ME&L framework to strengthen CS advisory capacity

Deliverable 4.1

M10/JANUARY 2024

Author(s): Kevin Collins (OU), Jorieke Potters (WR), Ellen Bulten (WR)

Funded by the European Union

This project has received funding from the Horizon Europe research and innovation programme under Grant Agreement No 101084179.

Project Full Title	**ClimateSmartAdvisors: Connecting and mobilizing the EU agricultural advisory community to support the transition to Climate Smart Farming**
GA number	**101084179**
Type of Action	**Coordination and Support Action (CSA)**
Project Duration	**84 months**
Project Start Date	**01.04.2023**
Project Website	climatesmartadvisors.eu
Deliverable Title	**ME&L framework to strengthen CS advisory capacity**
Deliverable Submission Date	**30.01.2024**
Version	**V1.0**
Dissemination Level	**PU – Public**
Deliverable Lead	**OU**
Authors	**Kevin Collins (OU); Jorieke Potters (WR); Ellen Bulten (WR)**
Contact	**kevin.collins@open.ac.uk; jorieke.potters@wur.nl; ellen.bulten@wur.nl**
Work Package	**WP4**
Keywords	**Monitoring, Evaluation & Learning, Capacity Development, Climate Smart Advisors, Climate Action, Community of Practice, Theory of Change**

Disclaimer

List of Abbreviations

AKIS	Agricultural Knowledge and Innovation System
CA	Climate Action
CD	Capacity Development
CFD	Climate Farm Demo (project granted under call topic HORIZON-CL6-2021-CLIMATE-01-04)
CSA	Climate Smart Advisors
CS-AS	Climate Smart Advisory Services
CSC	Climate Smart Coach
CSF	Climate Smart Farming
CoDIE	Co-Design Innovation Experiment
CoP	Community of Practice
DLA	Dynamic Learning Agenda
GA	General Assembly
ME&L	Monitoring, Evaluation & Learning
MIP	Multi-actor innovation project
NC	National Coordinator
PDF	Pilot Demonstration Farm
PIP	Projects, flagship Initiatives and Policy makers
TL	Thematic Leader
TTT	Train the Trainer
WP	Work Package

Contributors

Name	Organisation
Kevin Collins	OU
Jorieke Potters	WR
Ellen Bulten	WR

Revision history

Version	Date	Reviewer	Modifications
Draft 0.2	16-01-2024	Lies Debruyne (EVILVO)	minor textual corrections, suggestions for (limited) additional content, requests for clarification of phrases/meaning
Draft 0.3	22-01-2024	Tom O'Dwyer (TEAGASC)	minor textual corrections, suggestions for (limited) additional content, requests for clarification of phrases/meaning
Final 1.0	30-01-2024	Erika De Geest (EVILVO)	layout corrections, final version for upload

Table of Contents

List of Tables and Figures

1 Abstract

Aim of Monitoring, Evaluation & Learning

The aim of the Climate Smart Advisors project is mobilise the European agricultural advisory community, leading to an acceleration of the adoption of climate smart farming practices by the wider farming community within and across EU AKISs. Agricultural advisory services will be boosted by strengthening advisors' capacity to provide targeted Climate Smart advice. The main vehicle for strengthening advisor capacity will be a Community of Practice (CoP), comprising a Climate Smart Coach and 6 Climate Smart Advisors.

The aim of WP4 is to design, coordinate and facilitate regular Monitoring, Evaluation & Learning (ME&L) within the CSA network. With a particular focus on the CoPs, the ME&L conceptual framework, processes and tools set out in this document to provide the foundations to enable the CSA network to function as a learning system.

The ME&L conceptual framework provides the CSA network with key concepts, methods, tools and training. The framework integrates learning on four levels: network; work packages; Climate Smart Coaches and Advisors; and practice.

Key Building Blocks

Based on the CSA Theory of Change, the ME&L conceptual framework is focussed on three building blocks:

1. **Capacity development**: The specific knowledge, attitudes and skills advisors need to support farmers and accelerate the adoption of climate smart farming practices.
2. **The role of the advisor**: Supporting the implementation of climate smart farming measures and acting as change agents, navigating the transition to CSF.
3. **Climate Action:** The actions taken to combat climate change and subsequent impacts.

Instruments for ME&L

The ME&L approach employs three interconnected instruments to understand the effects and enhance the effectiveness of interventions within the CSA network:

1. **Evaluation of interventions (TTT and CoP)** - A generic instrument has been developed to evaluate and refine the key capacity development interventions in the network, with a specific evaluation of the Training the Trainers (TTT) and an instrument for the annual self-evaluation of each Community of Practice (CoP). This last instrument will be used to prepare for the annual CoP reflection and planning session during the National Annual Meeting at country level (NAM).
2. **Climate Smart Advice Capacity Assessment Tool (CSA-CAT)** – Focusses on the development of CS advisory capacity and is aimed at monitoring and evaluation. It has been developed specifically for monitoring and supporting the development of CSA capacity within the network.
3. **Dynamic Learning Agenda (DLA)** - Overarching ME&L instrument that is employed for coordinating, facilitating and enriching learning across various actors, activities and components of the network. The aim is to deepen and guide learning, to document lessons learned and to foster collaboration and exchange between CoPs, countries, thematic areas, Work Packages, and Projects, Initiatives and Programs (PIPs) beyond the CSA network.

The ME&L framework and approach is iterative and dynamic. It provides the first step in fostering the CSA network as a dynamic learning system for the continuous improvement of network functionality and the strengthening of climate-smart advisory capacity to accelerate the adoption of climate smart farming.

2 Introduction

2.1 Importance of CS agriculture

In 2020, the European Green Deal set out how to make Europe the first climate-neutral continent by 2050. In 2021, the European Council adopted the "FIT for 55" package, aiming to meet the target of reducing greenhouse gas emissions by at least 55% by 2030 compared to 1990. In addition, the Farm to Fork (F2F) strategy emphasizes the need to accelerate the transition to a sustainable food system and highlights the need to develop new green business models. While agriculture is responsible for approximately 10% of the European greenhouse gas (GHG) emissions (CH4, N2O, CO2), it can also contribute to regulating CO2 uptake via carbon sequestration in soils. However, the uncertain nature of current and projected climate change impacts and the need for adaptive management as an ongoing process emphasises the importance of continuous learning and adaptation (OECD, 2020).

In the new CAP (2023-2027), farm advisors are considered key actors for sharing new knowledge and ideas as an integral part of a stronger AKIS and contributing to the development of innovation projects and the dissemination of their results. To have an impact on the transition to more climate smart farming (CSF) systems, advisors thus play an indispensable role in developing and sharing climate smart (CS) innovations and good practices between peers and with farmers.

2.2 CSA aim

The overall aim of the ClimateSmartAdvisors (CSA) project is to mobilize the EU agricultural advisory community, leading to an acceleration of the adoption of Climate Smart Farming (CSF) practices by the wider farming community within and across EU AKISs. CSA aims to boost the role of agricultural advisors and advisory service providers (ASP) by strengthening their capacity in providing targeted advice, and by implementing the approaches and sharing the solutions developed in the sister project Climate Farm Demo (CFD) on a wider scale across Member States (MS) and associated countries (AC).

2.3 WP4 Monitoring, Evaluation & Learning

2.3.1 Aim

WP4 is focussed on developing a Monitoring, Evaluation & Learning (ME&L) framework, processes and tools to enable the CSA network to function as a learning system. The aim of WP4 is to design, coordinate and facilitate regular ME&L within the CSA network, specifically to:

1. support the continuous improvement of the functioning of the network in developing and strengthening climate-smart advisory capacity; and
2. support learning on how to effectively boost the role of advisory services in accelerating the adoption of climate-smart farming practices.

2.3.2 Tasks and relationships to WPs

WP4 has five tasks:

- 4.1 Develop a conceptual ME&L framework for the CSA network and provide methods, tools and training to monitors.

- 4.2 Support WP1, 2 and 3, the CoPs and CoDIEs to systematically reflect on the functioning and effects of the different capacity building activities (peer learning, training, CODIEs) within the network.
- 4.3 Analyse the insights and synthesise overarching lessons learned.
- 4.4 Organise an annual Award for inspiring CSA practice.
- 4.5 Translate lessons into recommendations and practical guidance for advisors, advisory organisations and other AKIS actors.

The relationship between WP4 and other WPs is shown in

Figure 1.

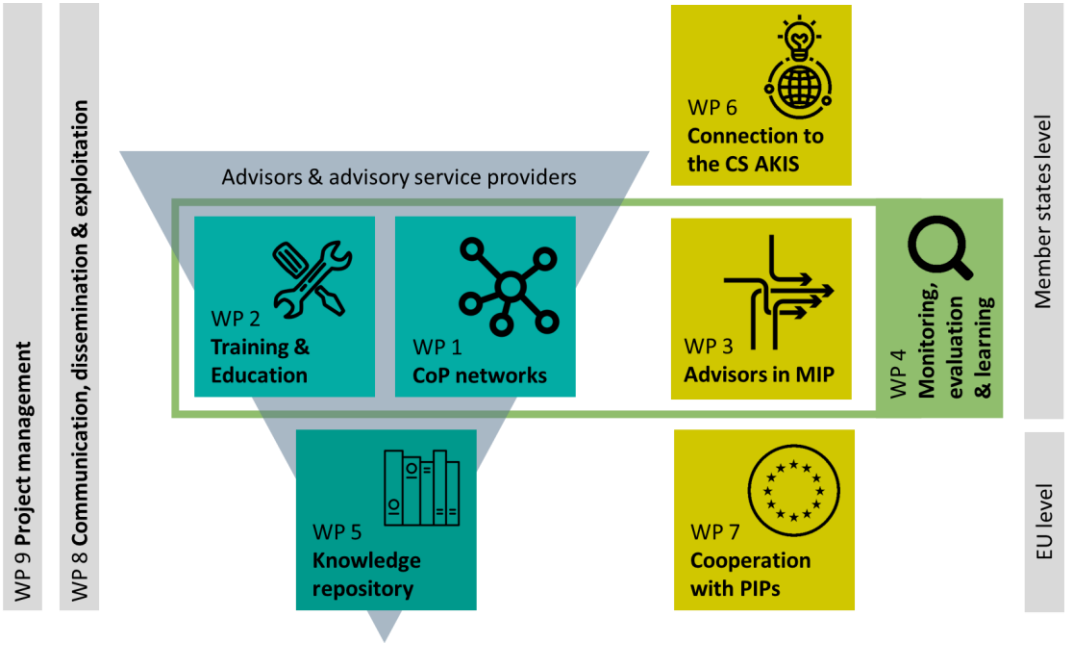

Figure 1 WP4 role in relation to other WPs and their key focus

WP4 will work in collaboration with other WPs to facilitate and enable ME&L over the course of CSA. Through training and guidance, the ME&L taskforce will support trainers, CSCs and CSAs in the CoPs, NCs and CoDIE leaders, with key tools and skills to critically review and improve their operations and their effectiveness.

2.3.3 Timeline

In years 2-3, the focus of ME&L is on improvement of the training and peer learning. From Year 4, the focus of ME&L moves towards drawing overarching lessons and insights on boosting the role of advisors in accelerating CS agriculture.

A Dynamic Learning Agenda (DLA), together with interactive review sessions during GAs (WP9) and national annual meetings (WP1), will be combined to stimulate and assess the learning at network and national level and to derive overarching lessons and insights.

From Year 4 onwards, a total of 10 outcome narratives will be developed to deepen the understanding of the impact of the capacity strengthening activities on advisory and farming practices in WPs 1, 2 & 3. Together with WP7, from Year 4 onwards an annual award for CS Advisory Practice will be organised.

