue with tras.irri.ma. They plan to connect with other projects at European level that deal with same issue about water.

The idea of GO AcquaBasilicata is to continue with implementing innovative technology, identified in this project, on the farms, and when bigger number of farms will be using this technology, to collect problems or new ideas in the terms of water management from these farmers or their advisors. They believe that results of this project will produce a change in the farming system of Basilicata region and maybe even other regions of Italy.

6. The AHA-Erlebnis: feedback on the gained insights

TRAS.IRRI.MA is a project that focuses on the issue of water scarcity for agricultural purposes in the Basilicata region of Italy. The project is innovative by itself, but at the same time it is a replica of the already implemented innovative project at the European level, called EIP-water. Here we are talking about combination of the innovative process of two projects. EIP-water implemented at the European level has become familiar in the environment and is being replicated (dissemination phase). Crucial to the launch of the TRAS.IRRI.MA project was Prof. Bartolomeo Di Chio, who presented to his colleagues, with whom he participated in the EIP water project, the idea of carrying out a similar issue at Basilicata region, where the need for better water management was present for years. The problem that the project is trying to solve is so widespread in the Basilicata region that in fact there were no major problems to obtain approval for the implementation of the project by the Region authority, nor was it a problem to obtain all relevant project partners.

One of the main success factors of the case TRAS.IRRI.MA was the match of opportunity and real needs of the farmers. This opportunity would be difficult to seize without good organization and communication coordinated by the University of Basilicata at the very beginning of the project. Numerous meetings of project partners and preparation of advisors as key actors in the transfer of knowledge between research and farmers, were organized with the help of people with more than 30 years of experience in water management, as well as experience from other similar projects.

For the advisors, the experience of participating in such a project was something new, because in Basilicata region research and advisory are not linked, but are independent from one another. Moreover they have different types of agricultural advisors – private advisors, technical advisors from farmer-based organisations and public advisors, whose work does not involve direct contact with farmers. Project TRAS.IRRI.MA brings all these actors together in a more structured way to transfer the knowledge from research to farmers. This is also the main innovation in this project – cooperation and knowledge flow between actors, who are normally not connected in such a way, with a common goal to acquire as much knowledge about efficient water management techniques and how to apply them and to spread the acquired knowledge among as many farmers as possible. But the knowledge flow goes in the other direction too, so the goal is also to collect knowledge and experiences from farmers, who use innovative technologies for water management.

Since TRAS.IRRI.MA is an EIP project, the main actors in this project are farmers. They are also the main reason this project was and still is so successful. Farmers have a very big interest in participating in the project, because they have direct benefit from it. The project will not co-finance the purchase of innovative water management technology, but testing farmers can take advantage of the positive aspects of the technology for water management at least for the duration of the project (water savings, lower costs, better yields, indirect advertising during open field visits, etc.). If the key actor is interested and has a strong motivation, then all other activities in the project are much easier to implement and at the same time other involved actors (advisors, researchers...) have more motivation because they have a guarantee that their work and results will continue to expand after the project is finished.

In the practical case of innovation TRAS.IRRI.MA we cannot say that agricultural advisors were innovative based on their own idea or competencies. The project was the idea of a professor and a group of researchers from the University of Basilicata, who needed an intermediate between researchers and farmers to realize their idea, that is, of course, advisors. In fact, advisors were given an important role in the project only after the basic idea and the way to implement it had already been conceived. However, in order for the advisors to be able to play their role in the project correctly, they first had to acquire the appropriate knowledge of water management technology. In this way, they gained in sovereignty and worked very successfully with farmers and other actors in all subsequent phases of the project from planning onwards. We must point out that, unfortunately, we were unable to conduct an additional interview with one of the key

advisors from Public Extension Service ALSIA due to his retirement. With this, we probably lost quite a bit of important information regarding the role of public advisors in TRAS.IRRI.MA project and their communication and cooperation with other actors.

The only barrier through the whole project was Covid-19, which changed the most important activities in the project – dissemination. As the project has been extended due to the latter, it is difficult to talk about the consequence at this moment, as dissemination activities will be probably carried out according to plan after the Covid-19 situation calms down.

TRAS.IRRI.MA project outcomes:

- Report on validated techniques and technologies for the design and implementation of high efficiency water-saving irrigation systems. The report will make it possible to spread the latest technological advances on irrigation methods at farms. Farmers can use these results to design corporate irrigation systems that provide good quality water, while at the same time enabling environmental and economic savings.
- Dissemination of guidelines for farmers, which include soil management methodologies to increase the knowledge of proper nutrition management and water balance.
- Diffusion of sensors and innovative systems for controlling and monitoring the soil-plant-atmosphere system and to improve knowledge on continuous measurement of soil moisture, to increase the skills on crop water balance technologies, to reduce water drainage and to reduce the water footprint of farm produce.
- All the knowledge gained will be set up in order to achieve greater competitiveness on local and international markets

7. Lessons Learned

The Peer Review activities, carried out in combination with farmers and agricultural advisors, helped to gain valuable experience and knowledge from representatives of the best practical cases of interactive innovation. Certainly, the best teachers are those who have already gone through all the phases of the innovation process and been successful in doing so. The path from the very beginning of the innovation process, i.e. from initial idea to the realization, is often complex and depends on many actors from different fields. We are very pleased to have gained insight into the roles of these actors through the so-called Field Peer Review, where we were, of course, mainly interested in the contribution and effectiveness of agricultural advisers in supporting interactive innovation.

It is a great pity that we were not able to conduct the interviews face-to-face, as we probably lost quite a bit of important information or at least genuine contact with the people we were talking to. Consequently results and understanding of the project are maybe modified. Moreover, the online implementation of the interviews did not attract farmers, who participated in Field Peer Review activities, as much as we maybe thought it would, because farmers are more practitioners than theorists, so the fact that they could not see the innovation on the field was a major drawback. Luckily, computer technology nowadays enables many things, so in a field peer review team, coordinated by SEASN, we agreed on a »mini virtual tour« of one of the farms that participated in the innovative TRAS.IRRI.MA project in Italy. The farmer in the video provided quite a bit of interesting information from his point of view and information in connection with the agricultural advisor with whom he collaborated during the project. This was also a good way to »spice up« the online peer review interview. Because of all the limitations in the implementation of Peer Review activities caused by Covid-19, we suggest that field visits to practical cases of innovation, which were reviewed on-line, are organised also on the field during the i2connect project when the situation will allow.

Reflection meetings after the peer review interviews are a very good way to exchange opinions, better understand all the information given by different actors that were interviewed and to give a first assessment on the practical case being reviewed. The importance of the involvement of an advisor in a peer review panel is particularly shown here, as he/she can best assess the role of agricultural advisers within the practical case due to his/her personal experiences. From the practical case of innovation tras.irri.ma, we learned how important the participation of different actors and the transfer of knowledge among them is. This is especially effective if all those involved, especially the key actors, i.e. farmers, have a great interest in the project, as they not only contributed to the new knowledge created through the project, but also benefited directly from it. This is the most important element of the success of the tras.irri.ma project. We have also learned that the innovative approach may differ among different countries also depending on the organization of the advisory service structure.

We are looking forward to the key findings based on all the implemented Field Peer Reviews, which will certainly open up new aspects of understanding why it is important that agricultural advisors are innovative and in what forms this competence is being shown. However we believe that only during the review of all conducted peer review reports it will become clear whether we have really properly followed the suggested methodology for the execution of the interviews.

Field Peer Review Report (Final)

The use of alternative forage in cattle feeding, conservative maize stripping, immediately after catch crops as an alternative source of income, Poland



Main author

Jane Kavanagh

With contributions from

Karolina Swistak, Poland

Martin Mavsar, Slovenia

Pat Dunne, Ireland

1. Introduction

This report provides a review of a practical case, which focused on the use of alternative forage in cattle feeding, conservative maize stripping, immediately after catch crops as an alternative source of income in Poland. This case study was selected as an example of a successful interactive innovation by the i2connect partners. The field review process for this case study followed the framework and methodology developed by the i2connect project. The objective of the i2connect Field Peer Review is to:

- assess the roles and function of advisors in supporting innovation processes, and
- assess the effectiveness of this support and the enabling environment.

The Field Peer Review process aims to provide an inventory of practices (with a particular focus on advisory) that define and support an enabling environment for interactive innovation processes, providing a framework for analysing the roles of various actors and policy instruments. It will provide insights to develop training programmes, materials and tools for capacity building of advisors, advisory teams, decision makers and managing authorities.

The peer review panel for this case study consisted of the following members:

Name	Role
Jane Kavanagh	Peer Review Panel Co-Ordinator
Karolina Świstak	Contact point/facilitator for Finland Case
Martin Mavsar	Advisor
Pat Dunne	Farmer
Geoffrey Hagelaar	Observer

Due to the COVID-19 pandemic the field review was carried out virtually. The preliminary meeting was held on 11th December 2020. This meeting focused on introducing and providing an overview of the case study and meeting the key actors involved in the case and the peer review panel. The duration of this meeting was 2 hours. The meeting was recorded.

The field review meeting was held on 15th February 2021 using zoom. This meeting focused on a deeper discussion with the key actors in the case and an interview with the peer review panel. A video presentation of the case study was provided by Wojciech Styburski. The duration of this meeting was 2 hours. The meeting was recorded.

This document outlines the case study and the insights from the peer review process.

Acknowledgements: The peer review panel would like to thank Karolina Swistak, Wojciech Styburski and Janusz Dąbrowski for their preparation and participation in this peer review.

2. Factsheet of the case

This case study is part of an EIP project called AgroInnovation (AgroInnowacja). The project is led by the consortium leader, Biuro Doradztwa Rolniczego Styburski & Golinski, an advisory services organisation. The consortium partners are six farmers and an entrepreneur. The lead advisor is Wojciech Styburski.

The AgroInnovation (AgroInnowacja) project uses an innovative approach to produce cattle feed on farms where land resources are limited. Sowing a catch crop, Futter Nova 11, for forage has enabled the six partner farmers to produce high-quality forage and keep more cattle on their land without increasing their land area.

Strip-till technology is used to sow maize on the day the catch crop is harvested thus maximising land use on the participating farms. Adopting this approach has resulted in higher gross margins for the partner farmers as their cultivation costs were optimised, they produced high quality fodder for their cattle and the overall performance of their cattle improved. The combination of effective feeding of cattle on the basis of the Futter Nova 11 intercrop mixture, followed by the management of maize for fodder or sale created an additional source of farm income and provided environmental benefits.

In Poland, due to the weather conditions, it is difficult to obtain a good yield from two agricultural crops in one growing season. This is why the successful growth of the Futter Nova 11 catch crop for forage production followed by growing maize is a technological innovation. The Futter Nova 11 mixture, of grasses and legumes, was developed specifically for this project.

Key Actors

The key participants in this case study are the agricultural advisors, the six participating farmers, researchers at the Poznan University, the agricultural input suppliers and entrepreneur. Co-operation among the actors was critical to the success of the project.

A summary of the key stakeholders involved in the project are shown in the table below:

Actor types	More specifically:	Name of organisation and sector (public or private)	Nature of involvement/Official role
Individual farmers or foresters	6 pioneer farmers	Private	Field trials management
Researchers or R&D departments	Researchers at university	Poznań University of Life Sciences (public – not formally involved)	Work package leader
Support organisations	Agricultural advisors	Biuro Doradztwa Rolniczego Styburski & Golinski (Agricultural Advisory Office Styburski & Golinski)	Leader of the consortium
Market actors - supply side	e.g. business, suppliers (e.g. raw materials), manufacturers, service providers	Entrepreneur (MSP category)	Work package coordinator, provider of funding for field trials

Challenge and Approach

The key challenge that this case study is addressing is how to sustainably increase the productivity and profitability on beef farms in Poland and maximise land use without purchasing or leasing additional land.

The approach used to address the challenge was to bring together a wide range of actors with specific expertise to co-create an innovative technological and organisational solution, which would deliver positive results. In this case study the solution is to use strip-till technology to sow maize directly into the soil after harvesting a catch crop, Futter Nova 11, and feeding the high quality roughage from the catch crop to beef cattle resulting in positive results which can be replicated on other farms, both beef and dairy.

What is new in this initiative is the willingness of actors and farmers to collaborate and work together on developing and implementing innovative solutions to a problem, led by an agricultural advisor.

Funding

The AgriInnovation (Agroinnowacja) project is co-financed under the cooperation action for efficient and sustainable agriculture from the Rural Development programme 2014-2020. This action provides support to establish operational groups (EIP groups) and implement innovative projects and solutions that will lead to the development of new processes, practices, products, technologies or methods in the agriculture, food and forestry sectors.

More information is available at <https://agroinnowacja.pl/>

2. The initiation period

This section outlines the origin of the idea for the project and the role of the key actors involved in the initiation phase of the case study.

3.1 The origin of the idea

The idea for this project came from the farmers in producer groups. The farmers came up with the idea to maximise their farm's potential by using catch crops while at the same time receiving maximum subsidies per hectare. The idea emerged when the farmers in the producer groups identified this problem and the advisors embarked on finding a solution. So, initially the advisors were looking for a catch crop solution to meet the greening requirements and secure maximum direct payments. However, they hadn't considered the idea of using the catch crop as a source of fodder for animals. It was not until the advisors discovered that in Germany farmers feed animals with fodder from catch crops that they got their real inspiration for this project. This gave them the inspiration to look for an appropriate solution for their farmers in Poland.

Coincidentally, at that time, Wojciech Styburski was a student at the University of Poznan and while there he asked the researchers at the University if they would develop a mixture for a catch crop that could be used as a source of animal feed. In 2017, the researchers, in collaboration with the advisors, developed their own proprietary mixture of grasses and legumes, which they called Futter Nova 11. This new mixture was then tested by growing some small areas of the crop on Wojciech Styburski's farm. When Wojciech realised that this mixture had potential, he asked Professor Czubak at Poznan University to analyse the potential of the crop from an economic perspective. Together, Prof. Czubak and Wojciech realised that this approach was particularly innovative and decided to create the EIP project.

3.2 Engaging the Actors/Building the Network

The next stage was to mobilise and engage the relevant actors and partners to participate in the project. The project would involve farmers growing and harvesting the catch crop on their farms and using it as a source of animal feed. It would also require the collection and analysis of data. For the project to be a success the selection of farmers was critical. The participating farmers would have to be open to change, willing to adopt new ways of doing things and sharing their data.

The Lead Advisor

Wojciech Styburski is an agricultural advisor with many years of experience effectively advising farmers and running his own farm. He is an agricultural scientist and is currently studying for a PhD at Poznan University. He is also the President of a private agricultural advisory consultancy company called AgrolIntegracja. AgrolIntegracja organises and provides services to producer groups in Poland. They currently provide services to over 450 farmers in producer groups in Western Poland. The approach taken

by AgrolIntegracja (Figure 1) is to help the producer groups to identify the problem and to connect the farmers with experts and specialists in the agri-food industry to create innovative solutions for the problems. The problems faced by the farmers are the basis for inspiration for ambitious projects such as this project.