In addition to reporting on the lessons learned, the ME&L will result in a portfolio of inspiring practices, narratives and tools to boost CS advice and action. These will be made available through:

- WP5 Knowledge repository;
- WP6 during national CS-AKIS meeting and transnational CS AKIS workshops;
- WP7 for wider KE with external projects and PIPs.

The remainder of this deliverable focusses on Task 4.1: the ME&L Conceptual Framework. Chapter 3 elaborates on the concepts of monitoring, evaluation and learning.

3 ME&L Conceptual Framework

3.1 Aim

The aim of Task 4.1 is to develop a conceptual ME&L framework for the CSA network and provide methods, tools and training to monitors. The framework will integrate learning on four levels:

1. Network: mobilizing the agricultural advisory community to engage in CS advice
2. WPs: capacity building activities for CSA
3. CSCs and CSAs: development of CSA knowledge, skills and attitudes
4. Practice: provision of targeted CS advice and the adoption of CSF practices.

This requires a range of activities and elements which include the following:

- Defining Monitoring, Evaluation and Learning in CSA;
- Elaborating building blocks on climate action, advisors, capacity development;
- Identify high-level common approach and criteria.

3.1.1 Development & Scope

The ME&L conceptual framework has been developed through several rounds of face-to-face and online activities, including engagement with CSA network partners and WP leaders during GA meetings and WP4 specific workshops to determine expectations, monitoring needs and key learning agendas.

The literature on ME&L has also been reviewed to determine relevant approaches and practices suitable for the pragmatic needs of the CSA project and the advisory community.

The scope of the framework is to enable the subsequent development of a ME&L approach, practical tools and the DLA to support emergent learning processes within the project. It is likely that the ME&L Framework will be revised during the project as learning and CSA requirements develop. WP4 will continue to collaborate closely with WP1, WP2 and WP3 in the use and updates of the conceptual ME&L framework, approaches and appropriate tools.

3.1.2 Expected Outcomes

The key outcome for Task 4.1 is a conceptual and methodological ME&L framework which can be used by the CSA network to strengthen CS advisory capacity to accelerate CS action and adoption. Specifically, the framework can be used initially to inform training of CSCs and CSAs in developing and running individual CoPs; inform practices across CoPs within each wave; and also gain insights to inform subsequent CoP waves.

As part of the WP4 activities, the framework will also help promote, support and equip the CSA network with knowledge, practices and capacity to provide targeted and actionable CS advice and also help develop a portfolio of inspiring practices, narratives and tools to boost CS advice and action.

3.2 Definitions of key terms

For ME&L to be successfully implemented in CSA, there needs to be a common understanding of the key terms used in ME&L. While there will be some variation depending on what is being monitored and evaluated by whom and why during the lifetime of the project, the following definitions provide a common starting point.

3.2.1 Monitoring

The aim of monitoring is to gather sufficient information to determine the status quo and to identify if any changes have taken place subsequently as a result of an intervention(s). To provide evidence on the success or performance of an intervention, pre-determined documenting and recording processes using specified indicators are usually employed to compile and collate both quantitative and qualitative data from a variety of sources. This gives rise to the following definition.

Monitoring is a "continuing function that uses systematic collection of data on specified indicators to provide management and the main stakeholders of an ongoing development intervention with indications of the extent of progress and achievement of objectives and progress in the use of allocated funds".

> ***Monitoring*** *– the systematic process of observing, measuring and documenting ideas, events, activities and outcomes over time using criteria and indicators to provide information to stakeholders on the extent of progress and achievement of objectives to support decision-making (adapted from OECD, 2002; TAP, 2016a; UK Govt 2019;).*

Box 1 Monitoring

Monitoring is a usually a 'continuing function' (OECD, 2002; TAP,2016a), although depending on requirements, it can be limited to a one-off event. It is generally considered good practice to involve stakeholders in the design and process of monitoring (and also evaluation) to promote ownership, build trust and ensure a range of experiences are represented in the indicators used and data collected (TAP, 2016b; Serpe et al., 2022; Amin et al., 2023).

Criteria and indicators used in monitoring processes are usually pre-determined, but in more challenging situations characterised by uncertainty and complexity, a dialogue-based learning approach can be used to develop criteria 'in situ' to reflect the experiences and insights of those stakeholders involved (Amin et al., 2023). New criteria and indicators can also be developed over time to expand existing areas of interest and/or to fill gaps in understanding. Equally, those which are no longer relevant can be discontinued.

An important distinction can be made between monitoring at a functional level; the activities and interventions themselves, and monitoring at a higher level, their results and impacts which may include monitoring strategies and actions being taken by partners and non-partners (UNDP, 2009), and figuring out what new strategies and actions need to be taken to ensure progress towards the most important results.

Although there is an implied choice of value or what is 'worth knowing' through deciding what to monitor and criteria selection, monitoring is fundamentally a data collection process. Monitoring does not make a judgement about whether any changes are positive or negative – this is the role of evaluation.

3.2.2 Evaluation

The concept of 'value' is, literally, at the core of ***evalu**ation*. In most cases, evaluation is understood as a systematic determination of merit, worth and significance against stated objectives, using criteria from monitoring processes. Criteria used in evaluation processes are usually explicit expressions of how value is understood and to be interpreted.

Evaluation can be based on qualitative and/or quantitative data, but in either case the intention is to develop insights into the current situation and the effects of any interventions, how resources have been used and whether a tool or intervention has achieved what it set out to do (TAP, 2016a). Evaluation criteria can apply to inputs, processes, outputs, and outcomes over the short, medium and long term, depending on the chosen timeline (Kuchenmüller et al., 2022).

Evaluation - *the systematic process of assessment of an ongoing or completed project, programme or activity judged against a set of criteria, usually related to the fulfilment of objectives which represent the perceived importance, worth, usefulness, efficiency, effectiveness, impact, success or benefit of the intervention (after OECD, 2002).*

Box 2 Evaluation

In determining whether the performance of an intervention was 'successful' or otherwise (according to the criteria selected), evaluation determines if any changes are required. In seeking to establish some kind of relationship between an intervention and an outcome, evaluation is the basis of learning.

Like monitoring, there is no set process of evaluation. It can be both formal at particular stages of a process and/or informal, or undertaken on an *ad hoc* basis. Experience in other agriculture-related M&E processes suggest that whatever process is designed, effective evaluation is dependent on reflection and learning.

3.2.3 Learning

The CSA project also includes an explicit focus on *learning* as a key part of capacity development of both the CSAs and the CSA network. Learning is usually associated with a change in an individual's understanding and practices, though determining 'what kind of change is a delicate matter' (Bateson, 1972). While not an easy concept to define, two aspects are important. The first focusses on 'things' and the second on 'processes' of learning. In relation to 'things', learning is often associated with the notion of acquisition: continuously gaining and adding knowledge, skills, insights, practices, ideas and so on. While this is often the case, it is also important to recognise that learning often also involves giving up: getting rid of habits in thinking, concepts, understandings and framings which are no longer appropriate. For example, as a result of a CSA event or intervention, an advisor may learn that they may need to give up their commitment to a particular approach or farming technique which no longer fits with a climate smart agenda in their context. Equally, members of the CSA network should also be willing to give up their framings and expectations of an intervention or outcome, for example the idea that an advisor *must* adopt a particular advisory practice because it has worked elsewhere.

It is also possible that learning results in continuation or acquisition of 'bad' or inappropriate knowledge, skills and practices contrary to expectations or desired outcomes associated with an intervention or wider aims of CSA. Such *maladaptation* is not unusual and requires careful monitoring to identify if and how it occurs.

In addition, it is also possible to induce unintended effects as a result of an intervention. For example, this could be the formation of 'group think' where advisors adopt an intervention 'as a solution', but the apparent 'solving' of the problem has the unintended consequence of diminishing interest in further learning thereafter.

In short, learning of 'things' cannot be assumed always to be positive.

The second and closely related element of learning is focussed on processes of learning. Learning can occur in almost any kind of process such as simple, casual conversations between CSA individuals and advisors, to fully designed workshops, CoPs, interventions and on-farm demonstrations or some combination thereof. It is a process that leads to change, which occurs as a result of experience and increases the potential for improved performance and future learning (Ambrose et al., 2010).

Monitoring and evaluating the *process* of learning is as important as monitoring *what* has been learned since there will be a close correlation between the two. This is particularly the case in terms of understanding the role of CoPs to improve advisors capacity to enable CSF where content and process combine. The difference is reflected in the following definitions of learning.

Learning - the change in, acquisition of, or giving up of, for example, concepts, ideas, values, attitudes, perspectives, knowledge, skills and practices.

Learning - a process that leads to change increasing the potential for improved performance and future learning.

Box 3 Learning

While these definitions of learning are helpful, the literature also distinguishes between *individual learning* and *social learning* – both very complex concepts with many authors offering differing views and interpretations. The detailed arguments are not rehearsed here, but some basic distinctions are possible which are likely to be relevant in relation to evaluating the work of the CoPs in particular.

Individual learning can happen as a result of individual study or within a social setting, i.e. I learned something during a meeting with farm advisors. But even though it occurred within a social setting, it is still an individual 'doing' the learning.

Social learning is *not* the same. Instead, social learning is learning that arises from, and is *co-created,* and *held by a group* of people as a result of their social interactions i.e. 'as a group of advisors, we have established a set of agreed goals and are developing guidance for new irrigation practices which benefits each of us, farmers and our environment'. Sometimes also called collaborative learning, social learning can be defined as follows.

Social Learning - a process involving groups of people enabling:

- The convergence of goals (agreement about purpose), criteria and knowledge leading to awareness of mutual expectations and the building of relational capital between participants.
- The process of co-creation of knowledge, which provides insight into the causes of, and the means required to transform, a situation.
- The change of behaviours and actions resulting from understanding something through action which leads to concerted action.
- Social learning is thus an emergent property of the process to transform a situation.

(After Collins and Ison, 2009)

Box 4 Social Learning

Social learning does not preclude individual learning or vice versa. Both can be happening at the same time within, for example, a CoP, but social learning *only* occurs as a result of engaging with others since it is reliant on interactions with others to co-create, for example, goals, interests, insights, knowledge and practices. Social learning can lead to concerted action.

Concerted action is people acting in concert with each other and can be considered as a type of capacity in being able to collaborate with other advisors, networks and farmers. Concerted action is not the same as consensus nor does it require consensus apart from agreement on the overall issue or task to be tackled – i.e. to strengthen capacity for climate smart advisory services.

Concerted action can be likened to the performance of a jazz band. There is an agreement to play music of a certain style, but how and what is played is open to interpretation, ongoing negotiation, and a certain degree of improvisation based upon the wishes, skills and experience of the musicians as they interact. There may be many different musicians playing different instruments at different times, but, critically, they each make and adjust their own contributions *with understanding and awareness of their actions being interdependent with others*. This results in diverse elements acting in concert within an encompassing 'whole'.

A high degree of concerted action is required if there is to be an outcome judged as 'successful' by themselves and external observers (the audience). The performance and outputs of the jazz band cannot be pre-determined nor reduced to a single thing or action. Instead, both the activities and outputs are best described as emergent.

Similarly, with a group of advisors in, for example, a CoP, there may be differences in the way each advisor approaches CS farming issues and farm practice interventions, but they learn and develop a collective understanding of (i) the overall objective, (ii) possible advisory practices and (iii) how each other's ideas and actions are interrelated. Learning for concerted action cannot be 'taught' in a traditional sense since it is emergent – i.e. it is dependent on the interactions of many different elements. However, it is possible to design processes such as CoPs to encourage and enable concerted action.

Significantly, just like a jazz band, learning processes in CoPs should be designed to ***accommodate difference, rather than seeking homogeneity*** (Wenger-Traynor and Wenger-Traynor, 2020). While it is important to gain agreement on the key issues to be addressed and the way the CoP may function initially – i.e. 'setting the ground rules', allowing for difference may be a more effective way of encouraging and enabling learning and capacity building. Trying to avoid or eliminate differences and artificially reducing complexity by seeking easy 'solutions' is likely to be counter-productive to

the work of a CoP. It can also reduce the potential success rate of a CoP if everyone adopts the same intervention which subsequently fails – this risks reduction in confidence and subsequent commitment to the CoP (although it can, of course, provide important insights and learning).

3.2.4 Single and Double Loop Learning

Irrespective of whether learning is individual or social, it is also possible to identify different levels of learning. Two of the most commonly described levels are: single and double loop learning.

Single loop learning is associated with problem solving within the existing paradigm of ideas and practices. Results derived from an intervention are used to improve existing or develop new interventions, but the changes are essentially incremental and do not substantially change the existing paradigm or system of practices.

Double loop learning is less focussed on the fixing the problem 'in front of us' and more about questioning often implicit assumptions on which practices have been established. Double loop learning aims to provide a critically informed answer to the questions: 'why do we do what we do?' or 'why are we doing it this way?'. The differences between the learning levels are show in Figure 2.

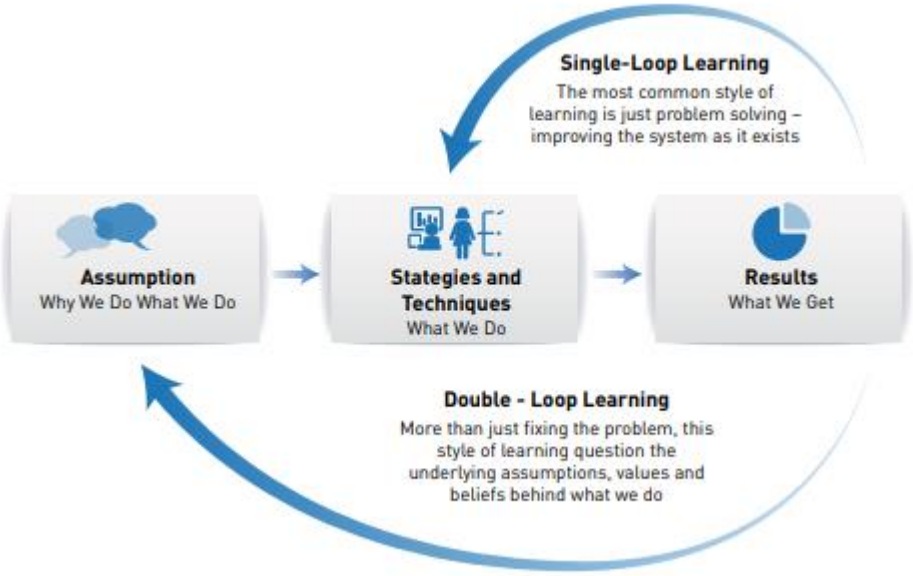

Figure 2 Single and Double Loop learning (TAP, 2016a)

Within the CSA, it will be important to be aware of and distinguish between learning occurring at these two levels in order to understand and evaluate the effectiveness of interventions with farm advisors and gauge the implications for longer-term impacts on farming practices.

3.3 Conceptualising ME&L processes

In CSA, ME&L is designed to support capacity development to accelerate CSF. A ME&L framework can help structure, support and identify what to monitor, how to evaluate and enable the learning process. The relationship between the different elements of ME&L is shown in Figure 3.

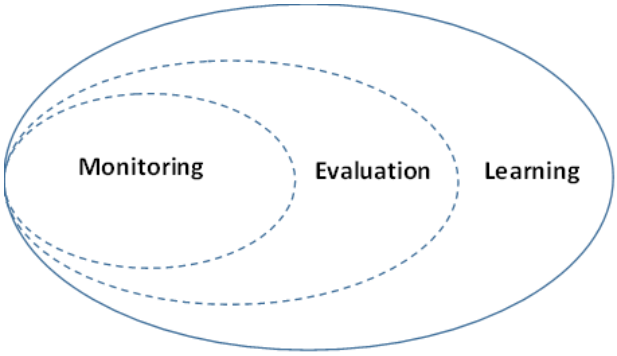

Figure 3 The relationship between the different elements of ME&L

In Figure 3, learning is shown as encompassing evaluation, which in turn encompasses monitoring. The dotted 'porous' boundaries indicate that there is interdependence between the three elements. Importantly, the single origin point means that there is no prior assumption that monitoring must be done 'first'. Depending on context and requirements, a ME&L process could begin 'in reverse' by focussing on what has already been learned and explore evaluation criteria before establishing a monitoring scheme, before moving back towards evaluation.

It is also clear from Figure 3 that while monitoring is important, it is not, of itself, sufficient for learning. Equally, evaluation requires monitoring to be in place if robust judgements are to be made about efforts to strengthen capacity building. In turn, learning requires evaluation and monitoring.

There is no universal or 'off-the-shelf' conceptual framework for ME&L which can be adopted by CSA. This is mostly because of the specific aims and activities of CSA which determine what is subject to ME&L and when. Figure 4 below illustrates the expected process and use of the ME&L conceptual framework in the CSA.

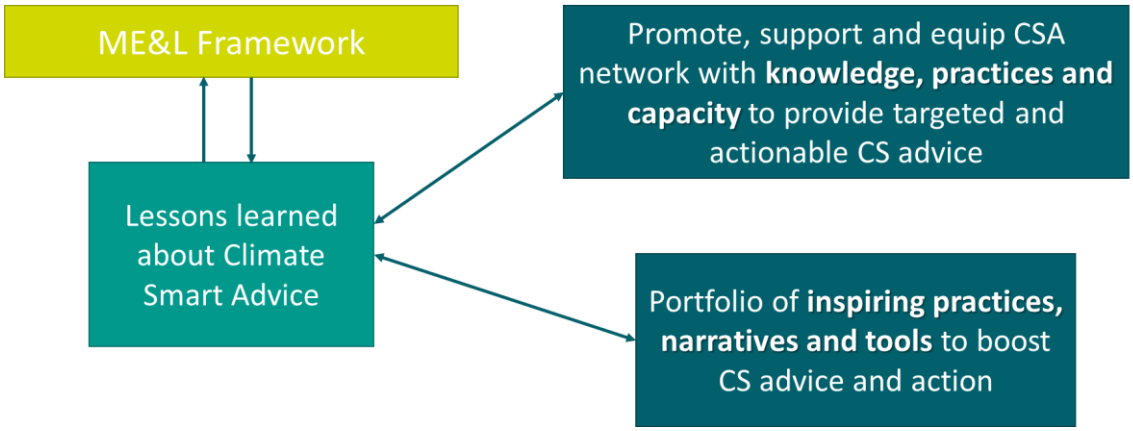

Figure 4 The ME&L Framework in context of CSA

Within this process, the ME&L framework provides a structure for learning within the CSA network in order to strengthen the capacity to provide targeted and actionable CS advice. This incorporates a Dynamic Learning Agenda which is an ongoing repository of learning questions for the CSA. In tandem, the lessons learned support the development of a range of resources to boost CS advice.

3.3.1 Cause, Effect & Impact

A key issue in ME&L is determining cause and effect and linking it to impact. Cause and effect may be more easily identifiable in simple situations. However, in more complex situations, such as

strengthening advisory services in climate smart farming, multiple actors and activities will be relevant and interdependent. The interventions by the CSA and advisors will also interact with other existing practices. Determining cause and effect, especially over extended time-frames, becomes problematic (Noltze et al, 2021). The problem of linear thinking in attributing cause and effect in complex situations is shown in Figure 5.

Figure 5 The limitations of linear thinking in complex situations (reproduced from Haldrup, 2022)

Simple attribution of cause and effect is likely to limit insights, learning and, ultimately, strengthening of CSF advisory services. For example, following training or participation in a CoP, an advisor may go on to recommend a new initiative on a farm which is adopted by the farmer. At first glance, this would suggest the training (cause) has led to the farmer implementing the initiative suggested (effect). This evaluation might be sufficient, but it has the potential to overlook other elements. This might include quality of trainer/training; reasons for the advisor engaging with and acceptance of training in the first place; farmer willingness to engage with the advisor; mutual recognition of the issue to be addressed; farmer willingness to experiment; relevance of initiative to existing farm context and future plans; existing trust between advisor and farmer; economic viability of the initiative; access to additional support from other farmers; and cultural aspects including the initiative meeting the cultural needs of being a farmer in this particular context. All and any of these elements could have been relevant to varying degrees in shaping the outcome.

To address this, there is an increased emphasis in ME&L on the importance of narrative to record and make sense of system-level interdependencies rather than reliance on log frame lists of separate criteria, indicators and data (van Wessel, 2018; Haldrup, 2023) which are difficult to 'add up' as a totality. Narratives can include a variety of quantitative and qualitative data, but are focussed on sense-making and meaning rather than measurement (van Wessel, 2018). The narrative approach is not yet fully developed in M&E practice, but narrative evaluation is relevant in providing insights to the work of the CoPs and will be incorporated into ME&L CSA reporting processes as part of the 10 outcome narratives in Year 4 onwards.

3.3.2 Ethical considerations

ME&L is about documenting behaviours, events and activities, assessing their performance against criteria and then identifying learning for future practices. For those designing and undertaking the assessment, there is a clear ethical responsibility to do so in an appropriate way.

Many of the ME&L ethical principles recognised by the M&E practitioner community should already be part of the CSA network's and CoPs' modus operandi, but are included here for completeness to support the CoPs and other CSA activities in self-evaluation and learning.

In making judgements on what people have done and should do, (Luli, 2024) suggests ME&L requires careful consideration of ethics to ensure:

- Respect for participants;
- Data quality;
- Accountability;
- Risk Management;
- Sustainability of the project and the communities engaged.

These considerations lead to a series of ethical principles which are summarised in Box 55.

Respect for Human Rights: obtaining informed consent, ensuring confidentiality and privacy.

Beneficence: acting in the best interests of participants and the wider community, ensuring that their welfare is promoted and avoiding risk or harm to participants, including physical, psychological, social, or economic harm.

Fairness: ensuring that participants are treated fairly and that the benefits and risks of participation are distributed equitably. This includes avoiding exploitation and ensuring any vulnerable or marginal groups are not discriminated against.

Transparency: being transparent about the purpose and objectives of the ME&L process, the data collection methods, and the use of the data collected. This involves providing participants with clear and concise information about the ME&L process, use and outcomes.

Professionalism: maintaining a high level of professionalism and integrity, skills and expertise, and adherence to ethical principles and standards.

Box 55 Guiding principles for ME&L (after Luli, 2024)

The principles are generic in scope, but are relevant to evaluating the work of CoPs and other interventions in CSA. Of particular importance is that ME&L processes need to be done transparently; and data and evidence collected of the CoP needs to be reliable, appropriate and representative of the situation. Where this might include personal data or stakeholder opinions, this must include consideration of consent, data storage, confidentiality and anonymity, and responsible use and interpretation in any ME&L reporting. Providing clarity, agreement and consent on data handling, proposed ME&L processes and use of learning insights will be essential to ensure trust within CoPs and other interventions.