Very often the views of agricultural advisors, including veterinarians, fertiliser representatives, chemical representatives etc are contradictory. AgrolIntegracja identifies and selects the best local specialists to create effective interdisciplinary teams to discuss and co-create innovative solutions. Co-operating with outstanding experts enables them to effectively advise producer groups. According to Wojciech, highly innovative solutions are most often developed by interdisciplinary teams of the best experts.

The AgrolIntegracja advisors have been working with the farmers in the producer groups for many years and have built up a significant level of trust. Their many years of advisory work enable them to quickly and thoroughly identify problematic issues. They create research and development projects to assist in searching for potential solutions.

Wojciech’s success as the consortium leader for this project originates from huge social support from co-operating farmers, entrepreneurs and agricultural institutions. He has established a wide network and built many relationships with various actors throughout his advisory career which he can leverage for his innovative projects. A key skill is being able to identify the problems for the farmers and being able to translate them to a research and development and business context to find effective solutions.



Figure 1: AgrolIntegracja approach to advisory services

Selecting the farmers

The advisor used his extensive knowledge of the farmers in the producer groups to identify six farmers who would be the most suitable to participate in this project. The level of trust between the advisor and the farmers helps the advisor to influence the

farmers to implement challenging innovative solutions. The farmers had to agree to the terms and conditions of the project and, in particular, to co-operate and collaborate towards the achievement of a shared goal for all participants. Co-operation was key to the success of this project. Other criteria for selection included, good farm results, honesty, willingness to participate in research and development, willingness to share results and information. From a potential pool of 300 farmers, Wojciech selected six exceptional farmers who he believed were the best fit to participate in this project. This initial selection of farmers was critical, as the advisor was conscious that these farmers would become ambassadors for the new practices that would be developed during the project.

Accessing Relevant Expertise

Running his own farm and collaborating with the University to find solutions for his farm gives Wojciech a good insight into what it means to be an effective advisor and how the knowledge and experience required for this role differs from the role of an agricultural sales representative. Wojciech actively seeks out and engages with the sales representatives and other experts calling to the farmers in his producer groups by inviting them to participate in interdisciplinary teams to advise the consortium and the farmers (Figure 2). He knows this approach to agricultural advice is most effective because they provide a much more comprehensive and thorough approach and consider every aspect of the farming enterprise. Farming is complicated and while he has a lot of agricultural experience, he acknowledges the need to call on experts for help.

For this particular project, the advisor sought expertise from outstanding specialists in animal nutrition, animal husbandry and crop cultivation. He created an interdisciplinary team focused on finding a solution to the problem. He facilitated many workshops with this team and the team also participated in a number of study tours. In fact, 31 workshops were held on the optimisation of plant and animal production during this time.

With the help of a team of nutrition advisors and specialists they developed three nutrition models for testing on the six farms. A private seed company was also involved at the beginning of the project. Wojciech enlisted the expertise and support of the seed company to match the Futter Nova 11 mixture to the individual soils of the farmers. This was done in collaboration with the participating farmers. A local entrepreneur was also invited to participate in the project. The entrepreneur purchased the strip till sowing machine and provided timely sowing services for the participating farmers.



Figure 2: Wojciech Styburski facilitating a meeting with the interdisciplinary team of experts

2.3 Reflections

Reflecting on the initiation stage of the project Wojciech said that the most challenging part of the process was to encourage the farmers to co-operate, to run research on their farms and to carry out tests. Also, to take a risk that would have an impact on their own farms. It was very helpful that Wojciech had already done a trial on his own farm and was convinced by the results, which he could then use to convince the farmers that they would not lose by participating in the project.

3. Planning and Development

This section outlines the development of the catch crop and the new farming practices that were implemented on the participating farms.

4.1 Developing Futter Nova 11

The Futter Nova 11 mixture, of grasses and legumes, was developed specifically for this project. The nutritional value of the Futter Nova 11 mixture is extremely important. The mixture includes components from the Fabaceae family, which has increased its usefulness in feeding beef cattle, and it can also be successfully used for feeding dairy cattle. It is resistant to water shortages because the crop is grown outside the main growing season.

The selection of plants in the mixture was developed by specialists and scientists to achieve the following goals:

- Above average growth in unfavourable conditions
- High green mass efficiency
- Rapid regrowth
- High level of plants wintering
- High nutrition and protein content
- Uncomplicated cultivation
- Possibility to be used in various crop rotations

4.2 New Farming Practices

The aim of the project was to show the effectiveness of feeding animals using intensive catch crop cultivation (spring – autumn) and sowing maize directly into soil. This required all six of the participating farmers to adopt new farming practices on their farms for both crop production and animal production. The following inputs were required for the research and development work on each of the six farms: seeds (catch crops mixture and corn), fertilizing material, cattle – weaned calves.

Crop Production

Traditionally, as shown on the conventional crop in Figure 3, the land was left fallow after sowing Winter barley before sowing maize/corn. In this project, the farmers sowed the catch crop Futter Nova 11 during the fallow period and harvested the crop for forage.

As shown in Figure 3, during the first year of the project the farmers planted winter barley on their farms and immediately after harvest they prepared the fields for the catch crop. The cultivation method for Futter Nova 11 is similar to grassland seeding. This enabled them to cut the FN11 2-3 times by the end of Autumn providing them with fodder (approx. 50 bales/ha) with up to 20% protein. The first cut of FN11 was 60 days after sowing and the second 30 days later. The farmers wintered the crop which allowed them to cut the FN11 in the Spring, completely fulfilling their fodder requirements. In recent years, the third cut is in March and a fourth is cut in May. The farmer makes 12-15 bales/hectare. After harvesting in May, the maize is sown the same day using strip-till.

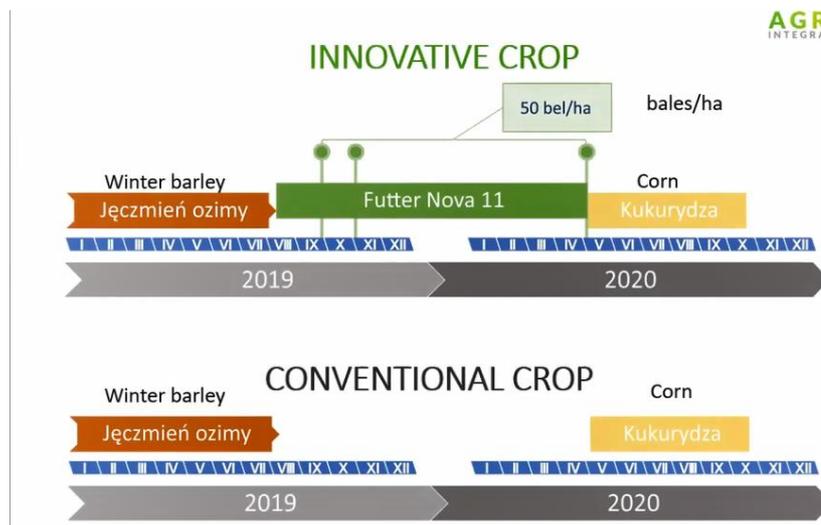


Figure 3: Incorporating a catch crop in farming practices

Animal Production

To test the fodder from Futter Nova 11 seven weaned beef cattle weighing 300kg each were placed on each of the farms participating in the study. During the fattening period from June 2018 to May 2020 the cattle were weighed and monitored regularly. With the help of the nutrition experts three nutrition models were developed for testing. The three models/experiments were as follows:

- 1) On 2 farms, the cattle were fed 100% maize plus concentrates
- 2) On 2 farms, the cattle were fed 50% haylage (catch crop), 50% maize plus concentrates
- 3) On 2 farms, the cattle were fed 100% haylage (catch crop) plus concentrates and nutritional products without maize, e.g. beet pulp.



4. Implementation

This section outlines the results of the project and how those results were disseminated. It also includes a reflection on the role and effectiveness of the key actors.

5.1 Results and Outcomes of the Project

The objectives of the project were two-fold:

- To improve beef cattle production using an innovative catch crop mix and sowing maize using strip-till technology;
- To improve farm profitability using effective catch crop cultivation for fodder and effective maize cultivation after harvesting the catch crop to generate additional income on the farm and additional feed.

The results of the project were very positive. There was an increase in productivity and profitability for each of the participating farmers. There was an average daily increase in cattle weight of 1.3 kg and very good post-slaughter results were obtained.

In Poland, land is very expensive and availability of land is a real problem. Therefore, farmers need to improve production and maximise the utilisation of their resources in order to increase their profitability. The positive results from this project have provided beef farmers with options. They can increase the size of their herds or they can sell maize or haylage for additional income.

Incorporating the innovative catch crop Futter Nova 11 in the crop rotation has:

- Doubled the generative yield in one growing season
- Provided additional fodder or income for the farm
- Made efficient use of production space

Using strip-till technology to sow maize has prevented water loss and reduced cultivation costs. Implementing these solutions has enabled the farmers to use their available sources in a better way.

Summary of the main outcomes from the project

- Due to the high protein content of Futter Nova 11, the consumption of relatively expensive compound feeds has decreased. As a result, the cost of feeding decreased and the economic efficiency of cattle production increased.
- Thus, an increased income was obtained: either by increasing the production of cattle with an unchanged area or by selling maize.
- Sowing with strip-till technology on small to medium sized farms had a number of benefits; it improved soil structure, reduced fuel consumption and saved time.
- A new contracting service was developed and showed that strip-till technology can be used on small-medium sized farms.
- Clever planning of production has resulted in four harvests of Futter Nova 11 for forage during the year.
- The combination of this production planning and the use of modern technology has increased the efficiency of the farm without the need to increase the area. Lack of available land for cultivation is a problem that has been affecting Polish farmers for many years.
- Sowing Futter Nova 11 meets the greening conditions for direct payments without the need for additional practices.
- It also provides ecological benefits including improving soil fertility and soil structure. It acts as a break-crop for monoculture thus reducing the need for chemical plant protection.
- The options available to beef farmers are to graze cattle and expand their farm or to give up cattle breeding and sell maize to other farmers. Now they have the option to grow an additional feed for their cattle using catch crops.
- Re-designed farming practices to be able to assimilate the new Futter Nova 11 and the rotation with maize in existing farming practices and on the other hand change the business of the involved farms.

5.2 Dissemination

Each of the six farmers participating in the project act as ambassadors. They share their experiences and the changes they made to their farm and the results with other farmers in the producer groups. Each producer group has approximately 20 farmers, so the ambassador farmer is actively influencing those 20 farmers in their producer group.

At Producer Group meetings the advisor will present a new idea to the group and the ambassador farmer will share their insights and experience of implementing that idea and getting results. This is an effective method for influencing other farmers and showing them what is possible. This is encouraging other farmers to get involved in innovative projects and they are now volunteering and eager to work as part of a group.

The dissemination of the success and results achieved in this project has had a real impact on the other members of the producer groups. The farmers are now approaching the advisor to ask if they can be part of a project and are willing to co-operate and work with others to develop and implement new solutions.

An interesting channel that has become very effective for marketing and promoting the results of innovative research and development projects is YouTube. High quality and well-produced videos are created to showcase the project and the results and then put on YouTube. These videos are then shared/promoted by agricultural influencers on YouTube who are successfully using the solutions. When an agricultural influencer shares the video it results in thousands of views by people in the target audience. The success of this effective marketing approach has shown the advisor that it is not necessary to have more than six farmers involved in a project in order to have an impact.

The University of Poznan has also played a role in the dissemination of the results of this project. They are currently running a three-month training course for students where they spend time at AgrolIntegracja to gain experience in advisory.

5.4 Reflections

Reflecting on the project, Wojciech would have invited the University to participate in the project at an earlier stage. At the beginning, he encountered difficulties in co-operating with the University due to formal procedures that had to be followed and it took some time to formalise the co-operation. However, due to Wojciech's relationship with Professor Czubak, he was able to collaborate with the University informally while waiting for the process to be completed. Engaging with the University and researchers earlier ensures that the correct research methodology is outlined when planning the project. It was much easier to engage with the University on subsequent projects because the co-operation had been formalised.

5. The AHA-Erlebnis: feedback on the gained insights

This case study highlights the importance of investing time in building relationships and a broad network of people. A critical success factor in this case study was the advisor's ability to leverage his network to bring different actors together to solving a specific problem. The advisor always brings different actors together for different projects. The case study shows the benefits that can be gained from a broad group of actors co-operating and working together to solve a particular challenge.

The knowledge, skills, experience and networking capabilities of the advisor was critical to the success of this project. Wojciech is full of ideas. He is very curious and is constantly searching for new and innovative solutions to farmers problems. While other projects may involve a small number of people and may work with the same people from project to project, Wojciech takes a different approach. He is constantly bringing new people together to work on projects. It is this skill and his ability to effectively facilitate co-operation among people focused on solving a specific problem that is unique to the success of this project. Wojciech currently has nine innovative projects in the pipeline and now has no difficulty in getting farmers to volunteer to get involved in new projects.

Contentwise the knowledge and skills of the advisor and his network has two components, which are critical as well for the success. Two components i.e. concerning how to assimilate innovative solutions in existing farming practices and to be able to capture value from this in terms of value for the farm itself but as well to customers.

Key success factors

- The knowledge, skills and experience of the consortium leader.
- The advisors skills in being able to communicate effectively with farmers, researchers and business.
- The network and networking skills and the ability to identify the appropriate specialist or expert to contribute to finding a successful solution.
- The project had a clear focus and was trying to find a solution to a specific problem.
- The ability to identify suitable farmers and to match the farmers to the project.
- Knowing how to integrate different fields of knowledge to be to successfully change farm practices
- The advisor is continuously updating his knowledge, through experiments on his own farm and through his linkages with the University. He is currently undertaking a PhD and is lecturing in the University.
- The advisor is constantly searching for new solutions.

Barriers to overcome during the process

- Identifying suitable and willing farmers to participate in the project initially.
- Getting the University formally involved in the project.

Summary of Outcomes

- The knowledge, skills, experience and network of the lead advisor in this case was critical to the success of the project.
- Using his network, the advisor was able to engage and collaborate with a team of experts to co-create an innovative solution suitable for the particular farm systems in the project.
- This effective collaboration resulted in the development of an appropriate innovative solution to maximise land use on the farms providing the participating farmers with improved productivity and profitability on their farms.
- Networking and collaborating effectively with relevant actors to co-create a solution appropriate to the farm type.
- Economic and ecological benefits for the participating farmers.
- Farmers in other producer groups are volunteering to get involved in new innovative projects.
- Producing high quality videos on the project is enhancing dissemination as key agri influencers are adopting the solutions and are then sharing and discussing the innovations on their channels.

6. Lessons Learned

- *What did we learn from the case to enhance interactive innovation?*
 - The advisor's knowledge and experience gained through many years of advising farmers and also from running his own farm were critical to the success of this project.
 - The advisor's ability to integrate knowledge about how to assimilate innovations and to capture value from that is of importance.
 - The advisor invested significant time in building relationships with farmers and with key actors and experts in the agriculture industry and built a large network that he could access for expertise when needed.
 - Involving new farmers and actors in the projects led to innovative solutions being created and also enhanced networking.
 - The advisor was actively testing new innovations on his own farm which gave him the confidence and leverage to engage other actors, such as the University, in the project.
 - The advisor always strives to protect the environment.
-
- *What did we learn from Field Review as a process to learn about interactive innovation?*
 - The field review methodology is an effective means of sharing experiences and learning from one another.

- While the online/virtual meeting was effective, more learning would have been gained from an in-person visit.
- Having a video of the case study and discussing what was happening in the video with the peer review panel was effective and should be recommended for incorporation in future virtual peer reviews.
- Providing a more thorough written description of the case study and the various actors in advance of the peer review would be very helpful in writing the final report and allowing for the time to be focused on reflections.
- The purpose and scope of the preliminary interview and the field visit were somewhat blurred and overlapped. It is difficult to have natural conversations and discussions in the online environment.
- It would be beneficial to have a structured template for writing the final peer review report with headings.

Field Peer Review Report (Final)

Improving the effectiveness of Discussion Groups in Western Finland: example Grassland Discussion Group (Paimio) Finland

Main author

Jane Kavanagh, Teagasc

With contributions from

Anu Ellä, ProAgria

John Quinn, Ireland

Laszlo Gabor Papocsi and Mihaly Csoto, Hungary

1. Introduction

This report provides a review of a practical case, which focused on improving the effectiveness of discussion groups in Western Finland. This case study was selected as an example of a successful interactive innovation by the i2connect partners. The field review process for this case study followed the framework and methodology developed by the i2connect project. The objective of the i2connect Field Peer Review is to:

- assess the roles and function of advisors in supporting innovation processes, and
- assess the effectiveness of this support and the enabling environment.

The Field Peer Review process aims to provide an inventory of practices (with a particular focus on advisory) that define and support an enabling environment for interactive innovation processes, providing a framework for analysing the roles of various actors and policy instruments. It will provide insights to develop training programmes, materials and tools for capacity building of advisors, advisory teams, decision makers and managing authorities.

The peer review panel for this case study consisted of the following members:

Name	Role
Jane Kavanagh	Peer Review Panel Co-Ordinator
Kati Kastinen, Terhi Taulavuori	Contact point/facilitator for Finland Case
Laszlo Gabor Papocsi	Advisor
John Quinn	Farmer
Geoffrey Hagelaar	Observer

Due to the COVID-19 pandemic the field review was carried out virtually. The preliminary meeting was held on 11th December 2020. This meeting focused on introducing and providing an overview of the case study and meeting the key actors involved in the case and the peer review panel. The duration of this meeting was 2 hours. The meeting was recorded.

The field review meeting was held on 13th January 2021 using Zoom. This meeting focused on a deeper discussion with the key actors in the case and an interview with the peer review panel. A video presentation of the case study was provided by Anu Ella, ProAgria. The duration of this meeting was 2 hours. The meeting was recorded.

This document outlines the case study and the insights from the peer review process.

Acknowledgements: The peer review panel would like to thank Kati Kastinen, Anu Ella, Terhi Taulavuori, Samuli Kallio, Mari Alanen and Riikka Mäkilä for their preparation and participation in this peer review.

2. Factsheet of the case

Discussion groups, facilitated by ProAgria Advisors, have been operating in Finland since 2004 as a tool to enhance knowledge transfer among farmers. The discussion groups, comprised of active farmers who together share information, monitor performance and analyse results on their farms, thus enabling the adoption of best practices leading to improved results. The most popular groups in Finland are the grassland discussion groups. There has been a significant increase in positive outcomes from discussion groups in Western Finland in recent years. For example, in one discussion group the average silage yield of the whole group has increased by 90% in a six-year period.

Over the years, the discussion group methodology has developed considerably in Finland and, in western Finland in particular, several projects are now focusing on developing better ways to run and facilitate the groups. The ProAgria facilitators believe the most active discussion groups achieve the best results. Many of the discussion groups in Finland have been in existence for many years and the facilitators are actively seeking ways to ensure the groups remain active and productive. A critical factor for success is that the group members maintain their positive attitude, enthusiasm and willingness to take on new ideas. The facilitators and discussion group members acknowledge the need to look outside the group for new ideas too.

A new initiative was set-up in Finland – the establishment of an international study group for discussion group members. To find and harness these new ideas members of discussion groups in Western Finland participate in an international study group and undertake study trips abroad twice per year. Using their networks, the ProAgria facilitators contact advisors and farmers in other European countries and arrange for the discussion groups to visit, participate in each other's discussion groups, share knowledge and even spend time working together on each other's farms. This international perspective has opened the minds of the discussion group members and is making it possible to constantly develop and rejuvenate the discussion group model.

This case study focuses on an approach to exposing discussion group members to new ideas and experiences that they can learn from and adopt on their own farms. It shows how incorporating an international perspective to discussion groups is leading to better results using the example of a grassland discussion group called Paimio.

Key Actors

The key participants in this case study are the ProAgria facilitators and advisors; the members of the Paimio discussion group; members of the international study group and the network of European advisors and farmers interacting with ProAgria and the discussion group members. In the virtual peer review the farmers in the group were represented by Mr Samuli Kallio from the Mattila farm. Ms Anu Ellä, is the main advisor/facilitator from ProAgria, Western Finland, and is an expert in grassland production and discussion groups. She is also a dairy farmer.

A summary of the key stakeholders involved in the project are shown in the table below:

Actor Type	More specifically	Name of organisation and sector (public/private)	Nature of involvement
Individual farmers	Paimio discussion group, International discussion group, the study trips abroad	Norsk Landbruksrådgiving, advisors in many European countries	Communication and field trials, sharing best practices
Support organisations	Advisors	Association of ProAgria Centres and regional ProAgria centers, co-operation in Norway (Norsk Landbruksrådgiving)	Information, sharing of national crop production results; providing summary of results and profitability. Farmers in both countries share best practices in grassland production with each other.
Market actors	Suppliers and service providers	Finnish grass seed suppliers, Atria, Hk Scan, Farmimatkat	Communication and field trials.

Challenge and Approach

The key challenge that this case study is addressing is how to continuously upskill advisors and farmers participating in discussion groups to maintain their enthusiasm and to renew the discussion group model as a key method for effective knowledge transfer.

The approach used to address the challenge is to continuously develop the facilitators/advisors skills, continuously improve the discussion group methods and to add an international perspective to the discussion group members and facilitators exposing them to new ideas and new ways of doing things. What is new in this initiative is adding an international dimension and exposure to new ideas.

3. The initiation period

This section provides a brief overview of the discussion group model in Finland, the Paimio discussion group and outlines the origin of the idea for international study trips, the key actors involved and a brief description of the supporting environment. It also includes a reflection by the actors involved in this phase of the case study.

3.1 Origin of the Idea

Anu Ellä is an experienced facilitator with ProAgria in west Finland and is also a dairy farmer. She has a degree in Applied Sciences from Häme University. She also studied in Helsinki University (agricultural plant biology) and Jyväskylä University (Adult pedagogy). For Anu, her studies in adult pedagogy were actually the most important education for planning and facilitating discussion groups. Anu also completed a two-year course in business advisory.

Anu has been working with discussion groups since 2004 and, while the discussion groups were working well and achieving results, she wanted to find a way to improve the running and facilitation of the discussion groups to ensure they remained active and productive. Initially, when she started facilitating discussion groups she was not aware that there were other discussion groups outside her region and when she became a national grassland top expert, she started to connect with other discussion groups. It was through her interactions with other facilitators that she got the idea to look at discussion groups internationally, to establish a facilitators' network in other countries and to organise study trips abroad for her discussion groups.

Figure 1 depicts Anu's view of discussion groups at the early stages whereby there was no connection with other groups nor was there any exposure to ideas outside the group. She had little experience of facilitating and no knowledge of or connection to other facilitators at the time. Knowing that there were other discussion groups in existence gave her the motivation to make connections.

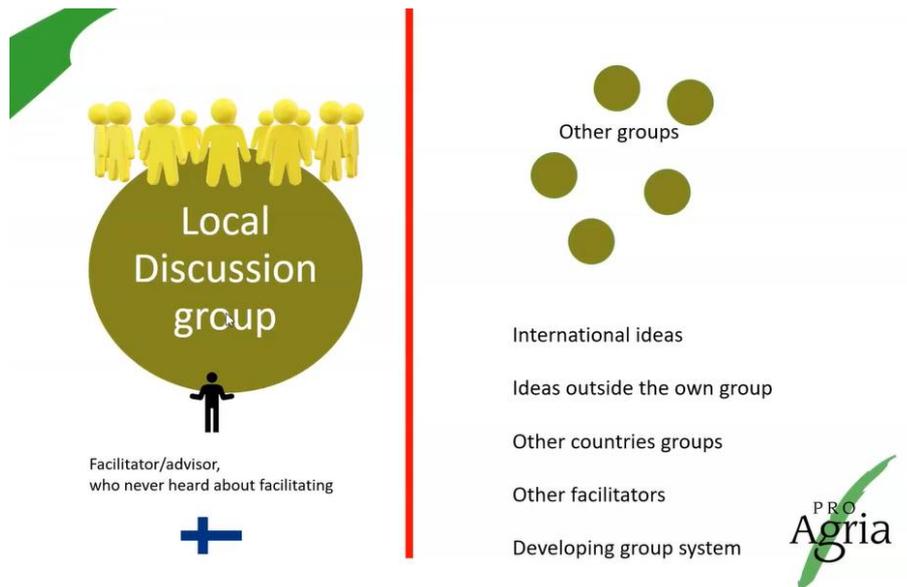


Figure 1: Lack of connection among discussion groups

3.2 The Discussion Group Model in Finland

Anu started her discussion groups in Finland in 2004 whereby a group of grassland farmers would meet together. When she noticed that nothing was happening within the groups and no progress was being made she made changes to the approach. The group members started by sharing knowledge, then moving to sharing knowledge, practices and comparing results and analysing their farm data. Next, she introduced the concept of having a monitor farmer within the group and setting achievable targets for the farmer to achieve within the year (Figure 2). There are currently 80 farmers in grassland discussion groups in Western Finland and the 'Paimio' discussion group is used as the example group for this case study.

THE GRASSLAND DISCUSSION GROUP SYSTEM IS DEVELOPING CONSTANTLY

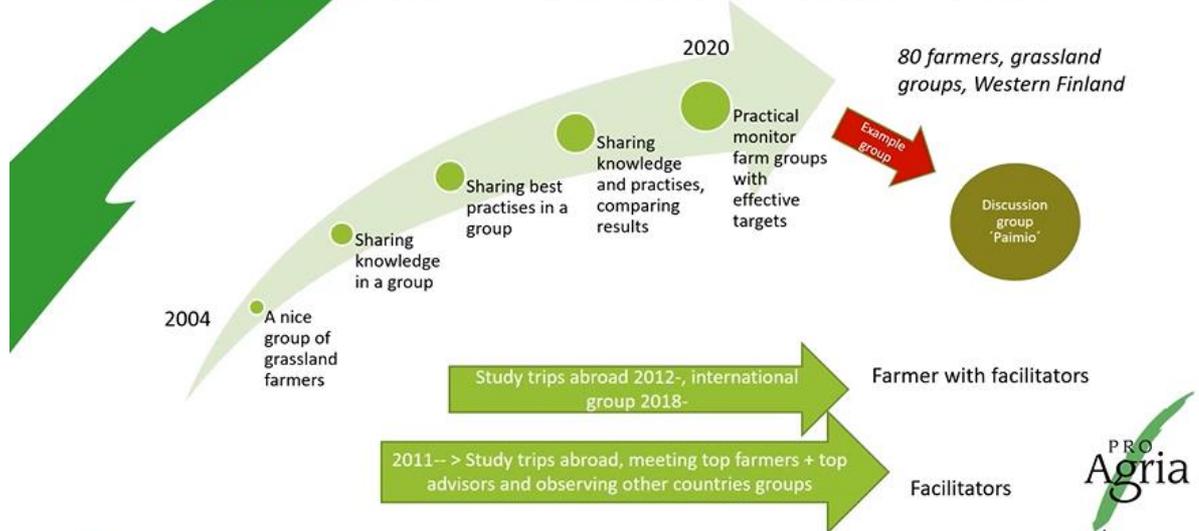


Figure 2: Overview of the discussion group model in Finland

In 2011, Anu and her colleagues in ProAgria began to travel abroad to meet advisors and elite farmers and to observe discussion groups as a method of learning and development. In 2012, she started organising study trips in Finland and abroad for her discussion group members and facilitators and in 2018 she established the international group.

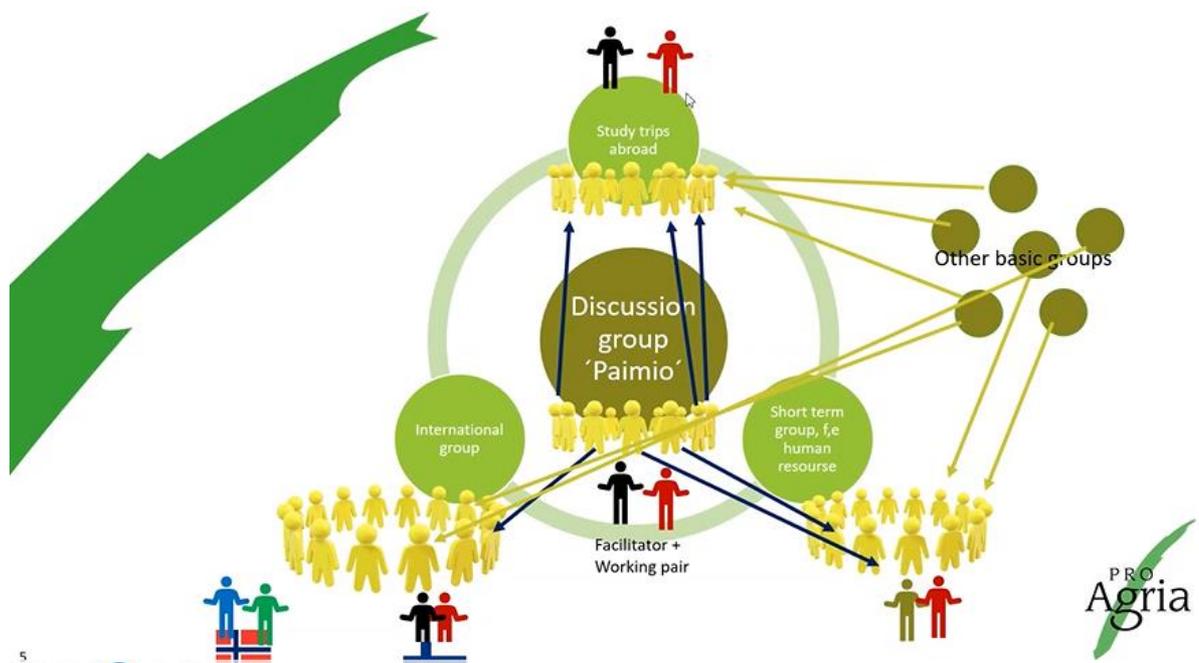


Figure 3: Interactions among discussion groups, facilitators and members.