Several ethics-related challenges which may be experienced when engaging in ME&L including:

1. cultural barriers, e.g. language and interpretation problems may lead to misunderstandings;
2. organisational barriers, e.g. business confidentiality may prevent openness;
3. power imbalances e.g. monitors and evaluators seen as a 'threat' or judgemental;
4. scale and complexity e.g. evaluation unable to be done equally across the intervention;
5. technology e.g. use of new/different platforms such as communication apps which may breach prior agreements (Luli, 2024).

While these challenges may not seem immediately relevant to CSA and CoPs, they can significantly undermine confidence and trust in CoPs and related ME&L if left unchecked. Acknowledging the challenges as they arise and gaining the agreement and support of the CoP participants to manage them appropriately will ensure ME&L processes are appropriate and enhance self-evaluation and learning.

Training on the potential ethical dimensions of ME&L will be included for CoPs and TTT.

4 Conceptualising Climate Smart Advice

4.1 CSA Theory of Change

A Theory of Change (ToC) is simply a core expression of an expected sequence of actions or events leading to an outcome(s). ToCs are used in many different contexts to establish the conceptual framing of the work to be done in relation to the expected end result. In this way, ToCs provide the basis for identifying key activities and also provide the starting point for defining the focus and learning questions for ME&L.

A ToC sets out a simple overview of the *expected* sequencing of actions and outcomes. It is possible that, over time, a ToC requires amendment to incorporate insights and learning from experience as captured in ME&L processes. As the ToC evolves, this can also requires changes in the ME&L processes and focus.

Within the CSA, the overall Theory of Change can be found in the main objectives of the project. Taking these as an 'ideal' Figure 6 represents a graphical representation of the CSA ToC setting out the main steps towards the acceleration of the adoption of climate smart farming practices.

Figure 6 shows a series of interventions directed towards the advisory community to strengthen its capacity to provide targeted advice, in turn leading to provision of CS advice and implementation of approaches and solutions developed in the sister EU Horizon project Climate Farm Demo.

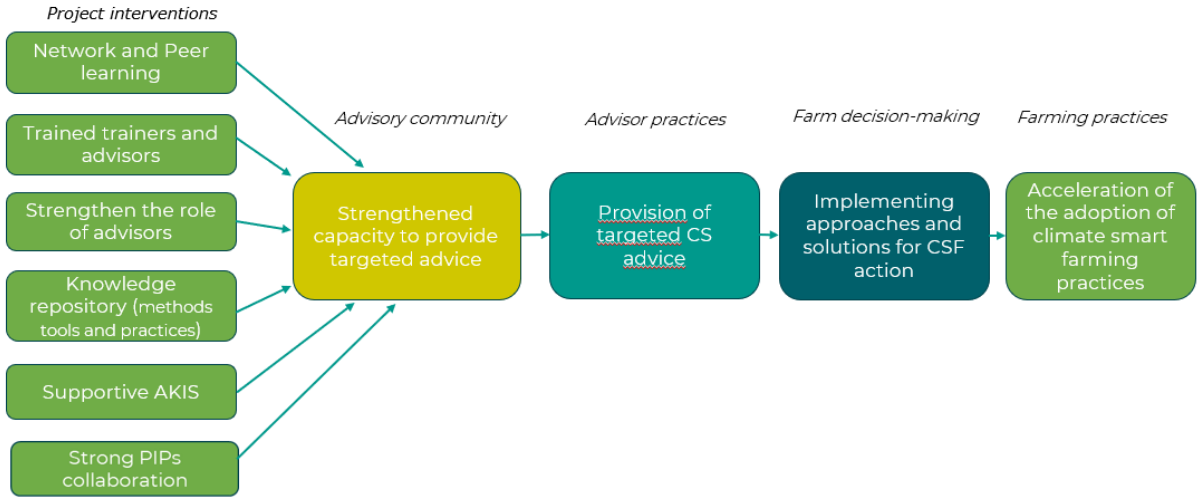

Figure 6 CSA Theory of Change

At the core of the ToC is the aim of the CSA network: the strengthening of the capacity of the advisor community. To strengthen CSA capacity the project will set-up 260 advisory Communities of Practice (CoPs) to boost peer knowledge exchange and cross fertilisation on CSF and CSA practices and methods on a national and European level. The CoPs will be supported with dedicated training activities and a CSF interactive knowledge and methods repository. Connections will be made with national MA innovation projects (MIPs) and AKIS actors to further strengthen the advisor's capacity in providing CS advice and supporting farmers in their systemic transition. The interventions by the CSA consortium of 73 partner organisations will directly engage with a minimum of 1500 advisors. Of these, 140 will be trained as Climate Smart Coaches (CSCs), equipped to support capacity

development in their peers through a Train the Trainer (TTT) programme, and the remaining 1360 supported in their development as Climate Smart Advisors (CSAs).

The roles and focus of each of the different elements involved in the interventions are summarised in Table 1.

Table 1 Interventions and definitions

	Key concept	Definition
	**Climate Smart Coach (CSC)**	A peer advisor who has the responsibility of animating and facilitating CoP activities. CSCs will receive dedicated training through the TTT program in WP2, to ensure they have the right competence both regarding CSFPs and suitable advisory methods
	**Climate Smart Advisor (CSA)**	Advisors who take part in a 2-year CoPs with their peers. CoPs will meet on min. 4 times per year, and will be supported by the project to ensure engagement and commitment. CoP activities include a mix of both expert-supported (training) and peer learning activities.
	**Community of Practice (CoP)**	A Community of Practice (CoP) brings together 6 advisors in a group, operating at the regional/national level. With the guidance of a CSC, the CoP meets frequently over the course of two years with the objective to improve their knowledge and advisory methods and skills in support of climate smart farming practices. A total of 4 waves of CoPS are planned.
	**National Coordinator (NC)**	The leading person that supervises CoP related activities at national level. The NC is responsible for connecting CoPs nationally, connecting to the CFD national network, and for national dissemination and communication activities
	**Thematic Leader (TL)**	An expert in one of the Adaptation & Mitigation thematic areas selected by the project to cope with climate change impact. TLs will organise knowledge exchange between CoPs and CS AKIS actors at EU level and share new & innovative knowledge in their thematic area for wider dissemination.
	**Climate Smart Agricultural Knowledge and Innovation System (CS AKIS)**	A group of actors, stakeholders and organisations at regional, national or EU levels who join together to promote mutual learning, to generate, share, and use climate smart agriculture-related knowledge and information.
	**Co-Design Innovation Experiments (CoDIE(s))**	Multi-actor, practice oriented innovation experiments where CSAs play a central role as change and innovation agents in CSF multi-level transitions. CoDIES (10) fill in innovation gaps that have been identified in CSA activities in CSF MIPs across the EU.

The main vehicle for strengthening advisor capacity will be a Community of Practice (CoP), comprising a CSC and 6 CSAs. CoPs are informal learning communities characterized by the following elements:

- **domain** of interest shared by the community;
- **community** of members engaging in joint activities and discussions, helping each other, and sharing information, even if subsequently acting alone;

- **practice** where members are practitioners and develop a shared repertoire of resources: experiences, stories, tools, norms, knowledge, ways of addressing recurring problems (Wenger, 1998; Dolinska and D'Aquino, 2016).

In understanding CoP as social learning systems for capacity building (Bailey, 2014), the CSA CoPs will boost peer knowledge exchange and cross fertilisation on CSA and CSF practices and methods on a national and European level. The CoPs will be supported with dedicated training activities and a CSA and CSF interactive knowledge and methods repository. Connections will be made with national multi-actor innovation projects (MIPs) and AKIS actors to further strengthen the advisor's capacity in providing CS advice and supporting farmers in their systemic transition to more sustainable agricultural practices. The CoP network will also provide an additional capacity building layer for the Pilot Demo Farm (PDF) network being developed in our sister project Climate Farm Demo (CFD).

Training and methodological guidance approved by the CSA Management Team will be provided to CSCs, and CSAs and at a later stage also to WPs, NCs and CoDIE teams.

4.2 Key Building Blocks

Based on the conceptual elements shown in the Theory of Change above, the focus is on three key building blocks to operationalise the ME&L framework as shown in Figure 7**Fout! Verwijzingsbron niet gevonden.**.

Figure 7 Key Building Blocks to operationalise ME&L

Each building block is explored and conceptualised in more detail next as a basis for operationalising the ME&L in chapter 4. The order is reversed so starting with Climate action the desired impact, then reasoning back to the role of advisors in supporting climate action and the capacity that needs to be developed to do so.

4.2.1 Climate Action and Climate Smart Agriculture

Climate Action refers to all efforts taken to combat climate change and subsequent impacts. Climate Action is about both climate mitigation as well as adaptation measures. Mitigation refers to reducing GHG emissions e.g. through proper soil management or use of catch crops. Adaptation measures anticipate effects of climate change and are aimed at minimising damage. Examples of adaption measures in agriculture are using drought resilient crops or good ventilation to reduce heat stress in stables. Climate Smart Agriculture is then built on three pillars: improve food security by increasing productivity (pillar 1), strengthen resilience by adapting to climate change (pillar 2) and mitigate GHG emissions (pillar 3) (FAO, 2019; see also Figure 8).

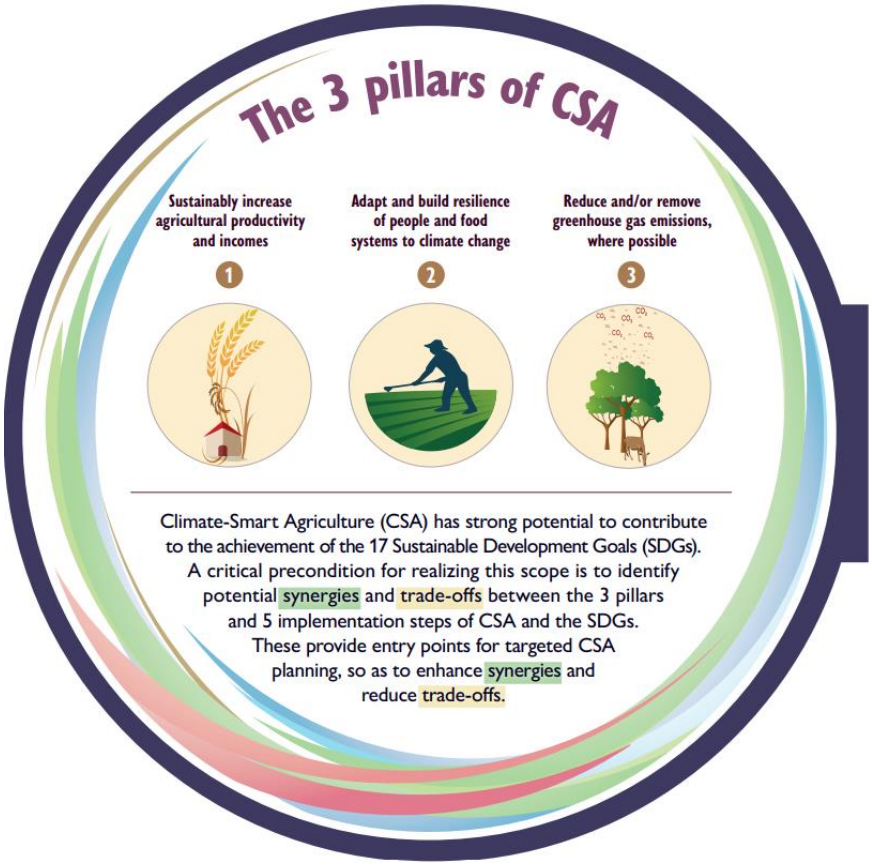

Figure 8 The 3 pillars of Climate Smart Agriculture (FAO, 2019)

Within the framework of the European Innovation Partnership for Agricultural Productivity and Sustainability (EIP-AGRI), Climate-smart Agriculture is described as (EIP-AGRI, 2021):

> *"[…] an approach that can help farmers and foresters increase productivity and incomes in a sustainable way. It also helps to build resilience and adapt to the effects of climate change, and contributes to climate change mitigation by reducing or removing greenhouse gas emissions. Climate-smart practices can focus on ways to reduce emissions in livestock production, to reduce farm inputs (such as fuels, energy, pesticides, mineral fertilisers) for more resource-efficiency, or to keep carbon stored in the soil. Making farming systems more diverse can also make them more resilient in the face of climate change."*

Within the CSA project, the goal is to enhance the capacity of both current and future farm advisors to empower farmers in climate action. In doing so, it is important to take into account system complexity and integration of multiple CSF interventions.