In Finland, the farmers participate in discussion groups referred to as 'basic groups'. These are the main groups they belong to and are usually focused on a specific topic e.g. grassland, berry production, poultry, pigs, dairy. The members of the basic groups can also participate in other short-term discussion groups focused on other topics of interest such as human resources, or financial management. They can also participate in study trips abroad and be a member of the international group (Figure 3). The average number of farmers in a group is 8-10, although some are smaller and some larger.

Each discussion group has a facilitator and an advisor who is referred to as the 'working pair'. The working pair is typically an advisor with the technical/subject matter knowledge for the topic of the group. The role of the working pair is to organise the meetings, the agenda and any tools or handouts required for the discussion group meeting. This allows the facilitator to focus on facilitating the discussion among the members. Either the facilitator or the working pair changes regularly.

In Figure 3, Anu is represented as the facilitator by the red person icon. Anu is the facilitator for the Paimio discussion group but she also facilitates some short-term groups, the study trips abroad and the international group thus enabling her to develop her knowledge and facilitation skills. This also provides her with an opportunity to meet, engage and learn from many farmers and advisors in Finland and other countries.

The facilitators and discussion group members who participate in the study trips or the international group report their experiences and insights from the visits to the members of their basic group when they return. The study trips typically consist of members from many discussion groups and it is not always the same people.

3.3 The Paimio Discussion Group

The Paimio discussion group consists of 14 farmers; 12 dairy farmers with 50-180 cows and two bull farmers. The focus of this group is on grassland management. In 2019, the dairy farmers' average milk yield was 10,883 ECM (Energy-Corrected Milk) kg (9888-12,812). One organic farm in the group is included in the results. In 2017, the average silage yield was 10,425 kg DM (Dry Matter) /ha. In 2018 and 2019 they had two extremely dry growing seasons. When the group first started, the silage yield was 5480 kg DM/ha, which is close to the average silage yield in Finland. The increase of the yield has been remarkable. Three members of this group won the award for the best grassland farm in Finland over the past 10 years.

The age profile of the group is 25 years to 65 years. Two of the group members joined in 2020 and the others are members since 2011-2012. Originally, the group consisted of two smaller discussion groups and after the first three years, having learned the basics of the grassland production, these two groups joined together to form a larger experienced group. Over the past 10 years, five farmers left the group and four new farmers joined the group. Some of the members who left the group joined other groups

and some of the new members came from other discussion groups. The facilitator will remove a person from the group if they are not active or if they miss meetings quite often and this creates space for new members.

Farmer, Samuli Kallio, is one of the original members of this group and was also a monitor farmer. He initially joined the group to learn about grassland management and has progressed to producing top quality silage and halving his concentrates. He describes the group members as innovative and open minded to new ideas.

When the group first came together, they had what is known as a 'starters packet' for the first two years. This is where they focused on sharing knowledge and practices. As the group evolved they introduced the concept of a monitor farmer, they set targets for performance and tracked and monitored their progress at their meetings. The third stage in the evolution of this group was participating in study trips to farms in Finland and also abroad twice per year. Many members of the Paimio group are also members of the international group.

Format of discussion group meetings

As shown in Figure 5, the group meets five times each year in February, April, July, August and November/December. Due to the weather in Finland in winter, it is very difficult to hold meetings outdoors. During this period the group members join other discussion groups to learn something new. The study trip abroad is usually held in March and November and participants of the groups can also join the international discussion group, such as the Norwegian group. A WhatsApp group is used to share information and insights in between meetings.

The format of the meeting typically follows the structure outlined below and in Figure 4:

- Opening of the day: Everyone shares two main points between the last meeting and this one
- New knowledge (shortly) about the day's issue
- Observing together (fields, silos, results), sharing practises
- Giving feedback to the monitor farmer
- Own results compared to the monitor farmer
- Next meetings plan/plans for study trips
- The summary: everyone tell the main thing they learned today



By sharing knowledge and experiences, the aim is to make better and faster decisions leading to better results.

Figure 4: Knowledge sharing during meetings

One group member is selected as the monitor farmer for the year and this rotates among the members every year. Most of the group meetings are held on the monitor farm. At the beginning of the process the group sets targets for the year and decides which issues to observe and focus on for the year ahead. For example, the group might focus on solving a problem with silage crude protein value or nutrient balance.

Anu Ellä is the facilitator for this group along with a working pair. Both are trained facilitators and bring different perspectives to the group.

Each farmer pays €180 per year to join the discussion group. The full cost is €500 per year but the group receives funding from an EU project which enables them to reduce the cost per farmer to €180. One-to-one advisory services are not included in this price. The farmer pays for the study trips abroad; approximately €1,400 for the trip including flights and accommodation. The EU funding covers the costs of planning discussion groups, developing the discussion group model and the advisors costs.



Figure 5: Annual calendar of meetings for the Paimio Discussion Group

3.4 Building a Facilitator Network

In her pursuit of developing the discussion group methodology, Anu established a facilitator's network. Initially, this comprised facilitators in east and west Finland and broadened to include facilitators in Norway and Sweden. To build up a network of international contacts Anu searched the internet to find relevant contacts in agricultural advisory or extension institutes in other countries with experience of discussion groups.

She also used an agricultural travel agency to help her find relevant contacts. Using an agricultural travel agency has helped her to find new contacts faster and easier, for example top farms, or local experts who know which farms are the top farms in that area. The travel agency also books the flights and hotels, so Anu and the advisors can concentrate on the agricultural knowledge. As the group leader, Anu also contacts the farms and advisors before the visits.

Over time she built up a network of contacts in Norway, Sweden, Scotland, England, Wales, Ireland, France, Germany, Austria, Netherlands, Italy, Czech Republic and Slovakia.

Key Actors

The main actors involved in the initial idea for this case study were: Anu Ellä and Jarkko Storberg, two facilitators from ProAgria Western Finland and the farmers in the discussion groups. During the initiation phase, the ProAgria facilitators, Anu Ellä and Jarkko Storberg, travelled nationally and internationally to get inspiration to shape the concept for the discussion groups. They consulted with Sara Gregson and Robert Craig, England; Ragnhild Borcherius and Stein Jörgenssen: Norsk Landbruksrådgiving, Norway; John Yeomans, Richard Tudor: Farming Connect/Nuffield Scholarship Wales; George Ramsbottom and Tom O'Dwyer, Teagasc, Ireland. They also met other inspirational contacts during the trips abroad and consulted with farmers too. For example, they got the idea for a monitor farmer from their visit to Ireland.

Anu and her colleagues spent a considerable amount of time travelling to other countries to meet advisors and discussion groups. She visited many countries to make contacts and to look at discussion groups in other countries to recommend to her groups. She has also invited international contacts to Finland to meet her discussion groups and to share information.

There is a goal/objective for each study trip and this is decided by the advisors and the farmers to ensure that they will learn something new and receive new information. The advisors then try to identify the best farms to visit and they prepare questions in advance for the farm they will visit to ensure the farm is suitable.

The study trips are advertised to the members of all the discussion groups. There are 20 places for the western group members and 10 places for other group members anywhere in Finland. They want their own farmers to join the trips, but it's also important to have new faces and practices from other parts of Finland joining the trips. The study trips, the country they will visit and the theme of the visit are announced 1-1.5 years before the trip and places are offered on a first come first served basis.

Facilitation Skills

Anu realised early on that the discussion group facilitators needed training. While her own background is in agriculture and teaching she recognised the need to undertake

training in psychology to broaden her skills. She is now the lead facilitation trainer in ProAgria.

Reflections

The initial barrier to progressing the idea was not having international contacts or knowing where to find them. Also, at the early stages she was not aware that there were other discussion groups in Finland.

4. Planning and development

This section outlines how the international study group activities were planned; the key actors involved and their reflections.

Key actors

The main actors involved in the planning and development phases of the project were:

- ProAgria Western Finland
- Anu Ellä, Jarkko Storberg, Riikka Mäkilä (Facilitators)
- Farmers especially group Paimio, the study trip group and international group with Norwegian farmers
- International contacts in other countries discussion groups
- Travel Agency: Farmimatkat
- Dairies, Finnish Poultry Association

New Network of Facilitators

To get exposure to new ideas and to learn from others the ProAgria advisors established a network of facilitators, who facilitate all types of discussion groups. There are 20 facilitators in Western Finland who join the facilitators own group. Outside this western facilitators group there is a Nordic network for just grassland advisors, who share ideas about grassland and discussion groups. In this group there are grassland advisors from Finland, Sweden and Norway. Iceland is currently adapting the Finnish way to run discussion groups and will join the Nordic group soon.

The meetings of facilitators are very practical and focus on learning from each other and sharing their experiences of leading, managing and facilitating discussion groups. This network has been a very effective source of new ideas.

Developing Facilitator Skills

A key feature of the discussion group model in Finland is that it uses two facilitators or one facilitator and one working pair (advisor). The benefit of having two facilitators is that they learn from one another and each brings a different perspective to the group as well as having different facilitation styles. One facilitator takes on the role of organising the discussion group meeting and setting up the WhatsApp group while the other facilitator leads the discussion. A critical aspect of the methodology is reflection and after every discussion group meeting the facilitators reflect on the meeting to identify what worked well and what could be improved for next time.

In ProAgria in Finland a mentoring approach is used to train and develop new discussion group facilitators. New facilitators take on the role of assistant facilitators at discussion group meetings as part of their training. A new facilitator can be an assistant facilitator for up to two years where they act as an apprentice and the experienced facilitator acts as their mentor. They become familiar with the process through this approach. The assistant facilitator takes notes and writes the report from the discussion group meeting and may be invited to lead a discussion as part of the development.

ProAgria has set up a group for facilitators. The group is led by Anu Ella who provides training for the facilitators. The group provides the facilitators with a safe space to practice their facilitation techniques and to reflect on and share their experiences. They also plan the content for their group meetings. This group meets two or three times per year and the meetings are very motivating for the new facilitators. They use WhatsApp and MS Teams to share information or ask questions. They also have a book on facilitation skills that is shared with the new facilitators. This group also discusses and plans the international study trips, identifying suitable farms, topics and countries to visit.

A key part of the training for facilitators is to participate in study trips and to observe discussion groups abroad. A significant amount of time is devoted to planning the study trips abroad. During their international visits, Anu and the facilitators identified suitable farms and topics for their discussion groups. The factors for success are comparability between the farms, farming systems and the climate as well as opportunities to learn something new such as new management techniques.

While this is the approach adopted by ProAgria, Anu has also trained other companies, including dairy and meat companies, in facilitating discussion groups.

Norwegian Discussion Group

One of the established international connections is with a discussion group in Norway (Figure 6). The international study group has teamed up with a discussion group in

Norway where they meet online and in-person. Initially, each group member prepared a booklet outlining the key facts and details of their farms and their farm systems to share with the other group members (as shown in Figure 6). The facilitators organised a five-day English language course to enable the group members to communicate better. They also organised a four-day visit to Norway. Each member of the group has a friendship farmer in the host country. The friendship farmers visit each other's farms to share knowledge and experience, and to spend some time working on their farms. They meet in the evening to share their experiences and it is a great learning opportunity for both the farmers and the facilitators. The farmers and friendship farmers are matched based on similarities e.g. if one has 2 milking robots, they search for 1-2 robots farm in the other country; or if one is organic, they identify another organic farm as the friendship farmer.

The farmers find it very beneficial to connect with farmers with similar production systems in a different country, both in terms of scale and climate. They get an opportunity to meet new farmers and learn new ideas. For the advisors, the study trips give them new ideas to introduce to their farmers and new input to discussions. The advisor plays a critical role in planning and organising the visit in their country.

Prior to the pandemic the meetings between the Finish and Norwegian groups were held online due to the distance between the groups. They are also very active on WhatsApp. While the members prefer the face-to-face meetings the virtual meetings need to be carefully planned and are shorter. The meetings are fun and the social aspect is very important to the group.

Reflections

A contributing factor to the success of the international study group is that the farmers visit the country and farms more than once. This enables them to build relationships with the friendship farmer and provides them with the opportunity to have more in-depth discussions on their experiences and learn from one another. The facilitators decided that the international group should visit the group/farms abroad more than once as they would learn more and it would be more effective in contributing to the uptake of new knowledge.

The ProAgria facilitators take a leadership role in planning and organising the international study trips and identifying suitable topics and aspects of the farms to be highlighted. A brochure on the farm outlining details of the farm system is prepared in advance and is shared with the visiting discussion group members.



Figure 6: Example of the information shared between Finland and Norway Farmers.

Farmers in Discussion groups

Samuli joined his discussion group nine years ago to improve his grassland management. There was good cohesion among the members of the discussion group from the start. The members were open to sharing their experiences. Samuli has found the discussion group meetings very useful and the overall results on his farm have improved significantly. His silage yield has doubled in the past 10 years and he has improved his grassland management skills. The group members are very active, innovative and open minded. They joined the international group and they go on an international study trip every year.

Reflecting on the critical success factors for a discussion group both Samuli and Mari felt that it is important for the members to maintain their enthusiasm for the subject and to share their experiences and practices openly. It is also important that the members feel that they are all equal. This helps them to find solutions together and to keep pushing forward. The social aspect of the group is equally as important to the members as the professional aspect.

Discussion Group membership

The facilitator plays a key role in selecting the members of the discussion groups. Once a year farmers can express their interest in joining a discussion group. While there is no particular selection criteria, the facilitator tries to match the farmer with a group based on their farming system, age and experience of discussion groups.

5. Implementation

This section outlines how the international study visits were implemented, the key actors involved and their reflections.

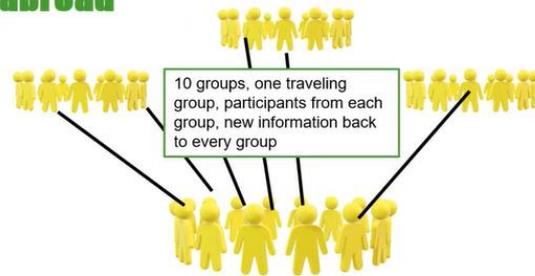
International Study Groups

Since the international study trips were first established in 2012, the farmers have visited many different countries (Figure 7). During a study visit they visit up to 5 different farms in one day. This gives them an opportunity to see a wide range of activities and opens the eyes of both the farmers and facilitators to new ideas and new ways of doing things. In the evening they meet to share their experiences and to learn more about the five farms. This approach enhances the development of both the farmers and the advisors and facilitators.

Reflecting on their experiences with the international study group the farmers stated that they got a lot of great ideas from the international visits and have implemented new practices on their farms. The group went on a four-day visit to Norway in August 2020. There were a lot of similarities among the farms and the climate in Norway is similar to Finland. A fun social aspect to the visit helped to build relations and share experiences. The groups are in regular contact on WhatsApp and a reciprocal visit to Finland is planned post-COVID. Most of the exchanges of information are done through WhatsApp. Some farmers bought smart phones specifically so that they could use WhatsApp. Only a few meetings are held online.

Constant co-operation with other European countries top farmers and advisors: Half-yearly study trips abroad

Opens the eyes for both: the group members and the facilitators -and makes it possible to constantly develop and renew the discussion group system.



2012-2020 Study trips of the western Finland grassland discussion groups:

England-Austria-Switzerland-
Italy-Denmark-Sweden-
France-Germany-Netherlands-
Scotland-Tzechk-Slovakia,
Norway, Spain, Canada...



Figure 7: International study trips 2012 – 2020.

New Discussion Group model

Anu and the facilitators are constantly looking for new ideas to develop the discussion group methodology. During the first five years of the Paimio grassland discussion group the main focus was on changing farmers opinions, learning, and developing their technical skills. Next, the facilitators introduced the idea of a monitor farmer which has helped to maintain cohesion among the group members. The group suggests a farmer to act as the monitor farmer or someone might volunteer. At times, the advisor may have to ask a farmer to act as the monitor farmer. Mostly, there is no difficulty in getting a monitor farmer.

The Paimio group was the first group in Finland to have monitor farmers. This group acts as the testbed for new initiatives, which are then rolled out to other discussion groups. Now, the Paimio group is planning the next stage in their development and would like to change the focus of the group for the next 10 years. The group is considering changing their focus from grassland management to possibly whole farm planning or managing the farm as a company. This has yet to be decided by the group.

Reflections

The feedback from the farmers participating in discussion groups and the international study group has been very positive. A survey of discussion group members was carried out in 2020 and 47 farmers responded to the survey. The key findings from the survey were that the members of the discussion group considered it very important to share best practices, meet other farmers and receive peer support. Access to international information and the implementation of scientific research were considered important.

The survey showed that participating in a discussion group has improved much or very much the farmers' enthusiasm (75%), knowledge transfer (60%) and professional skills (58%). Discussion group membership has developed members' farms; 86% of the members are observing their farm system more, 81% are monitoring and analysing results better, 76% have made positive changes to their working processes. In conclusion participating in discussion group leads to better and faster decisions and management.

The following are the opinions of those farmers involved in the groups:

"The trips have covered examples that have been used to develop our own division of labour, for example by using a whiteboard. There have been many ideas and good practices, although their implementation on your own farm only takes time. Grassland has developed significantly in every area and the willingness and courage to try different methods has increased"

"Overall, very successful. I would not leave out any section, the language course, the brochure about the farm, the online meetings and to top it all off, the meeting with the Norwegians. However, outgoing people are involved in this group anyway. The topics of the group were interestingly constructed and the interest of the instructors was evident"

"Hopefully the international group will continue to work. In a changing climate, but also in an ever-changing atmosphere, farmers across national borders need community spirit, new innovations and the kind of brisk me-spirit that we were happy to experience during our visit to Norway! Within a group, it is possible to learn from the successes of others but also from failures"

"Because it is easily blinded to what one is doing, it is really important to get to hear the opinions and insights of other farmers. It tempts itself to look at its own cultivation with cause and effect. On a livestock farm, large workloads can sometimes take away the enthusiasm to learn and look for new ways of working. There's a peak when the team leader is "one step ahead" and talks about new innovations"

"An interesting and expanding group! The development of language skills is also important. More like this!"

Communication and Dissemination

Discussion group members communicate in face-to-face meetings and using WhatsApp. Information is also disseminated using blogs posted on the ProAgri website. Please see Appendix 1 for links to related blogs.

6. The AHA-Erlebnis: feedback on the gained insights

This case study has highlighted the importance of having engine-type people (embedded in different networks) involved in interactive innovation. Advisors especially can play this role or support other key players to act in this way. This case study has shown that the lead facilitator in this case has a multiply function, she serves as ProAgria facilitators chairperson, has developed strong ties with the farmers for a long time, as well as having practical knowledge (as also being a farmer) and being passionate about the project.

The lead facilitator in this case recognised the need to refresh and rejuvenate the discussion group methodology to ensure the discussion group members remained active and progressive. She took a proactive approach to build up networks of discussion group facilitators both in Finland and in other countries as a community of practice to share experiences, ideas and to learn from one another.

The facilitator/advisory plays a critical role in facilitating discussion groups and exposing members to new ideas and new ways of working.

Key success factors

- ProAgria's effort to develop the facilitators/advisors skills, and the constant development of the inner workings methods of the discussion groups (e.g. introduction the monitoring farmer approach), and the inclusion of an international dimension.
- An innovative facilitator embedded in different networks.
- The main advisor/facilitator has freedom to innovate and to implement her ideas.
- Developing a network of professional facilitators to learn and share ideas and to enhance the discussion group methodology.
- Developing a network of international contacts with experience of discussion groups to facilitate study trips.
- Adopting a mentoring approach to develop the skills, knowledge and experience of new facilitators.

- Visiting farms internationally and subsequently planning visits to suitable farms for the group members.
- Instigating change and rejuvenation within the discussion group model to keep the members progressing and moving the group forward.
- Keeping the group refreshed.
- Setting out and agreeing a programme and goals with the discussion group in advance.
- Willingness of the farmer discussion group members to engage in international study visits.
- Success factors for effective discussion groups:
 - Having a mix of personalities in a discussion group is desirable.
 - Farmers need to be open to sharing and discussing their experiences and farming systems.
 - Changing the facilitator every year to refresh the group.
 - Appointing a new monitor farmer every year.

Barriers to overcome during the process

- The main barrier initially was a lack of international contacts.
- If a discussion group is not progressing changes will be made. This could be a change in the members of the group or a change of facilitator or working pair or both.

Summary of Outcomes

- The facilitator plays a critical role in planning and organising the international study visit and ensuring the topic is engaging and relevant.
- The supporting environment provided the facilitator with the freedom to innovate and act on her ideas.
- The farmers are given an opportunity to learn from the successes and failures of others and to hear the opinions and insights of farmers in different countries.
- The study trips have increased some farmers' willingness to try new methods, some of which have been taken on board.
- The discussion group members are progressing and are engaged.

7. Lessons Learned

- *What did we learn from the case to enhance interactive innovation?*
 - Establishing a network of advisors/facilitators is important and beneficial for building their knowledge, skills and capabilities.
 - Assigning a facilitator and an advisor (working pair) to a group can enhance the effectiveness of the group by bringing different perspectives to the group.
 - Regularly changing the facilitator or advisor contributes to rejuvenating the group.
 - Adding an international dimension to the discussion group model gives farmers and advisors exposure to new ideas which can enhance knowledge transfer.
 - Taking the farmers and advisors out of their normal environment can provide the seed for innovation.
-
- *What did we learn from Field Review as a process to learn about interactive innovation?*
 - The field review methodology is an effective means of sharing experiences and learning from one another.
 - While the online/virtual meeting was effective, more learning would have been gained from an in-person visit.
 - Having a video of the case study, in this case the discussion group in action, and discussing what was happening in the video with the peer review panel was effective and should be recommended for incorporation in future virtual peer reviews.
 - Providing a more thorough written description of the case study and the various actors in advance of the peer review would be very helpful in writing the final report and allowing for the time to be focused on reflections.
 - The purpose and scope of the preliminary interview and the field visit were somewhat blurred and overlapped. During the online field visit, it was difficult to gain more insights in the online environment, however, the invitation of more participants and different actors made it valuable and quite lively.

Appendix 1: Links to blogs and resources on International Study Trips

Ireland: We were observing the groups with Tom O'Dwyer and another time with George Ramsbotton, Teagasc

Finnish advisors in Ireland: <https://www.proagria.fi/blogit/ruohonjuurella/2015/05/18/vihrean-saaren-laitumilla>

<https://www.proagria.fi/blogit/ruohonjuurella/2017/05/28/kokonaisuus-haltuun-pienryhmissa-irlannissa>

<https://www.proagria.fi/blogit/ruohonjuurella/2015/05/28/nurmi-lypsattaa-irlantilaista-lehmaa>

Irish advisors in Finland: <https://www.proagria.fi/blogit/ruohonjuurella/2016/07/19/irlantilaisia-ajatuksia-suomessa>

Knowledge transfer seminar: <https://lansi-suomi.proagria.fi/blogit/huippusaajat/2015/12/07/silmien-avausta-monella-kielella-dublinissa-0>

England: English grassland expert in Finland:

<https://www.proagria.fi/blogit/ruohonjuurella/2015/06/28/englantilaissuomalainen-nurmiviikko>

<https://www.proagria.fi/blogit/ruohonjuurella/2015/10/31/learning-overseas>

Wales: Finnish advisors in Wales and the Welsh in Finland:

<https://www.proagria.fi/blogit/ruohonjuurella/2018/05/20/maajussien-matkassa-walesissa>

Canada: <https://www.proagria.fi/blogit/ruohonjuurella/2016/05/25/sinimailasen-alkulahteilla-kanadassa>

Germany: <https://lansi-suomi.proagria.fi/blogit/huippusaajat/2014/12/03/nurmivaen-poimintoja-eurotier-nayttelysta-saksasta>

Netherlands & England: <https://lansi-suomi.proagria.fi/blogit/huippusaajat/2014/05/27>

Co-operation with Norwegian and Swedish

advisors: <https://www.proagria.fi/blogit/ruohonjuurella/2019/09/12/pohjoismaista-innostustajakamassa>

<https://www.proagria.fi/blogit/ruohonjuurella/2019/01/25/naapurilta-oppii-eniten-suomalaiset-ja-norjalaiset-karjatilalliset>

<https://www.proagria.fi/blogit/ruohonjuurella/2018/08/18/kuivuus-koettelee-norjassakin>

Finnish grassland discussion groups visiting grassland farms with Anu Ellä as a group leader:

Germany + Austria: <https://lansi-suomi.proagria.fi/blogit/lansi-bloggaa/2014/10/27-0>

Italy: <https://lansi-suomi.proagria.fi/blogit/lansi-bloggaa/2014/10/27/alpeilta-po-joen-laakson-maitotiloille>

The Alps: <https://lansi-suomi.proagria.fi/blogit/huippuosajat/2014/11/05>

Switzerland: <https://www.proagria.fi/blogit/ruohonjuurella/2016/12/19/nurmiseoksia-sveitsissa>

The Netherlands: <https://www.proagria.fi/blogit/ruohonjuurella/2017/11/08/alankomailla>
<https://lansi-suomi.proagria.fi/blogit/huippuosajat/2017/12/22/hollantilaista-helppoutta>

England: <https://lansi-suomi.proagria.fi/blogit/lansi-bloggaa/2016/03/29/siella-missa-ruoho-on-vihreampaa>

Germany, Switzerland: <https://lansi-suomi.proagria.fi/blogit/lansi-bloggaa/2016/11/07/keski-euroopan-nurmiviikolla-lannen-nurmiryhmat-reissaa>

Scotland: <https://lansi-suomi.proagria.fi/blogit/johtotehtavissa/2018/04/20/johdonmukaista-johtamista-skotlannissa>

Czech and Slovakia: <https://www.proagria.fi/blogit/ruohonjuurella/2018/11/15/nurmiryhmat-slovakiassa-ja-tsekissa>

France: <https://www.proagria.fi/blogit/ruohonjuurella/2019/11/26/normandian-nurmimaihinnousu>

Norway: <https://www.proagria.fi/blogit/ruohonjuurella/2019/08/20/heittaydimme-norjalaiseen-arkeen>

Field Peer Review Report

Technique day

Slovenia



Main author

Patrizia Proietti

With contributions from

Anu Ellä, Egidio Lardo

1. Introduction

The case Dan technique was selected as one of the first ten pilot cases to be analysed within the i2connect project.

The analysis was performed by a peer group composed of a project member, Patrizia Proietti, who had the role of peer coordinator, an advisor, Anu Ellä (ProAgria), and a farmer, Egidio Lardo, who were selected respectively from a Finnish and an Italian practical case.

Data for this case study were all gathered through direct interviews, both individual and group.

The first interview was carried out on 7 January 2021 with an advisor and a Head of Advisory Service in Chamber of Agriculture and Forestry of Slovenia (CAFS). This allowed for a throughout cognitive picture of the case and for getting an idea about the different actors involved, their roles and their possible contribution to the analysis.

Building on this first interview, the peer group asked to be enabled to interview, during the “field” peer review, two farmers (including the initiator), two advisors (including the initiator), one researcher and one person from the supply side.

Given the relative simplicity of the practical case to be investigated, it was agreed, together with the peer review facilitator, to carry out the interviews on a single day. The peer review was carried out on 15 February 2021 and allow the peers to interview all the different types of key actors involved in the project, paying attention to their point of view and perceptions.

The analysis was supported by a video presentation which was shown during the peer review. The peer review was exhaustive and shed light on all the relevant aspects for the analysis of the case and the role of advice. Currently, no validation workshop has been carried out since all issues were discussed during the peer review and the triangulation of the information did not present any unclear points.

The preliminary interview and the peer review were carried out online since it was the only feasible solution due to the COVID-19 pandemic. Interviews were recorded and transcribed to be analysed.

The methodology did not present any difficulties, due to the limited complexity of the practical case and the willingness of the actors involved.

2. Factsheet of the case

Dan Technike (Technique day) is an event, organised in Slovenia, during which, advisors, farmers, machinery and other equipment suppliers, professional institutes and research departments dealing with biotechnology come together in one place (a farm) to provide expert contributions on technologies and see them working on the field.

Dan Technike enables the connection between different actors, highlighting the importance of co-creation between them to contribute to more efficient and sustainable agricultural production.