Effective Climate Action is characterised by complexity because of the multifaceted, interconnected and transnational nature of the effects of climate change. There is no one simple solution that will adequately address the effects of climate change on the agricultural sector. Therefore, systems thinking, where climate change is perceived as interconnected and dynamic, is needed to address the complex nature of Climate Action and Climate Smart Advice. In the context of the CSA project, the question then is how systems thinking can be operationalised in order for climate smart advisors to effectively support European farmers to take climate action. Some practical aspects of systems thinking will be included as part of the TTT programme, such as:

- recognising and engaging with complex situations;

- surfacing boundary choices;
- recognising and working with multiple perspectives on a situation.

The ME&L framework will capture these systemic aspects by a combination of reporting on individual criteria coupled with a narrative which provides an overview of CoP performance documenting the interrelationships between the criteria and the learning emerging. This will shape next steps within individual CoPs and also inform the work of other concurrent and subsequent CoPs.

In this way, the ME&L framework will collect lessons learned about Climate Smart Advice and vice versa feed lessons learned back into the project. This learning cycle will result in 1) promoting, supporting and equipping the CSA network with knowledge, practices and capacity to provide targeted and actionable Climate Smart advice; and 2) provide a portfolio of inspiring practices, narratives and tools to boost Climate Smart advice and action.

4.2.2 Role of the advisor

In CSA, advisors play the central role in supporting farmers in their transition to CSF. Labarthe et al. (2013) define advisory services as services which aim to enhance farmers' skills and facilitate their access to knowledge in order to increase farm performance. In CSA, the focus is then on advisory services which aim to enhance farmers' skills and facilitate access to knowledge *in order take effective climate actions*. When exploring the role of the advisor in CSF, two characteristics are central:

1. CS Advisors **support the implementation of CSF** measures
2. CS Advisors **act as change agents**, navigating the transition to CSF.

Climate Smart Advisors are agricultural advisors equipped and dedicated to support farmers in implementing both climate adaptation and mitigation measures and promote the transition to climate smart farming. In understanding CS advise and the role of the advisor in CSF it is important to note that:

- CS advice Is **embedded** in other advisory work;
- CS advice has both **quantitative** (e.g. how much attention is given to CSF and the number of instances CSF topics are included in advice) and **qualitative** (e.g. the quality of the CS advice, content, skills, dealing with complexity) aspects;
- The advice provided depends on the advisor's **perception of the changes required** to achieve CSF: e.g. is it the implementation of technical measures; diffusion of innovation; behavioural change; human transformation; systems transition;
- The advice provided depends on **the role perception of the advisor**; e.g. the advisor as a service provider versus the advisor as a pro-active promotor of CSF.

The role of the CS advisor and the provision of CS advice depend importantly on factors at three levels: individual, organisational and enabling environment. Figure 9 shows the factors at each of the three key levels.

On the **individual level**, different types of CSAs bring knowledge, purpose, attitude, methods, co-creation skills with them to support farmers. Individual advisors are also part of an **organisational context** (whether or not part of an organisation) that hinders or supports CSA e.g. by providing networking capacity, training, resources, support in their work, climate competence, the ability to work in teams and opportunity to learn from others. In the **enabling environment**, CSAs connect to, for example, the wider AKIS of their country and/or region, national advisory services, stakeholder

networks, demonstration projects, and flagship initiatives. Developments in societal perceptions, the economy, policy, and supply chain can also influence the role and capacity of the CSA. These three levels provide a nested systems view of the individual advisor, organisational context and enabling environment as they simultaneously interact and influence each other.

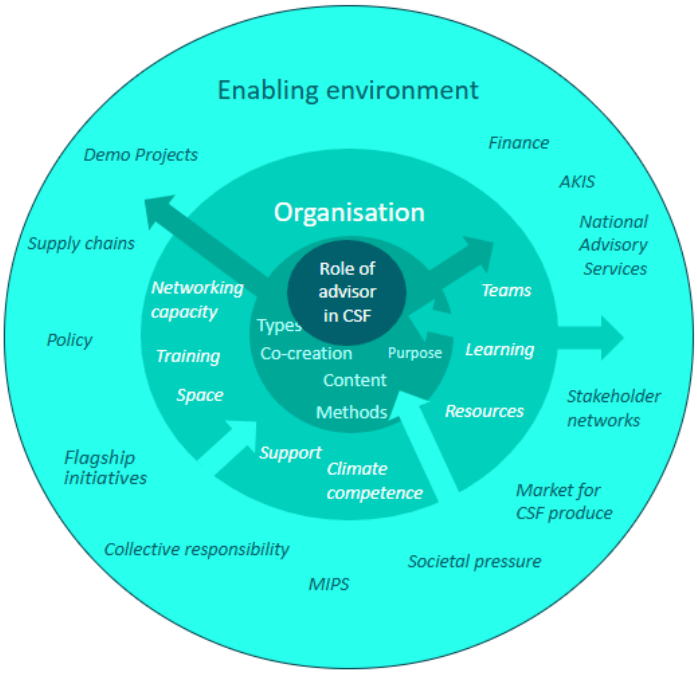

Figure 9 The role of CS Advisors on three levels: 1) individual; 2) organisational; 3) enabling environment

A systems views of advisors suggests that interventions to strengthen the CSA capacity need to target or at least take into account the interdependencies of the three levels. The ME&L approach will consider effects at these three levels and enable learning how the different aspects at these levels constrain or enable the capacity and role of the advisor in supporting farmers' transitions to CSF.

To understand the capacity of advisors to support farmers implementation of CSF, it is also important to distinguish different types of advisory activities, methods and purposes or desired effects. Figure 10 provides an overview of different aspects of the Climate Advisory role in terms of type of advisory activities, advisory methods and purpose of advice for Climate Action. Developing the capacity to support farmers in climate actions requires being able to move between these levels, activities and methods and to navigate these dimensions according to the specific situation at hand. CSAs can have different role perceptions, where one advisor might focus on practical implementation of measures while others focus on diffusion of innovation, learning about CSF practices, behavioural change or a broader systems transition.

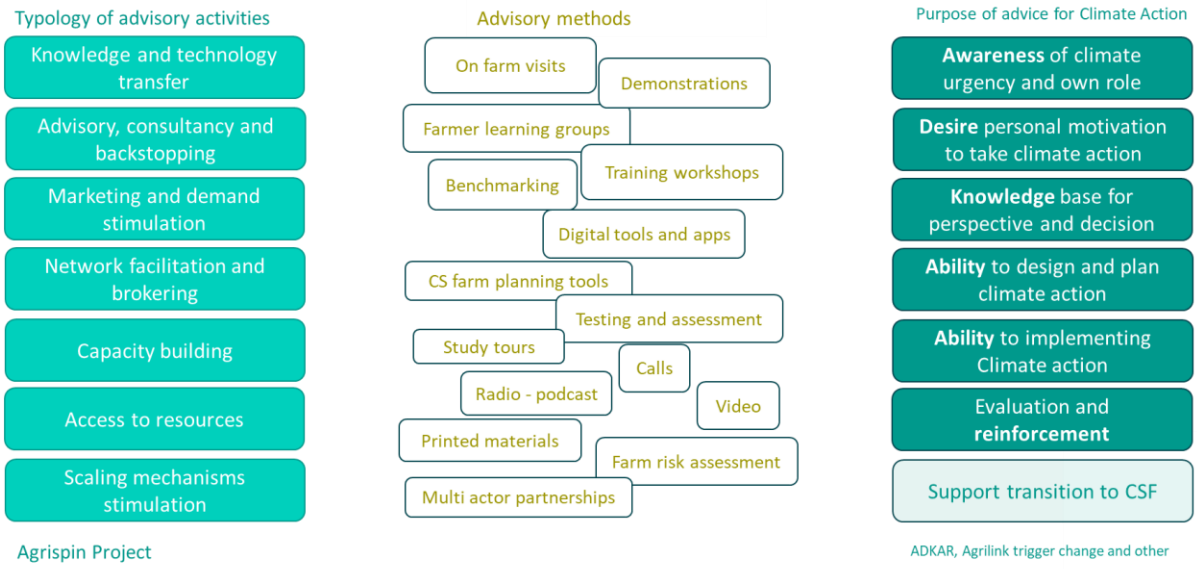

Figure 10 Aspects of Climate Advisory role, in terms of type of advisory activies, advisory methods and purpose of advice for Climate Action. (After Agrispin project Mathe, et al, 2016), the ADKAR model (Hiatt and Hiatt, 2006) and the Trigger Change model (Sutherland, et al, 2012)

While all elements should contribute to a transition to CSF, different situations will require the CSA to support different aspects and the purpose of CS advice differs depending on specific situation and (local) contexts. Sometimes CS advice is more focussed on awareness raising and personal motivation, where in other situations strengthening the knowledge basis for sound decision making is required or the ability to design, plan, implement or evaluate climate action. Capacity to assess the (local) context is necessary to determine which role and intervention are most needed and will contribute most to a CSF transition.

In Figure 10 advisory activities (left) and the purpose of CS advice (right) will shape the choice of advisory methods. These methods can take on many forms, from on-farm visits and demonstrations to training workshops, study tours, farm risk assessments or multi-actor partnerships. There are many other methods and activities that CSAs can use to reach their goal. Some types of activities are more useful to support climate action than others and some purposes are easier to serve than others. The ME&L aims to support the learning on advisory methods by the CSA in the CoPs and better understand different roles and the experiences of CSAs. Furthermore ME&L explores which methods and tools are useful for which purpose and learn about specificities of advice for Climate Action. Annually the CoPs will select specific methods and tools to test and comment on. These will be collected and made available through the Climate Smart repository (WP6).

4.2.3 Capacity development

In line with an increasing body of academic and practitioner guidance, the ME&L conceptual framework uses the term capacity development in favour of capacity building. This acknowledges that many capacities already exist in different contexts, albeit in varying degrees. Capacity building suggests no previous or relevant capacity. Developing or strengthening capacity more accurately reflects the intentions and ethics of CSA.

Nonetheless, while there is a substantial literature on capacity development, there is no agreed definition. The meaning of the term has changed in the last 50 years, but it lacks rigour in conceptual clarity and it remains a contested concept (TAP, 2016a). The following possible interpretations and descriptions of capacity development illustrate this problem.

> *The process of developing and strengthening the skills, instincts, abilities, processes and resources that organizations and communities need to survive, adapt, and thrive in a fast-changing world* (UN, n.d.).
>
> *The process whereby people, organizations and society as a whole unleash, strengthen, create, adapt and maintain capacity over time* (OECD, 2006, 2008).
>
> *Capacity to adapt to new and constantly changing environments, to learn and analyse the internal and external context and to relate and build partnerships* (TAP, 2016a).

Each interpretation has a slight variation in emphasis, detail, content and process. For example, the last is the only one to acknowledge directly the importance of context.