The innovative idea lies in the practical demonstration of how the machines work and in the involvement of experts from universities and agricultural institutes for professionally supporting machinery demonstrations and the implementation of each individual agro-technical measure. This means that participants to the event receive real lessons in different topics related to agriculture (e.g., phytopathology, soil management, production quality, etc.): therefore, the event is not limited to the demonstration of machines but offers a holistic approach to sustainable production, providing information aimed at addressing a wide range of farmers' needs. The emphasis of the event is on sustainability, on how technological machines can contribute to the sustainability of agriculture and the safety of agricultural operators.

All the experts (advisors, researchers, academics) who provide lectures during the presentation of machines are independent, meaning that none of them are linked to companies producing the machines being demonstrated. In fact, the event is not aimed at selling or sponsoring machines, but at promoting topics concerning sustainable agriculture, which is a topic of public interest.

Similar events are organised throughout Europe, but Dan Technike provides a different approach for farmers to experience technological machinery and to understand whether they are worth buying. During the event, farmers have the opportunity to talk not only to the producers of technical equipment (as usual), but also to researchers, advisors and other experts in order to get a comprehensive idea of what these machines can do within their farms. Furthermore, the event is entirely managed by advisors.

Initially, the event was a regional one, but since the Chamber of Agriculture provides advice throughout the country, its advisors have succeeded in involving many farmers from different parts of Slovenia, turning it into a national event. Moreover, since the contents of this event are provided by independent experts, it has attracted considerable interest from the public authorities. Participation is completely free of charge for the attendees since public administration funds the event and supports the social part of it (i.e., by providing food and drinks and space for discussion)

The Dan Technike project involves a range of actors, with different roles and power of influence on the innovative process, which are listed in the following table:

Actor types	More specifically:	Name of organisation and sector (public or private)	Nature of involvement/Official role	Power or influence on the innovation process
Individual farmers or foresters	<i>Farmer (vineyard); Advisor</i>	<i>Žaren vinarstvo, sadjarstvo d.o.o. Chamber of Agriculture and Forestry of Slovenia; Agricultural and Forestry Institute Novo Mesto</i>	<i>field trials communication, professional content, event organizer, coordinator</i>	<i>HIGH</i>
Researchers or R&D departments	<i>researchers at institutes or universities, professors, R&D departments</i>	<i>KIS (Agricultural Institute of Slovenia); BF (Biotechnical University of Ljubljana); FKBV (Faculty of Agriculture and Life Sciences)</i>	<i>field trials, professional content</i>	<i>MEDIUM</i>
Support organisations	<i>supporting organisations, financial actors (banks, insurance companies)</i>	<i>many different sponsors (producers/suppliers of agricultural machinery)</i>	<i>field trials</i>	<i>MEDIUM</i>
Market actors - supply side	<i>business, suppliers (e.g. raw materials, manufacturers, service providers)</i>	<i>many different providers of agricultural machinery, fertilizers, plant protection products, agricultural raw materials</i>	<i>field trials</i>	<i>HIGH</i>
Administrative bodies	<i>local municipality</i>	<i>Municipality of Krško and Trebelno</i>	<i>event organizer + financial support</i>	<i>HIGH</i>

3. The initiation period

Dan techniques is a very special case because it was born from the idea of two people, an advisor and a farmer who are linked by friendship that goes back to secondary school. They are the same age and the same professional background and, although they have taken different paths, they are both very interested in machines and digital tools.

Jernej Žaren (J.) is a big wine producer in Slovenia and Martin Mavsar (M.) is a well-known advisor dealing with machinery and technology. M. is very popular in Slovenia because this is a small country and there are not many advisors dealing with machinery. He has a well identified role within the Slovenian AKIS: he is highly respected not only due to his wide knowledge and expertise but mainly because he is an independent advisor, who works for public advisory services and is not linked to any machinery producer.

The idea for this event grew out, over the years, of M. & J's travels to various exhibitions in neighbourhood countries (Italy, Austria and Germany) to know what was new on the technological landscape and keep their knowledge update. In fact, there are no similar events in Slovenia, and there are hardly any relevant events connected with agriculture.

These experiences have led them to view many machines and many new techniques and technologies, but they could never see a machine working on the field. They realised that it would be important to let farmers understand how technologies can work in practice and what benefits a farm can have by using particular machines. And, overall, it would be important that farmers should be allowed to try out technologies before buying them, since they are extremely expensive. This is how the idea of holding a first event on the Žaren farm came about. The event immediately attracted a good number of people, which grew from one event to the next, thus allowing the initiative to get off the ground.

M. has always been interested in machines and technology, since he was at secondary school, and has always cultivated his personal interest by reading specialised magazines and continuously searching for information about new technologies. His profession (and, above all, the organisation he works for) has given him the opportunity to travel and visit events featuring new technologies.

Certainly, M.'s curiosity to know and constantly update his skills is a key driver in this practical case. This interest also encourages him to travel thousands of kilometres just for attending a few hours event and, sometimes, he is also willing to pay on his own, whenever a business assignment is not possible.



When the two initiators started to develop the idea of this project, they introduced the proposal to the head manager of the public advisory service who was immediately enthusiastic about implementing this project.

The following step was to approach the local municipal authority asking for cooperation in the project. The mayor of the municipality showed great interest and immediately provided financial support for the initiative. Since Dolenjska region is a small territory,

the relationships between the various actors are rather narrow; therefore, it was quite easy for the Chamber of Agriculture to dialogue with the public administration and find a common understanding. Indeed, the territory of Dolenjska is almost entirely covered by vineyards. Sustainable vineyard management is therefore an issue of great interest for the municipality, which is committed to safeguarding farmers' income but also the citizens' health. Therefore, the organisation of an event that was going to have an impact on sustainability issues immediately met the favour of the public administration. After that, Martin involved all the other colleagues from the advisory service who were very willing to help him, mainly in activating their contacts network to involve other actors who might have an interest in this project: e.g., academics and researchers from biotechnology departments or other research institutes carrying out agricultural research in Slovenia.

Sharing the initial idea with other key actors who were able to contribute to the realisation of the project was very easy since there was no need to discuss, try to convince anyone or to negotiate compromises. In fact, there was a very immediate common understanding as the proposed idea provided a solution to several existing needs:

- lack of events allowing farmers to socialise,
- need to understand how (and which) technologies may improve farm performance before investing money,
- need to find sustainable farming solutions to reduce the environmental impact of agriculture.

4. Planning and development

When M. and J. were inspired to start with this event, they had no idea how to develop it. The very first one was built on the experience of similar events in neighbouring countries, just starting with machines demonstrations on J.'s farm. It was only after the first two events that M. and J. realised how they should effectively develop it, making the event more and more interesting and attractive to farmers.

According to the two initiators, the content of the event should have met the farmers' need for receiving independent advice concerning how a certain machine effectively works and whether it can meet their own needs. Therefore, the event should have intended to provide the farmers with the opportunity to watch (and compare) different machines in action to be enabled to understand if and what equipment would be useful to improve in their farm's production processes.

Event planning takes place on a yearly basis and has become an institutional task of the Chamber of Agriculture's advisory services, both in the Dolenjska region and throughout Slovenia. Planning for each event starts one year early (as soon as one event ends, planning of the event for the following year begins).

M. is responsible for event planning and organisation.

Actually, decisions about the organisation of the event are taken by a small group composed of three-four people, including M. and J., the director of advisory services and another advisor. Alongside a professional relationship, these actors are linked by a friendship and a high level of mutual understanding. Of course, the group also faces discussions when different contents or solutions are proposed, but these are discussions, not conflicts, which, being a very small group of people who understand and respect each other, are solved easily by finding the right solution every time. The board decides what topics are to be addressed in each event and plans the activities by getting an idea of who is going to be involved and deciding when and where to hold the event. This decision-making process, however, is shared with the other colleagues of the Chamber of Agriculture and, moreover, it is influenced by several external drivers.

The advisors of CAFS are bearers of farmers' needs, since they know very well their clients: for instance, they know who is testing new technologies and would be able to introduce them to others farmers, and they also know who is interested in learning and implementing new equipment (and which one). Therefore, there is close contact with farmers, which are also willing to be involved in demonstrations (as demonstration farms) or other organisational tasks. Really, farmers who are more on the cutting edge and inclined to innovate represent an important driving force behind the development of this event, both in terms of content and methodological approach: when they buy a new technological equipment, they call M. to let him know and ask him to present that equipment during the event.

Another input comes from the policies, because the content of events is always planned in accordance with the latest policy directions, in particular EU regulations. The public

debate on viticulture and pollution problems within the community is also a great motivation for improving the event and identifying the content of each of them.

In addition, each event is followed by feedback meetings in which people discuss how the event went and how it should be improved. The most important feedback comes from the people attending the event, who generally send emails (without being asked) congratulating with the advisory services, expressing their approval, giving advice and explaining their needs for future events: therefore, there is also a mutual sharing with the participants about (future) contents and approaches.

The decision-making group is a small one, but in fact it takes into account the various inputs from outside, from the territory and its community, from policies, from farmers and even from the research, which may come forward with their own studies to present new outcomes. Therefore, the executive group decides on topics to be addressed, methods and approaches to be adopted, while gathering all the external inputs it receives.

To achieve the defined goals, a range of actors had been identified to be involved in the project, mainly farmers, researchers /academics and equipment suppliers/producers. All the people who were interviewed during the peer review claimed to have been directly involved in the project by M. on grounds of a personal relationship of friendship and trust.

They focused on the importance of the wide network of relationships built up over time by M. that allows everything happen very easily within the project: it has been sufficient to invite people in order for them to join the proposal without asking for additional fees or any formal agreements. This network of pre-existing relationships is based on informal relationships built up through phone calls, e-mails, etcetera. There is no formal agreement either between the universities and the Chambers of Agriculture or with other subjects. Perhaps, this network of informal relationships is also due to the geographical conformation of Slovenia, which is a very small country (similar to a regional dimension) where people working on similar topics are able to network together.

In the field review process it emerged that the roles of actors involved can change from one event to the other: one advisor referred to having participated in Dan Technique once as an expert, providing lectures during the event, and another time providing the farm and land for demonstrations. The role of each actor within every single Dan Technique depends on the contribution that each person can provide in terms of experience and knowledge, according to the content of the event. These contributions are identified by the steering committee drawing on its own knowledge, proposals from fellow advisors or nominations from individual actors themselves.

The involvement of farms depends on the content of the event: for instance, events involving viticulture are always organised at the Žaren Wine farm because it is a well-known farm and participants know how to get there and have a great interest in visiting

it. When the content concerns other topics, the farms are changed according to climatic conditions and other factors, such as location, to satisfy the need of testing technologies in different territorial and geographical contexts. The planning phase also entails preparatory work on the farm, especially on the land and crops where demonstration will take place, which requires ongoing collaboration between farmer and advisor.

The event is financially supported, in equal share, by the public administration and the entrance fee that is paid by the exhibitors. This allows the costs of organisation, dissemination and socialising to be covered as well. As mentioned before, the involvement of the public administration was facilitated by pre-existing relationships, but also by common goals. The same consideration applies to exhibitors (sellers/producers) who are well inclined to support the event from which they can directly benefit through the eventual sale of machinery and equipment.

The advisors are not paid for the organisation of Dan technique since this task is part of their salaried job; the university researchers are not paid either because they also have a public task and therefore it is their institutional duty to participate in the event and provide a lecture.

According to the interviewees, the event was so successful because M. is a person with very special personal characteristics (he is extremely friendly and prepared) and a very wide network of relationships. The first event immediately attracted a large crowd of people, who attended because they were confident that they would experience something very interesting simply because it was organised by M... This confirms that trust is one of the main roles of advice.

The personal characteristics of the advisor are emphasised repeatedly during the peer review, with particular stress on his availability to clients (to the extent that he even involves them in his travels) and his willingness to keep one step ahead of the others. One farmer highlights the advisor's ability to anticipate farmers' needs and demands for mechanisation (he always looks for them to provide information, rather than the opposite), compensating for the farmers' chronic lack of time to update, which makes him highly respected and trusted. Somehow, M. is not only the main 'free actor' of this network, but seems to be a real leader, who manages to stimulate the interest and trust of the partners and to coordinate the working group without any effort, by virtue of constant and daily work to maintain its relational network and satisfy its clients (and more generally the people he relates with).

What is also appreciated is the fact that he organised this event not only relying on his own expertise but involving experts from all over Slovenia in order to offer differentiated expertise and address multiple farmers' needs. Farmers emphasise that,

during these days, they have the opportunity to talk to a large number of experts, to present their problems and to share them, trying to identify possible solutions.

Therefore, the Technique Day is also seen as an important moment of exchange. This approach is considered particularly important for small farms, which need to learn before committing to significant investments, but more importantly need to engage with experts and peers. One farmer claims that Dan Technique offers three levels of learning: the first level consists of learning from exchanging with peers, (i.e., sharing problems); the second level of learning occurs when adding new knowledge from the lectures delivered during the event; and the third level of learning consists of watching the machines in action. The combination of these three levels of learning results in a high degree of satisfaction among farmers with the event.

Even during the implementation phase no particular constraints or problems were detected. Interviewees claim that during each event everything is carefully prepared paying attention to the legislation and to what might be possible problems arising from the organisation (e.g., safety, noise from car parks). M. usually prepares everything in detail, also studying the legislation, whose knowledge (and related skills and competences), ha said, is part of an advisor's job and, therefore, of its expertise.

5. Implementation

The practical organisation of the event requires the involvement of many people who have to deal with a wide range of tasks, in addition to the more technical ones, such as preparing the food, driving the machines being demonstrated, supervising the parking areas, etc. These tasks are generally carried out by CAFS advisors and voluntary farmers. During demonstrations, machines are driven by professionals, usually farmers working for third parties, who are employed exclusively to drive a machine during the event. Sometimes, when the machines are brought in by a producer, the drivers may be provided directly by the latter.

In general, the event attracts between 500 and 1.000 people, mainly farmers from Slovenia and sometimes, especially in border regions, also from Croatia. This is because Slovenian advisory institutes also have relations with the nearest Croatian farms and, furthermore, because the producers' unions (for wine and other productions), which collaborate in the organisation, usually also represent Croatian farmers and, therefore, provide invitations to them. Visitors are mainly farmers, but secondary educational schools are also present since this event is part of their curriculum.

The experts who participate in the event by providing technical and scientific content are all from Slovenia. The organisers have never thought of inviting experts from other countries, probably because of language issues (which could be solved by translations, by the way) or simply because this would imply greater organisational and financial efforts.

Apart from the safety regulations, which must be strictly observed to host a large number of visitors, and the fulfilment of the respective tasks, there are no particular problems or obstacles to the realisation of this event. This is because, as repeatedly claimed, Dan Technique pursues a public interest, shared by society, which is to ensure a more sustainable agriculture. Therefore, everyone has something to benefit from Dan Technique and nothing to lose.