The emphasis on developing capacity and learning (by all those involved in the intervention) highlights possible differences in power relations. Development studies suggests that when engaging with marginalised populations, a different strategy is required.

'In particular, instead of designing projects to change the practices of marginalised populations, learning processes *within* organisations and *with* marginalised populations must be placed at the centre of adaptation objectives' (Eriksen et al., 2021; emphasis in original).

In the context of CSA, marginalisation may be less obvious, but could be experienced as marked differentials in, for example, economic viability of advisory or farm businesses, access to advisory services and networks, or of knowledge and skills to adapt to climate change compared to other advisors or farmers in the locality.

Based on these considerations, for the purposes of the CSA, the following working definition of capacity development is adopted.

Capacity Development: *The process of learning, developing and strengthening the knowledge, skills, attitudes, practices, abilities, processes, tools, networks and resources of the agricultural advisory community needed to support and implement climate action in context.*

Box 6 Capacity Development

This definition recognises the importance of learning. This is to ensure that capacity development is not simply reliant on 'best practices' or top-down delivery; is process based rather than one-off interventions; and generates a sense of ownership (TAP, 2016b; Kacou et al., 2022). As indicated above, CSAs will therefore need to develop their capacities to understand what would support a specific farmer and farm to take appropriate climate action and be able to successfully choose and employ different advisory activities and methods.

While not exhaustive, Figure 11 sets out the main types of capacities that may be relevant to a CSA. These are likely to be revised based on feedback from the CoPs as they proceed.

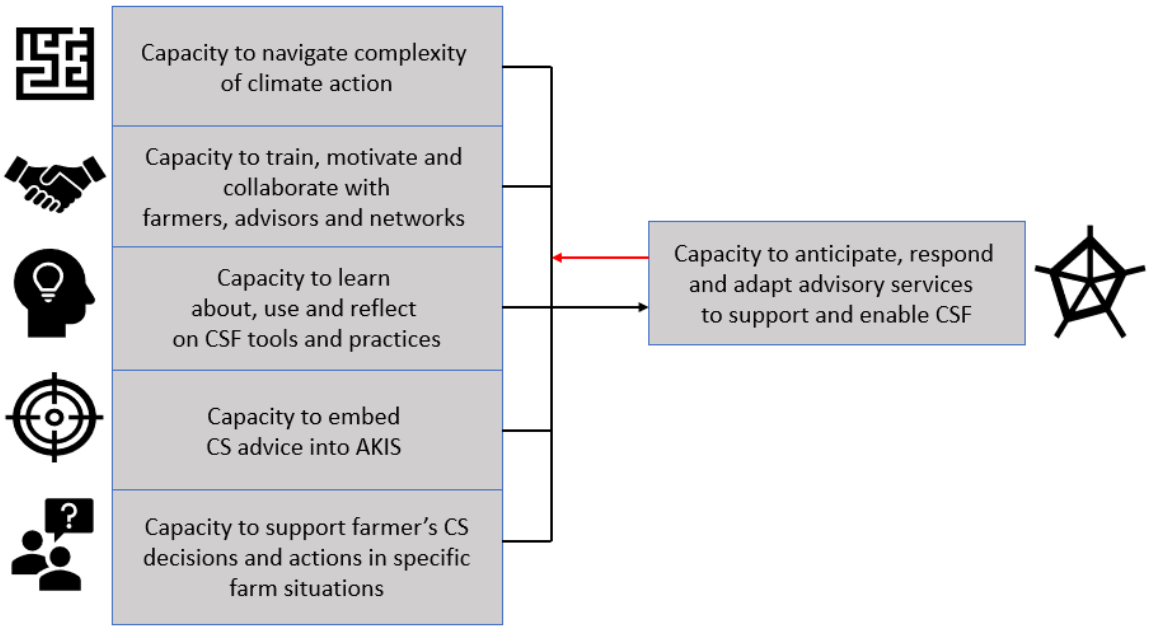

Figure 11 Different types of capacity for CSAs (after TAP 2016a)

The different types of capacity shown in Figure 11 should be self-explanatory. The connecting lines are 2-way in that capacity in one area can be supportive (or perhaps inhibitory) of developing capacity in another. Collectively, the set of capacities on the left of Figure 8 are expected to combine to develop an overall capacity to anticipate, respond and adapt advisory services to support and enable CSF.

In practice, none of the capacities are discrete – overlaps will always occur and they are often inter-dependent. It is also not necessary that an advisor has all capacities or in equal measure. Nor is it a requirement that all capacities are present or strengthened in all situations. The configurations and degree of capacities will depend on the particular starting conditions, the training and existing skill set of advisors, advisory requirements in context and the expected purpose and function of planned interventions.

For facilitating ME&L, the generic capacities identified in Figure 11 are further operationalised in Figure 12 by specifying the knowledge, attitude and skills which advisors need to provide targeted CS advice in diversity of contexts and target groups. The arrows are indicative rather than prescriptive of how the specific capacities can feed into the five overarching CSA capacities.

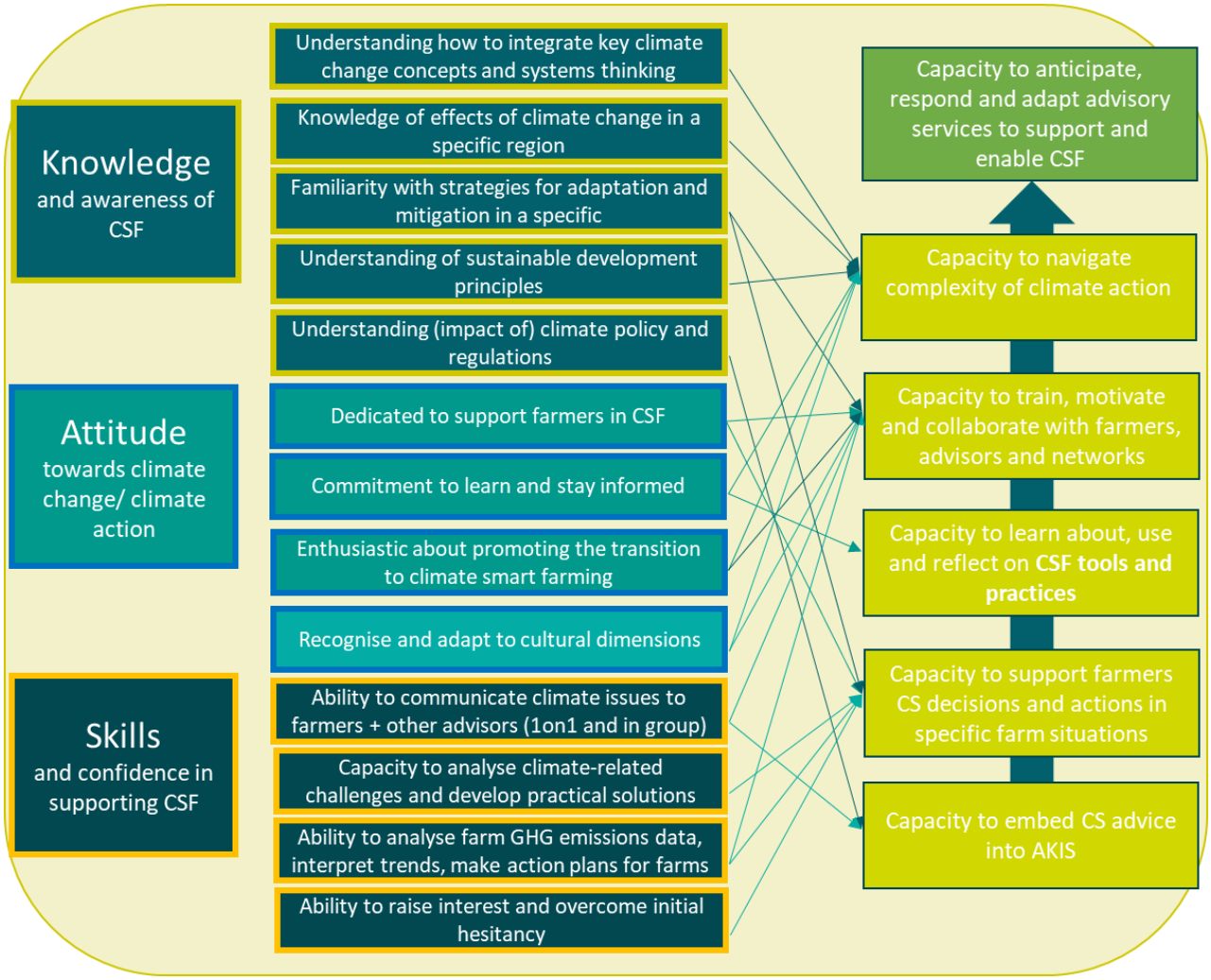

Figure 12 Operationalisation of CSA capacities into specific knowledge, attitude and skills

The ME&L approach includes methods to assess the development of knowledge, attitudes skills and also practices. Furthermore, ME&L approach provides methods to deepen the understanding of which capacities are most important for targeted CS advice and how these capacities can effectively be strengthened.

4.3 Evaluation Criteria

Criteria are simply standards or principles used in evaluation and provide the basis for evaluative judgement (OECD, 2021). Evaluation of CSA interventions are expected to be done using a range of criteria, focussing on specific aspects and possible outcomes of the intervention.

Several generic criteria can be identified from each of the building blocks and elements in the Theory of Change as high-level measures of performance for evaluation purposes. These are encapsulated in the following learning questions:

- Did the intervention strengthen advisors' capacity to provide targeted advice?
- How do interventions enable advisors to provide targeted advice?
- How do interventions lead to implementation of farm-level approaches and solutions developed in CFD?
- Does the intervention lead to acceleration of the adoption of climate smart farming practices?

In addition to these high-level criteria or learning questions, for each of the building blocks more specific criteria can be identified for ME&L. As the aim of the CSA network is on capacity development, this block receives more attention in the proposed criteria. The following criteria are included in the ME&L approach:

- Knowledge and awareness of CSF;
- Attitude towards climate change and climate action;
- Skills and confidence in supporting CSF;
- Enabling environment for CS advise;
- Role perception of the advisor;
- Advisory practice;
- Effects of CS advice on farming.

There is always an element of judgement whether criteria have been met, especially when using qualitative data and information. What constitutes success is likely to vary from person to person and situation to situation, depending on the starting position, expectations and requirements. A success for an advisor or a CoP in one context may be considered 'routine' by an advisor or CoP elsewhere.

In such cases, it is important to be aware of the ethics of ME&L to ensure that the ME&L process is completed appropriately and in ways which take into account the specifics of the situation being evaluated. Iteration of the evaluation with other members of the CoP for example can help to ensure accurate and fair assessments, which in turn can further promote learning and development of trusted relationships.

Experience in other agricultural ME processes suggest that processes which enable reflection and learning are critical for tracking whether outcomes were achieved and identification of enabling or constraining factors (TAP, 2016a, b). This should include key stakeholders in the evaluation process to ensure ownership and to reflect experiences.

The next chapter presents an approach for ME&L including methods to assess the above criteria in the different parts of the CSA network.

5 ME&L Approach for CSA network

5.1 Aims & Objectives

In this final chapter we draw on all the concepts and considerations presented in the previous chapters and translate this into an operational ME&L approach and practical instruments. The aim of ME&L is to support continuous learning in and between the different parts and levels of the CSA network. In alignment with the focus of the CSA network, the central question for ME&L is: How to strengthen and mobilise the advisory community to support the adoption of Climate Smart Agriculture? All ME&L methods and activities in the different parts and levels of the CSA network aim to contribute rich experiential answers. To do so, two related learning processes need to be distinguished in the ToC.

First, the learning process in the network to develop the capacity to provide climate smart advice to accelerate the adoption of climate smart farming. Which interventions and actions contribute, how and when?

Second, the learning process by CSA on how to provide targeted CS advice. CSA develop their capacity to anticipate, respond and adapt advisory services to support and enable the implementation of CSF. More concretely they explore and learn answers to the question: which approaches, methods, tools and processes work for them to fulfil their role as a CSA under different circumstances? These two learning processes are indicated by the outline boxes in Figure 13).

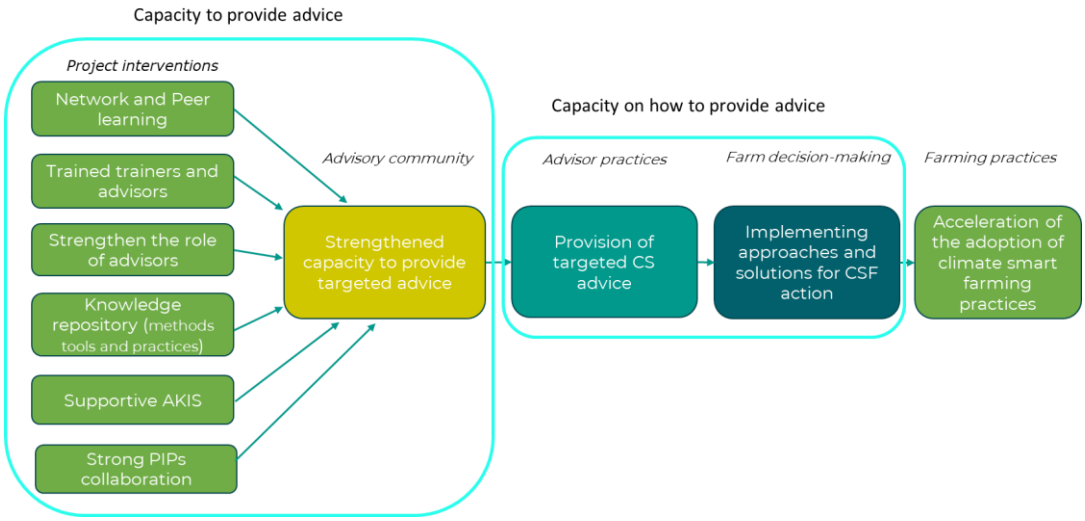

Figure 13 Two learning processes as the basis of the ME&L

The ME&L approach supports both learning processes: how to strengthen CSA capacity to provide advice (left side of the figure) and how to provide CS advice (right side of the figure).

5.2 Boundaries and Stages of ME&L

To complicate matters further, the aim of ME&L is also twofold 1) to improve the operations of the network and 2) to document lessons and insights on both climate smart advice and building climate smart advisory capacity. The ME&L encompasses learning at individual level, TTT and CoP, national and CSA network level, but the detailed monitoring of the adoption of CSF practices will be out of the main scope of the ME&L. Effects on CSF will however be addressed indirectly through the

lessons learned and experiences the CSAs bring to the CoP and in later stages of the project specific outcome narratives will be developed to understand how advisory capacity contributes to the transition to CSF.

As this challenge is complex and the network is big and in early development, we adopt a staged approach to ME&L. In year 2 and 3 (the first CoP wave) the focus of ME&L is on improvement of the training of CSC and CSA (TTT) and peer learning (CoP). We first focus on getting the basics of the ME&L approach right and embedding the ME&L instruments in the operations of the TTT and CoPs. The aim is to provide a structure, common language and create a learning culture and spaces for reflection in the different parts of the CSA network.

After the first CoP wave, the focus of ME&L will expand towards drawing overarching lessons and insights on boosting the role of advisors in accelerating CS agriculture. This might and probably will lead to further development of the ME&L approach. Using the experiences and insights from the first year of CoP operations, in subsequent years we will further elaborate the ME&L structure to deepen the analysis and learning and broaden the ME&L approach to gradually include other interventions such as CoDies, PIPs and AKIS workshops.

Like any learning or capacity development process, the success of ME&L processes is dependent on good preparation and design. In order to foster a ME&L culture, the description of the ME&L instruments and process address the following aspects:

- Data collection methods;
- Process and responsibilities for ME&L at different levels;
- Reporting on ME&L results;
- Use of evidence collected in ME&L (OECD, 2019).

These elements will be part of the training, support and guidance provided to TTT and CoPs.

5.3 Main instruments for ME&L

The ME&L approach employs three interconnected instruments to understand the effects and enhance the effectiveness of interventions within the CSA network. As the network is extensive and the ME&L will be mainly implemented by the WPs where the interventions take place, the emphasis in this first wave of CoPs and early stages of CSA, has been on developing concise instruments which are easy to use and create spaces for reflection and learning at different levels. The ME&L approach attempts to strike a balance between time investment in ME&L and the quality and relevance of the insights gained. The following ME&L instruments have been developed:

1. **Evaluation of interventions (TTT and CoP)** - This instrument focusses on interventions and is evaluative and reflexive in nature. A generic instrument has been developed to evaluate and refine the key capacity development interventions in the network, this has been refined to a specific evaluation of the Training the Trainers (TTT) and an instrument for the annual self-evaluation of the functioning of the Community of Practice (CoP). This last instrument will be used to prepare for the annual CoP reflection and planning session during the National Annual Meeting at country level (NAM).
2. **Climate Smart Advice Capacity Assessment Tool (CSA-CAT)** - This instrument focusses on the development of CS advisory capacity and is aimed at monitoring and evaluation. It has been developed specifically for monitoring and supporting the development of CSA capacity within the network.

3. **Dynamic Learning Agenda (DLA)** This overarching ME&L instrument is employed for coordinating, facilitating, and enriching learning across various actors and components of the network. The aim is to deepen and guide learning, to document lessons learned and to foster collaboration and exchange between CoPs, countries, thematic areas, WPs, and Projects, Initiatives and Programs (PIPs) beyond the CSA network.

In subsequent years, Outcomes Narratives will be developed as a fourth instrument to deepen the understanding of the impact of CSA capacity development on advisory and farming practices.

5.3.1 Evaluation of interventions to strengthen CSA capacity (mainly TTT and CoP)

The purpose and content of the intervention evaluation

The purpose of evaluating the capacity building interventions within the CSA network is to systematically learn from experiences and improve the functioning of these interventions and processes in subsequent CoP waves. The general questions here are the common evaluative questions: What is the value? What went well? and What can be improved?

The intervention evaluation instrument consists of an online survey with a combination of quantitative and reflection questions and guidance for using the instrument and the resulting data in the TTT and the CoP. The following aspects of the intervention are covered:

1. Quality and value of different elements of the TTT/CoP
2. Relevance of the content
3. Effectiveness of facilitation/guidance
4. Methods and methodology
5. Learning outcomes
6. Overall satisfaction
7. Further needs and motivations
8. Suggestions for improvement of the TTT program or the CoP action plan.

Though the evaluation of the TTT is somewhat different than the evaluation of the CoP operations, this tool follows the same general structure for both interventions to allow for cross fertilization. For each of the interventions (TTT and CoP) a specific tool and processes will be developed from the generic intervention evaluation instrument.

The procedure and responsibilities for applying intervention evaluation

For the TTT, the intervention evaluation instrument will be used by the trainers and be completed by the participants of the TTT (CSC) on paper or as an online survey at the end of the training and again (in a slightly reduced form) six months into CoP operations to review the value of the TTT. The results will be used firstly to improve the TTT design for the subsequent CoP wave and secondly for reporting results.

In the CoP, the intervention evaluation instrument will be used by the CSC and completed by the participants of the CoP (CSA) as an online survey after each full year of CoP implementation. The results will be used as a basis for a reflection, exchange and planning session during the NAM. The aim is to strengthen learning and exchange and to enrich the CoP action plan for the subsequent year or the next CoP wave. The more general lessons learned from the evaluation of the TTT and the CoP experiences in what works well for CSA capacity development can be fed into the Dynamic Learning Agenda.

During the TTT the CSC's will be trained in the ME&L approach and the use of the instruments in their CoP.

5.3.2 Monitoring CSA capacity development (CSA-CAT)

The purpose and content of the CSA-CAT

The purpose of assessing the development and mobilization of the climate smart advisory capacity within the network is threefold:

- To support self-assessment and reflection by the CSA to deepen exchange and learning and the CS advisory capacity development.
- Facilitate reflection and evaluation within the CoP to improve its functioning and prepare lessons learned.
- Create insight and overview of the capacity development within the CSA network.

The monitoring is done with the specifically developed online CSA-CAT tool. This covers, in general, the knowledge, skills, attitudes and practices the participating advisors may need to strengthen their role as climate smart advisor. The CSA-CAT is not an exam to test the CSA capacity of a specific advisor. It is a tool to support and assess the development of CSA capacity in the CoP and the CSA network. The topics covered are:

1. Knowledge and awareness of Climate-Smart Farming
2. Attitude and mindset towards climate change and climate action
3. Skills and confidence in promoting and supporting Climate-Smart Practices
4. Enabling environment for CS advice
5. Role perception of the advisor
6. Behaviour - Advisory practice
7. Effects of Climate Smart Advice on farming.

Each section contains questions (Likert scale) to self-assess the current state of the CSA's capacity and the level of progress made. In addition, more qualitative reflexive questions will be provided which can be used to facilitate exchange and reflection within the CoP and the link to the Dynamic Learning Agenda. In practice the Intervention evaluation and the CSA-CAT will be integrated in one single survey to simplify the task for the CSA.

The procedure and responsibilities for applying intervention evaluation

The development and mobilization of the climate smart advisory capacity will be assessed by using the CSA-CAT at the beginning of the CoP wave and then annually in preparation for a CoP evaluation and planning session at the national annual meetings. Furthermore, the CSA-CAT is completed by the CSA one final time one year after the end of the CoP wave. As indicated the CSA-CAT will be combined with the CoP evaluation into one ME&L document for easy use.

The WP4 ME&L team supports the CSC in coordinating and facilitating the use of the CSA-CAT by the CoP participants. The resulting insights are used for the own reflection and learning of the CSA in the CoP and to strengthen the learning and to improve the operation of the CoP. Furthermore, directly and through the dynamic learning agenda this CSA-CAT supports the operation of and learning in the CSA network as a whole.

5.3.3 Dynamic Learning Agenda (DLA)

The purpose and content of the DLA

The DLA is an instrument or method to facilitate reflection and learning in complex and difficult change processes. The change process underway within the CSA network confronts a considerable level of complexity and difficulty. The focal point of the CSA network, concerning climate change and the transition to CSF, inherently embodies complexity. The ME&L objectives include monitoring and learning about both the development of CSA capacity and about learning how to provide targeted CSA advisory services, which encompass both technical and facilitation aspects across a diverse array of topics.

The CSA network also operates across multiple levels—local, national, and international—encompassing individuals with vastly different educational and cultural backgrounds.

Additionally, the CSA network encompasses a wide spectrum of interventions, including training, peer-to-peer learning, innovation experiments, and networking at Agricultural Knowledge and Innovation Systems (AKIS) and at other EU levels programs, initiatives and projects. In this rich landscape, a DLA can serve to structure learning processes while allowing flexibility to tailor ME&L approaches to the diverse needs within the network's various spheres.

In combination with the more targeted and practical instruments for ME&L for the evaluation of the TTT and the CoP and the assessment of CSA capacity (CSA-CAT), the DLA will be the main basis for ME&L structuring and connecting the ME&L at the different levels of CSA network. The DLA presents and organises all learning questions which have and require attention in the CSA network. The agenda evolves over time depending on the needs and learning of the network, questions are answered or receive less attention and new learning questions arise. A DLA is a learning device to bring focus and collective ownership of the ME&L process. Initially, the DLA will be operationalised as an excel-sheet, however it will be developed in an online tool making available the questions and the experiential answers to the CSA network.