The main problems encountered in the realisation of the event are due to practical aspects such as weather, as sometimes, because of bad weather conditions, certain events cannot take place or certain sites cannot be visited.

Organisation of social activities with food and drink is considered very important because many farmers attend the event not only to watch demonstrations but also to talk and exchange opinions and ideas, share problems with peers and experts. Interviewees claim that sharing opinions with other people, especially farms that have similar problems is the most important aspect of the event. Therefore, *“there is always something to learn in this event, nobody leaves without having learned something”*. This is why, according to the farmers, these events are expected to grow. Furthermore, Technique days engage the interest of farmers since they are always very well focused on current issues; these are not generalised events, but they always have a very specific focus that matches the real problems of farmers in a given moment. The proof of this interest in getting together and exchanging ideas is also in the number of participants, since a thousand people visiting a farm in one day is very significant.

In general, Dan Technique actors, be they researchers or farmers, show great satisfaction because such an event did not exist in Slovenia: they had to travel abroad to view technological innovations and, in any case, they lacked opportunities for exchange and networking.

Information about the event is widely disseminated in Slovenia. All farmers benefiting from the public advisory service (about 56.000) receive a newspaper with the main news about farming. This newspaper always includes some news about the event so that everybody knows that it takes place every year. The event is also advertised in other types of press. In addition, on Slovenian television there is a programme about farming and during the event this always reserves a large space to it, allowing everyone to get informed. Each event is fully recorded and after its conclusion M., together with the TV staff, edits a program, that is approximately one hour long, which is broadcast on television and/or on internet: therefore, even those who did not attend the event can watch the demonstration.

Furthermore, after the event, all the actors involved, participants and stakeholders are allowed to continue to discuss what has been done through social media.

After each event, a lot of articles reporting what happened and what was done are also written (by the different key actors) and published. The publication of articles in different magazines is considered very important not only to reach people who could not attend (making them aware), but also for those who participated because these lasts are engaged in many activities during the Dan Technik, from socialising to observing the machines, and not everything can be attended at the same time or with the same intensity. The event is also documented through photographs that are sent to all the exhibitors and participants who can use them throughout the year (e.g. on the exhibitors' websites) to constantly publicise the event through high-impact visual tools.

Farmers' unions and cooperatives play an important role in disseminating the outcomes of these days, acting as multipliers. They try to involve farmers in Dan Technique since they aim to sell machines through their shops. After the event, wine co-operatives generally organise follow-up events (further dissemination), while there is no awareness whether cooperatives in other sectors organise similar events.

Today, Dan techniques has entered the national advisory programme. Indeed, it is the most important event organised by public advisory bodies in Slovenia and each advisor is responsible for contributing, publicising and disseminating the event. Technique days are organised in different production sectors (vegetables, crops, fruit) in addition to the grape one, and M.'s experience has been taken on board by all CAFS advisors and it is embedded in their competences.

Advisory services have the fundamental role of supporting each farmer in the transition from a conventional model of agriculture to a more sustainable one. CAFS advisors also support the eventual introduction of the machines at farm level. Indeed, farmers buying a machine can count not only on advisors, but on the whole network running from Dan

Technique. In other words, Dan Technique is not just an event, but also a network of experts that is present at every time: therefore, there is always someone who can support the introduction of the machinery and provide appropriate answers to any problems that may arise. This confirms that there is a very close network between actors involved in mechanisation in Slovenia, that has been consolidated since the organisation of this event and it is maintained (now more than ever) also through the use of digital tools such as social media.

Interviewees feel that the benefits of Dan Technik go beyond the event and the possible decision to invest in a technological machine. In fact, after attending the event, many farmers start thinking about a different future for agriculture: even farmers who are not so involved in sustainability issues are becoming more aware of the benefits of sustainable agriculture.

6. The AHA-Erlebnis: feedback on the gained insights

Main success factors of the case

- The public advisory body enables (both in terms of time and money) its advisors to travel and visit other countries to update their knowledge about what is new / happening abroad. This is a crucial element to be included for enabling environment for innovation.
- The advisor plays the relevant role of 'free actor', being able to stimulate the interest and trust of partners and to coordinate the working group without any effort, by virtue of constant and daily work to maintain its relational network and satisfy its clients (and more generally the people he relates with).
- The main actor of this case (the advisor) has a well identified role within the Slovenian AKIS, since his knowledge and expertise on technological machines is widely recognised throughout and respected due to his independence from machinery producer. This facilitated the involvement of other actors.
- The geographical conformation of Slovenia, which is a very small country, allows people working on similar topics to know each other and to exchange knowledge, thus fostering the setting up and maintenance of relationships networks (enabling an environment for growing ideas).
- Involvement of independent experts (advisors, researchers, academics), not linked to companies producing the machines being demonstrated, which favour the development of trusting relationships with farmers, free from hidden interests.

Case outcomes

Dan Techniques is an event that was born from the idea of two people, an advisor and a farmer who are linked by a long-standing friendship. Travelling to neighbouring countries to learn about new technologies and keep their knowledge up to date, they came up with the idea of organising an event in Slovenia that would allow farmers to socialise and attend lessons and demonstrations to know how (and which) technologies can improve farm performance and environmental sustainability, before buying them.

The idea immediately met the support (and the full trust) of the head manager of the public advisory service and the local municipal authority, which immediately endorsed, also financially, an event that was intended to have an impact on sustainability issues.

To achieve the defined goals, a range of actors has been involved in the project: farmers, researchers /academics and equipment suppliers/producers. People were engaged on grounds of personal relationships of friendship and trust who are also enabled by the geographical conformation of Slovenia, which is a very small country where people working on similar topics are able to network together.

Decisions about the organisation of the event are taken by a small group composed of three-four people linked by a friendship and a high level of mutual understanding. However, decisions ground on external inputs coming from: the advisors of CAFS, which bear farmers' needs, the farmers who are more on the cutting edge and ask for specific contents, the EU regulations, the public debate on pollution problems within the community, feedback meetings in which people discuss how the event went and how it should be improved. Therefore, Dan Technique develops, year by year, on the push of different drivers.

The success of the initiative is based on a number of factors, including the involvement of a variety of actors with different practical expertise and knowledge (and who are independent of input producers/purchasers) allowing multiple needs of farmers to be addressed. Therefore, the initiative is more an opportunity for exchange with experts and peers than a demonstration event.

Due to its popularity and social relevance, Dan techniques has entered the national advisory programme and each public advisor is responsible for contributing, publicising and disseminating the event, which is now organised in different production sectors.

Regarding long-term effects, Dan Technique has succeeded in creating and consolidating a network of experts which is at the service of technological development in Slovenian agriculture. Besides, it is contributing to let farmers become more aware of the benefits of sustainable agriculture.

7. Lessons Learned

Dan Technike is a special case because it is a social and organisational innovation that did not result in an innovation implemented by farmers but in a (learning, demonstrative, networking) event for farmers.

This type of innovation has made the application of the question framework difficult, as this last has been designed thinking to a different type of innovation process.

Dan Technike certainly describes a multi-actor process involving many actors but with a narrow decision-making core. Although the innovative process involved a large number of different actors and although it was very participative, in fact it did not enable all those functions that are usually applied in the management of an interactive project involving a variety of actors, such as mediation or conflict resolution functions.

Moreover, this case is embedded in a very particular social context since it starts and develops in already existing networks and, therefore, in steady relationships that are consolidated during the project.

Given the fact that these networks existed beforehand and that they are based on informal, very friendly and trusting relationships, all the functions that might usually be performed by an intermediary in innovation processes are in fact not displayed because, as a matter of fact, the meshes of these networks are already quite tight and linked by friendly and trusting relationships.

This case revealed some weaknesses in the methodology, not only in the analysis but probably also in the selection of projects. Therefore, it raises the question of revising both the project selection criteria and the analytical framework for peer review in the narrower sense.

Reflecting on the case, the most impressive element is the capacity of the advisory body to understand the importance of allowing its employees to travel, to learn about what is new in other contexts and to exchange opinions and ideas outside the usual working environment. Very often, public advisory bodies do not have this same view, considering participation to events as opportunities for entertainment rather than training.

Field Peer Review Report

Tracking high value Hungarian grey cattle herds in pastoral livestock management using IoT technology

Hungary



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1. Introduction

The case study report of the field review process presented hereafter was carried out within the framework of delivery of the I2Connect project in the period of winter months 2020/2021. The main focus of the research aimed at a better understanding of agricultural advisory services role in the process of facilitating introduction of innovative solutions into agricultural practices. This case study report presents the results of the research based on the experiences of the Hungarian case:

Tracking high value Hungarian grey cattle herds in pastoral livestock management using IoT technology.

This field report was carried by the following steps:

- a) selection of case studies by partners of the I2Connect consortium at a national level,
- b) allocation of some specific tasks between partners of the consortium within the framework designed by the I2Connect team of experts,
- c) carrying out two sets of interviews with every case study representatives by the panel of experts nominated by the I2Connect project,
- d) desk research carried out by a reporting team,
- e) peer review by the team experts.

All the interviews were carried out online without an option of direct, face-to-face meetings.

2. Factsheet of the case

The case study concerns the role of agricultural advisory services as the facilitators of introduction of a new IT solution directly into the agricultural practice. The solution was developed by research and development partners cooperating with the advisor on basis of Multi-Actors Approach (MAA). MAA is largely perceived as one of the most effective tools facilitating an effective promotion of innovative solutions in farming practice. This Hungarian case study is a classic example of the MAA application at the project focusing on the issue related to an animal production at a farm level.

The specific goal of the project is to develop a system of monitoring, traceability and livestock management based on the IoT technology. The IT system of monitoring of livestock movement is well adjusted to specifics of animal production in the Hungarian Puszta regarding raising traditional cattle breeds, the Hungarian Grey (longhorn) and Hungarian Buffalo. The services are provided by private advisory company establishing an overall framework for this case study.

As it was already emphasized the project is a classic example of multi-actors cooperation between partners representing all relevant actors for facilitating of innovation in agriculture. Thus, there were some representatives within the project's consortium of the following sectors:

- a) private agricultural advisory services owned by public partner,
- b) animal production farm managed by farmer (involved also in food processing activities),
- c) commercial IT companies involved in development of the monitoring system design and establishment,
- d) market actors,
- e) administrative bodies as supporting organisations.

What is of particular importance in view of the i2connect project's research objectives, it is an overarching role of advisory service as a framework organisation enabling the project's development throughout all the phases. It created a substantial value added through embedding the project in a network of well-established partners aiming at an increase of competitiveness of farm managed by agricultural company by:

- limiting the cost of production through a provision of new livestock management IT tool for an indirect monitoring of herd movements instead of costly and more time demanding direct monitoring activities.

Despite some technical problems, which will have to be overcome as a result of further research and testing, experience in the project allowed to test a new ear tag system connected into the IT network. The whole system allows for effective cattle movements monitoring by linking farm activities with a wider IT network. It is a very interesting solution for animal production in weather condition and geographic areas allowing for free range of animal production in non-closed natural pasture areas.

Two specific aspects of the approach applied by the case study project shall be strongly indicated as potential lesson learned for other advisory projects:

a) IT services from farmers' perspective are a part of commercial advisory package, not separate services requiring some additional payment. It is, therefore, an example for a holistic approach to agricultural advisory services provision by creating advisory packages meeting clients' expectation, but at the same, more demanding for the advisor in terms of time managing, human and financial resources of a service provider.

b) it is an excellent case study of the effective use of combining public policy instruments with provision of high quality agricultural advisory services at an individual farmer/client level – the costs of commercial advisory package are covered in 90% by support given to farmers under the farm advisory measure of RDP 2014-2021.

3. The initiation period

The context of advisory processes relevant for the research objectives of the case study:

a) long term relationships between advisory services represented by the EU-Info Ltd and connecting advisors with farmers. These linkages were developed in the process of services provision under commercial advisory package - it is a very important factor facilitating trust and personal relationships between farmers and advisors.

Similar patterns in two other cases considered under the I2Connect projects: the Irish and the Polish case studies.

b) familiarity or at least openness of farmers to apply the new IT based solutions in their farming practices – access to the web based farm logbook (one of the core digital platforms used by advisory services in Hungary),

The inspiration phase

“The aforementioned farm logbook system was/is developed by an advisory service provider organisation in Hungary, which has several clients in the livestock sector, including the Szomor Organic Farm, being one of the largest in the country, raising traditional cattle breeds, the Hungarian Grey (longhorn) and Hungarian Buffalo. The advisors also operate full traceability system for this farm, which covers not only software development, but also continuous support, training and improvement (by at least weekly personal . consultations). So it was a logical step to start the discussions with this farm about the initial idea.”

The initial idea came from a group of farm advisors, participating at a training of the web based farm logbook (one of the core digital platforms used by advisory services in Hungary), formulating ideas about

- ☞ further needs for improved record keeping,*
- ☞ better administration of livestock,*
- ☞ possibly by the use of digital devices (sensors). „*

Step 1

Needs identification

The whole process started from needs identification – an improvement of a record system keeping leading to upgrading administration of livestock movements. It is a result of discussions throughout the training between trainees (farmers) and trainers (the advisors).

The needs identification process was carried out in a well-defined social and institutional infrastructure created by advisory partners. The familiarity between partners, mutual understanding of farmers expectations and needs seem to be a very important aspect of

the whole process (see: The context of advisory processes relevant for the research objectives of the case study.).

Step 2

Inspiration process

The advisors have the capacity to „translate” a general idea worked out jointly by all the participants of the training session into an „operative” objective – the critical path from „what we want to achieve” towards „what are realistic options to follow up our ideas”.

The second equally important factor was to at least start the initiating talks with manager/owner of „*the Szomor Organic Farm, being one of the largest in the country, raising traditional cattle breeds, the Hungarian Grey (longhorn) and Hungarian Buffalo*” regarding his potential involvement into the (then) future project.

Here again, the role of advisors shall be considered with a particular attention – their ability from needs identification up to “goal operationalisation” (the logic of intervention from what we want to achieve to how we might reach our goal). As agricultural advisory practice seems to indicate is one of the most difficult phases of innovative advisory service provision – here, in the Hungarian case, good practice proven by experience is very well presented.

The initiation phase

In this phase a general idea of the future project was analysed in a sort of semi-feasibility study (do we have intellectual and human potential to develop “our” concept. As experiences from some other researches on innovation indicate, this stage of analyses is considered by practitioners as taken/matter of course, and at the same time not an area of any in-depth review. However, it seems to be a crucial step for any effective “translation” of needs into projects’ delivery in the area of promotion of innovative solutions in farming practice with a real farmers’ involvement.

It is, therefore, worthwhile to consider the key aspects relevant for the Hungarian case study. All the aspects are directly related to social and institutional infrastructure of the Hungarian AKIS.

Step 1

Source of funding

The key question at this stage is to identify a source of funding to answer the question whether it is really worthwhile to follow-up any new, innovative idea. In this case study the EU support measure was an obvious reference point leading to a conclusion for the activities continuation.

A potential research question – to carry out a comparative analyses of multi-actors innovative projects from three types of sources:

- a) publicly funded,
- b) private funding (i.e. owner/manager of farm entities/network of farm entities)
- c) purely commercial (i.e. large supplier of farm supporting inputs, like fertilizers suppliers),

Are there any differences in advisors professional practice in the initiation phase of multi-

actors innovative projects in agriculture related to:

- a) source of funding,
- b) publicly supported advisory services operating in the environment of availability of publicly funded measures/tools for supporting innovation processes in agriculture versus purely commercial services based mainly on market incentives?

Step 2

Institutional infrastructure

„Operationalisation” phase (we know what we want to achieve – now, consider how?)

The key criteria:

- an access to sources of R&D know-how,
- an ability of R&D know-how suppliers to „translate” general ideas into solutions having capacity of direct implementation in farming practice.

Step 3

Human network

An access to active agents of innovative processes having an intellectual capacity to provide feedback for question at this stage:

- a) how we can achieve our objective.

The very fact that the advisory actors in the Hungarian case area part of a wider AKIS framework proved to be important at two levels (at least):

- a) they themselves had to appropriate the capacities (i.e. EU-Info Ltd – software developer),
- b) were able to identify potential (at this stage of project development) partners – (Antenna Hungaria Zrt <https://www.ahrt.hu/en>, private, state owned, ChipCAD Ltd. <https://www.chipcad.hu/>, private)

4. Planning and development

The planning phase

The planning process was described by the advisors in the following way:

“The farmer and advisor started the planning in parallel with the opportunity of an application call for innovative projects (as part of Széchenyi Plan, that is a national framework for EU grants). They decided to combine the development of software in integration of innovative hardware device, and also a special method of delivery, to be offered as part of farm advisory service package, to make it more affordable, sustainable and replicable for others. They involved in the planning phase the applicant organisation, researcher, advisor, and IT developer company, specialised in LoRa technology, as we found it the most promising solution.”

Step 1

Identification of source funding

They decided to apply for the support to the EU funded grant.

They came through a well-known process familiar for all practitioners operating with public support system of innovative projects in agriculture;

a) to consider which measure is the most appropriate for the specific objectives of the project in view of reaching short and long term objectives (*“They decided to combine the development of software in integration of innovative hardware device, and also a special method of delivery, to be offered as part of farm advisory service package, to make it more affordable, sustainable and replicable for others.”*).

This approach was really critical for effective advisory services – to perceive the project (then potential) as a vehicle for further long term development in the scope of services provided by an advisor. The involvement of a farmer confirmed that it is a joined initiative – meeting farmers expectation regarding a further advisory service development. This process was definitely facilitated in a very positive way by the cooperation of both the advisor and the farmer in a dense institutional and human infrastructure facilitating the effective successful cooperation between all relevant partners.

Step 2

Identification of actors of the innovative MAA project

In short it is a process from a „long list“ of potential active agents of innovative projects towards the „short list“ – partners who will be effectively involved in further project development. Here the role of the advisor in the case study was important in view of:

a) taking into account requirements for pure IT/scientific skills/abilities,

b) understanding by potential partners some specific sectoral requirements (as sometimes partners having required skills/abilities do not necessary realise the scope of work in condition of farming practices),

c) power of human network – having a properly developed network of experts involved in IT known as trusted for potential cooperation.

To sum up in the Hungarian case the advisor acted as „an innovative hub” connecting all relevant for the project actors. It seems to be safe to make the assumption that the advisor was the factor generating trust between all involved actors in the following relationships:

a) farmer –advisor,

b) the IT support organisations (Antenna Hungaria Zrt <https://www.ahrt.hu/en>, private, state owned, ChipCAD Ltd. <https://www.chipcad.hu/>, private – the advisor. The fact that the EU-Info Ltd. advisor was also a software developer seems to indicate the in-depth understanding of the IT sector providers meeting expectation of farming communities),

c) other supporting actors (i.e. NEBIH – National Food Chain Safety Office, ENAR - Central database of the national bovine identification and the registration system, public – the advisor.

Potential research question – similarities/differences in the advisory processes between the Hungarian case based on strong public sector visibility v. more commercially oriented farm advisory processes.

The development phase

The development phase was more technically, administrative and procedural oriented as proven in the advisor statement:

“For developing the innovation project, the partnership mainly followed the requirements of the application call, which included all the regular steps, to prepare a summary description, a detailed work plan with Gantt diagram, definition of the role of partners, sustainability and dissemination plan, budget calculation, price offers, etc.”

At this phase answers the questions what and how was already defined. The main task of the advisor in the development phase was to match all the requirements as defined by all relevant actors (the farmers, the IT know-how supplier, the advisors themselves) into the strict substantive, formal and procedural requirements of the selected as source of funding measure: Competitive Central-Hungary OP.

The process covered the steps as follows:

a) adjustment of the project’s objectives as defined by all relevant internal actors to the measure’s strategic and specific objectives of the measure – (*“a summary description, a detailed work plan with Gantt diagram, definition of the role of partners”*),

- b) review of eligibility costs in view of matching special skills/expertise and expectation of each member of the consortium into the structure of eligibility costs provided as an important part of the measure in question description,
- c) development of all parts of application template covering both substantial, administrative and procedural requirements of the measure.

The role of the advisor at this stage was very complex due to different perspectives presented by the internal actors of the innovative process. Each of them (the farmer, the IT know-how provider and other supporting actors) tended to perceive the project from their own professional perspective and managerial/financial expectation.

The advisor acted as “an innovation hub” as an actor combining all relevant perspectives:

- a) the knowledge of needs directly related to animal production management in the Puszta region (free range pasture),
- b) the in-depth understanding of IT requirements for the proposed solution to work efficiently in real farm conditions (i.e. ear tags, servers, type of information to be collected by ear tags connected to server etc.),
- c) a professional ability of ‘translation’ of the project’s objectives into the specific requirements of the measure funding activities of the Hungarian case study,
- d) the skills for development of the project’s application in line with all the substantial, administrative and procedural requirements of the Implementing Agency managing call of proposals for the measure funding the project activities.

The special role of the advisor as “an innovative hub” seems to be worthwhile to be strongly emphasized in the Hungarian case. It does not mean that the other actors were passive or less important. Their participation was a precondition for an effective project design.

However it was the advisor, who, through its position in the AKIS framework, served as a facilitator of an innovative multi-actors process involving all the actors in the Hungarian

case (see: Section 3 The context of advisory processes relevant for the research objectives of the case study.)

5. Implementation

The realisation phase

Experiences from carrying out other case studies of innovative projects indicate that the actors perceive the realisation phase of their projects as simple following up the decisions taken at the planning and development phase. It refers particularly to the projects implemented at regional/local levels where the actors cooperated before the project in question on a regular basis and on informal and formal basis. The Hungarian case represents this type of the project as mirrored in the advisor statement:

“The realisation phase was implemented in accordance with the project plan, with the involvement of all actors.”

It seems worthwhile to indicate the most relevant aspects of the realisation phase:

a) Management and internal communication:

- *“The advisors also operate full traceability system for this farm, which covers not only software development, but also continuous support, training and improvement (by at least weekly personal consultations).”*
- Thus the activities directly related to the case study delivery shall be seen as a functionally connected to the whole spectrum of the advisory package provided by the advisor to the Szomor Organic Farm. This is something not perceived by all the involved actors as artificially delivered but as a separate activity.

b) Communication:

- The same concerns the internal communication process between the actors involved the case study project delivery – no need for any additional, special communication tools as the case study activities in real day-to-day advisory service were mixed up with other part of advisory package.

c) Technical issues – the advisor as a result of experience introduced some changes into the construction of ear tags to improve an ongoing process on identified weaknesses (i.e. dirtiness of ear tag limiting their usefulness).

To sum up two specific aspects of the approach applied by the project shall be strongly indicated as a potential lesson learned for other advisory projects:

a) IT services from farmers' perspective are a part of commercial advisory package, not separate services requiring an additional payment,

b) it is an excellent case study of the effective use of a combining of public policy instruments with provision of high quality advisory services – the cost of commercial advisory package are covered in 90% by support given to farmers under the farm advisory measure of RDP 2014-2021.

Thus, it is an example of the holistic effective approach for using publicly funded instruments for facilitating innovation in farming activities in double aspects:

a) to fund an innovative solutions themselves (Competitive Central-Hungary OP),

b) to fund services provision in view of an improvement of a farm production competitiveness.

It seems to be a perfect solution for medium and small farms sectors which due to limited financial and managerial capacities are in a disadvantage position as regards the access to the new IT driven innovation in agriculture against larger, commercial farms. Thus, the Tracking high value Hungarian grey cattle herds in pastoral livestock management using IoT technology case study might be recommended for:

a) any type of agricultural advisory services focused on small and medium size farms,

b) having an access to publicly funded policy instruments supporting functioning of agricultural advisory services.

The dissemination phase

All the actions related to the dissemination phase are often perceived by agricultural practitioners as additional, related to the obligation imposed on the consortium delivering any project by the requirement of an agreement with the Implementing Agency.

The Hungarian case study partly represents the same approach as illustrated by the advisor statement:

“The dissemination was primarily carried out according to the application undertakings; background and results made visible on the project website (2018/2019) by the project coordinator.

<https://vekop-leg.prompt.hu/>

The practical case was also presented and published on the FAO / WeAreNet SHIP (Small Holder Innovation Platform) event and website (2018) by participating advisors.

The practise was selected as one of the demonstrational content for the e-learning material on precision agriculture, developed by St Stephen University, Hungary.

It was submitted for the recent call of FAO ITU on digital excellence in agriculture (December 2020) by ÖMKi farm advisory division.”

This is the pattern dominating in at least, a part (if not majority) of other innovative projects. It reflects a wider phenomenon – agricultural practitioners tend to focus as much as possible on the technical, practical aspects of innovative projects as relevant for their professional activities as farmers or advisors. They are less concerned with some parts of dissemination activities, except of peer-to-peer demonstration in form for instance of demonstration activities for other farmers.

The embedding phase

The embedding process took various forms, some of them in vague border between dissemination and embedding.

One of the forms concerns the following up new projects on the basis of the project under the review process undertaken with other partners as indicated by the advisor:

“The Organic Research Institute (ÖMKi) in Hungary, member of i2connect project (as third party of FiBL) is a main actor in the embedding phase, as they will exploit further the results achieved in the last 2 years, in a new research project activity under the so called MNVH scheme. The farm advisors and IT experts from the previous steps are also joining forces with ÖMKi to further develop the solution, with more emphasis on animal welfare and consumer information.
[https://www.biokutatas.hu/hu/page/show/allattenyesztes”](https://www.biokutatas.hu/hu/page/show/allattenyesztes)

However, the picture is more complex. As the advisor also stated they are considering to introduce a new service of tracking cattle herds movement on a wider scale for other farmers, clients of advisory services. There are some technical problems that require an additional improvement before this type of services for other farmers, users of the advisory services. It seems that the advisor is considering the option as a realistic way forward to extent the spectrum of services provided to farmers not only to tracking movement of cattle but also for other purposes as well.

6. The AHA-Erlebnis: feedback on the gained insights

1. The importance of the context for advisory processes:

- A long term relationship between advisory services represented by EU-Info Ltd and connecting advisors with farmers. These linkages were developed in the process of services provision under a commercial advisory package - it is a very important factor facilitating trust and personal relationships between farmers and advisors.

Similar patterns in two other cases considered under the i2connect project: the Irish and the Polish case studies.

2. A strong embedding of the advisor in the Hungarian AKIS network as a critical factor for a successful introduction of a new innovative solution based on:

- well-defined farmer communities needs and expectation (a need itself shall be supported by willingness of a farmer for an effective implementation of new solutions requiring additional managerial and sometimes financial resources,
- the advisor realistic assessment whether any new solution under consideration is feasible in terms of the implementation by the actors operating in the AKIS scene.

3. A creative approach by the Hungarian advisor to the strategy of the new service development:

- This approach was really critical for effective advisory services – to perceive the project (then potential) as a vehicle for a further long term development in the scope of services provided by the advisor. The involvement of a farmer confirmed that it is a joined initiative – meeting farmers' expectation regarding the further advisory service development. This process was definitely in a very positive way facilitated by the cooperation of both the advisor and the farmer in a dense institutional and human infrastructure facilitating an effective successful cooperation between all the relevant partners.

4. The Hungarian case study project shall be strongly indicated as a potential lesson learned for other advisory projects in view of

a) IT services from farmers' perspective are a part of a commercial advisory package, not separate services requiring an additional payment,

b) it is an excellent case study of effective use of combining public policy instruments with a provision of high quality advisory services – the cost of commercial advisory package are covered in 90% by a support given to farmers under the farm advisory measure of RDP 2014-2021.

Thus, it is an example of the holistic effective approach for using the publicly funded instruments for facilitating innovation in farming activities in double aspects:

a) to fund an innovative solution itself (Competitive Central-Hungary OP),

b) to fund services provision in view of an improvement of a farm production competitiveness.

It seems to be a perfect solution for medium and small farms sectors which due to limited financial and managerial capacities are in a disadvantaged position as regards the access to new IT driven innovation in agriculture against larger, commercial farms. Thus, the Tracking high value Hungarian grey cattle herds in pastoral livestock management using IoT technology case study might be recommend for:

- a) any type of agricultural advisory services focused on small and medium size farms,
- b) having the access to publicly funded policy instruments supporting functioning of agricultural advisory services.

7. Lessons Learned

The Hungarian case largely confirmed my experiences from other research projects carried out in Poland and other countries on facilitation of innovative processes in agricultural sector in areas as follows:

- The very key role for any active agent of innovation processes is to develop trust relationship between all relevant actors; it concerns, both, effective institutional and human infrastructure,
- It is of a particular importance for any type of advisory service acting as “innovation hub” between farmers communities and other actors operating in the AKIS framework,
- It is of a special relevance for any type of agricultural advisory services providing services to farmers’ communities. It seems that, at least, a part of farmers is a bit more conservative regarding a new solution and relies more on strong informal ties with advisors than in some other sectors of economy. Building trust with farmers requires more time.

As regards the methodological aspects I have no specific comments or concerns. The reporting template allowed for covering all relevant topics.

In ideal world face-to-face interviews with the advisors in the case study, there would be a better solution facilitating a better understanding of nuts and bolts of the Hungarian case study. As it is always more effective to come over to pasture, see directly how the cattle monitoring system operates in real life or to have a long informal chat with the farmer to have a better understanding of his perspective. But, in absence of ideal world, the online interviews and follow up communication met all the methodological requirements.