Following the building blocks of the Theory of Change, the DLA is organised in three levels of questions: the central ME&L question, several subcategories and within each specific questions. Within the central question of ME&L the following sub questions are identified:

- Capacity Development: How to strengthen advisors' capacity for Climate Smart Advice?
- Learning: How to support learning between farmers, advisors and countries, over time, based on experiences?
- Advice Practice: How to improve advisory practices to increase farmer support, transfer knowledge and tailor advice?
- Advisory Tools: What are effective advisory tools for CSF and how to effectively make use of them?
- Engagement of Farmers: How to effectively engage farmers to adopt Climate Smart Agriculture?

Figure 14 is an extract from the current central DLA to illustrate the format and show the questions associated with the Capacity Development Building Block.

Dynamic Learning Agenda						
	Central Question: How to strengthen and mobilise the advisory community to support the adoption of Climate Smart Agriculture?					
	Learning questions	CoP working on question	Country working on question	Theme where question is relevant	Good examples	Relevant links
Capacity Development How to strengthen advisors' capacity for Climate Smart Advice?	How to train advisors to be inclusive of diverse types of farmers?	..	..	..	..	..
	What are suitable measures to evaluate capacity development?					
	Where to find suitable advisory trainings?					
	How can advisors take actors outside of agriculture into consideration?					
	How to effectively show farmers opportunities for climate action?					
	How to learn how to talk to farmers and understand their needs and fears?					
	How to motivate advisors to become successful climate smart advisors?					

Figure 14 Extract from the DLA showing structure and current questions (partial view)

Specific learning agendas will be developed in different parts of the CSA network. Each CoP will develop their own CoP learning agenda. This may sound complex and laborious, in practice a learning agenda is just collecting the expectations and interests of the participants in the form of a How-to question and associated answers. During the TTT the CSC will be introduced to working with a learning agenda by using a learning agenda to see if the TTT is meeting expectations of the participating CSCs. This way the CSC can practice with using a learning agenda to support learning, and the evaluation of the TTT is facilitated at the same time. As the project progresses, in similar ways also learning agendas will be developed at national level, and for thematic areas and CoDIEs to allow for coordinated learning.

The central DLA will provide an overview of who is working on which questions, in which country and thematic area. Besides collecting learning questions, the DLA serves as a platform for sharing insights and solutions discovered in one CoP or advisory practice, making them accessible and inspiring for individuals involved in other parts of the network and different settings. Additionally, the questions posed on the DLA provide a foundation for identifying opportunities for exchange between CoPs, across different themes and countries. These questions also play a crucial role in shaping the agenda for reflection and exchange during the various meetings in the network, such as national annual meetings, CS-AKIS workshops, and General Assembly meetings.

In later stages of the project the DLA serves as a basis to select the topics and settings for outcome narratives and the basis for the integrated assessment, capturing not only the answers discovered but also tracking how the questions evolve over time and vary across themes and countries. Furthermore, the DLA will be used as an inspiration for broadening CoP agendas. After set-up of the network, the DLA will be moved online to create ownership and facilitate access and exchange.

The procedure and responsibilities for the DLA

The WP4 team will coordinate and moderate the dynamics of the DLA. The process starts with several reflection sessions to identify initial learning questions using different interactive methods including questions from a variety of perspectives. For example, interactive sessions have been organised during the kick-off and general assembly and input has been provided by the different work packages. This collecting of upcoming learning questions will be repeated during reflection

sessions at different levels. In the CoPs the DLA will be used by the CSC during the annual reflection and action planning. To start the CoP action planning each CSA is invited to share their expectations answering the question: What do you want to explore and learn? This is then the basis for collectively identifying the CoP objectives for the subsequent year. When lessons are learned and solutions arise, these will be collected on the DLA for other CoPs to benefit from it. The testing of specific CSA and CSF tools as it is coordinated by WP6 for developing and enriching the repository can also be captured in the form of learning questions.

Similarly national coordinators and thematic leaders can use the DLA during national annual meetings and CS-AKIS workshops to inspire their own agenda. The WP4 team will actively support and facilitate the employment of the DLA during CoP evaluation, national annual meetings and general assembly meetings by providing scripts, methods and support. The application of the DLA in the CoDIEs, MIPS and PIPS is also foreseen and will be operationalised with the WP teams during the second year of the project.

5.3.4 Outcome narratives

From year 4 onwards, a total of 10 outcome narratives will be developed to deepen the understanding of the impact of the capacity building activities in the CSA network. Through interviews with advisors, farmers and AKIS actors on the ground, the impact of the CS capacity building on advisory and farming practice will be made visible in these outcome narratives. The method for the outcome narratives will be developed based on the results during the first years of ME&L.

5.4 ME&L Process and Reporting Procedures

The ME&L approach is organised as a bottom-up process of monitoring, evaluation and learning as a basis for collecting insights and reflecting on experiences, systematically documenting both questions and answers making them available and sharing as shown in Figure 15.

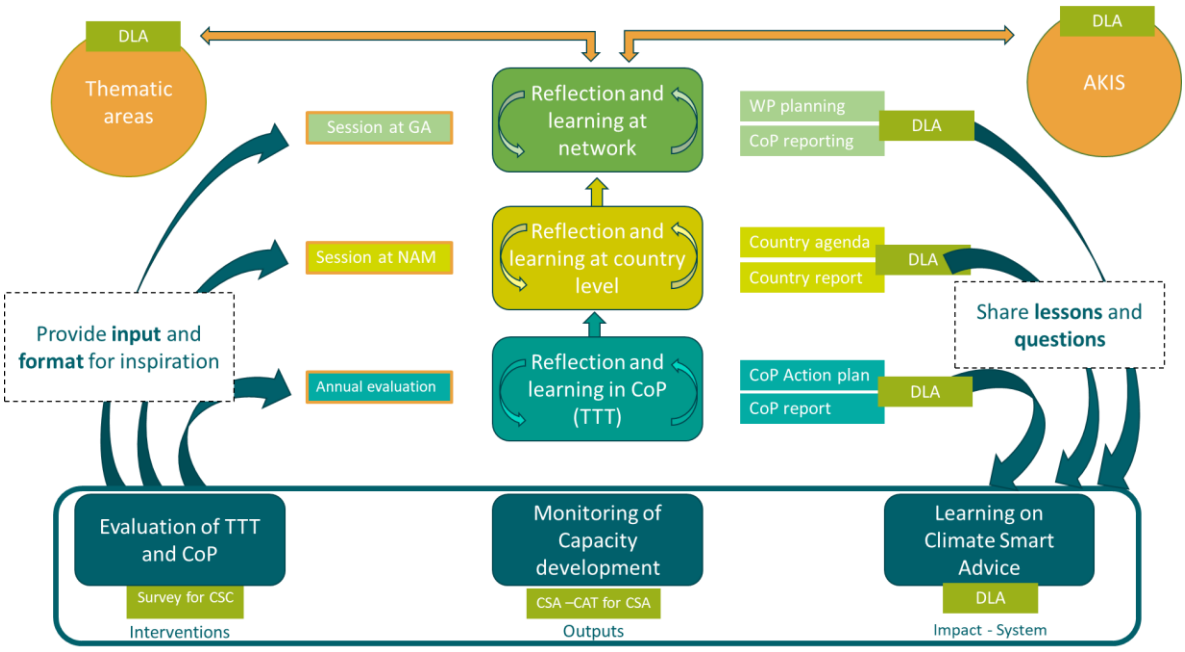

Figure 15 The main cycles of ME&L

The cycle starts at the bottom with the annual CoP evaluation and the monitoring of the capacity development with the CSA-CAT at individual level. A summary of the results, the updated version of the DLA and a script for the annual reflection and planning session will be made available by the WP4 team to the CSC for use by the CoP as part of the NAM. The first time will be after one year of CoP operations. The CoP reflection and planning session is expected to cover the following items:

1. Reflect on outcomes for the CoP and progress in CSA capacity development;
2. Peer-to-peer learning by share experiences within the CoP;
3. Update and enrich the DLA;
4. CoP action planning for the coming year.

The reflection is facilitated by the CSC during the NAM and results in insights and lessons learned which CoPs document in their CoP reporting and are input to the CoP action plan for the upcoming year. As this reflection and planning at CoP level takes place as part of the NAM, it is used as a basis for exchange between CoPs at national level. During TTT and NMU meetings, the WP4 ME&L team supports the national coordinators and CSC to prepare and facilitate this reflection and exchange.

At country level the results from all national CoPs can be integrated. A summary of the results per country, the updated version of the DLA, proposals for a script and focus for a national reflection workshop will be made available by the WP4 team to the NC for use in the national annual meeting reflection. This reflection results in insights and lessons learned which NC can document in their Country Report and the new learning questions are also inputs to the national action plan for the upcoming year. At both the CoP and the national level the role of CS-AKIS is a prominent topic, this feeds the AKIS workshops (WP5). Furthermore, each country is requested to share an experiential answer to one of the DLA questions. NCs and CoPs can use the national reflection to prepare for the exchange during the GA.

For the CSA network, the same repeats at aggregate level (including the results from the CoPs and NAM) for the whole network during the general assemble.

Besides the ME&L in the different levels of the network (WP1) and the ME&L of training events (WP2), each of the other WP use their own modes of ME&L based on the ME&L framework and in coordination with overall project management. Table 2 below gives an overview of the main criterium for ME&L in each WP and the relation with the ME&L approach and instruments. As a recording and learning device, the DLA is designed to cover all these criteria and to coordinate ME&L. The WP4 ME&L team will support the development of more detailed criteria and methods for ME&L with the respective WP teams during the second year of the project.

Table 2 The focus of ME&L in each WP

WP	Main criterium of ME&L	ME&L approach
1	The development of capacity to provide targeted CS advice	ME&L in CoPs; CoP Evaluation and CSA CAT and annual reflection
2	The training of CSC and CSAs	Evaluation of TTT and training events in CoPs
3	Understanding of the role of advice in MIPs and CSF	ME&L in CoDIEs making use of the DLA
5	Testing of CSA and CSF tools and lessons learned	Integrated in CoP reflection and DLA

WP	Main criterium of ME&L	ME&L approach
6	The development of a supportive AKIS for CSF	Insights and lessons from CoP and NAM on supportive AKIS and DLA provide input to AKIS workshops.
7	The role of external PIPs in supporting the development and mobilization of CSA capacity	Use DLA to strengthen exchange agenda

Following the bottom-up process outlined above, the analysis, interpretation and meaning making is done annually by the CSC, CSA, NC and the consortium at the three aggregate levels of operations.

At network level, the WP4 team will in later years of the project develop the method for the integrated assessment. Besides reporting on the lessons learned, the ME&L will enable the development of a portfolio of inspiring practices, narratives and tools to boost CS advice and action which will be made available through the WP5 Knowledge repository. This way the ME&L approach supports and coordinates the learning in the CSA network. As learning is at the heart of this approach and the CSA network, it is anticipated and welcomed that the ME&L approach evolves as our insights into the capacity development for providing targeted CS advice deepens.

6 Concluding Comments

In conclusion, the development of the ME&L framework and approach presented in this document serves as an important first step towards fostering the CSA network as a dynamic learning system for the continuous improvement of network functionality and the enhancement of climate-smart advisory capacity. With the support of the ME&L team, the ME&L framework and approach is both a foundation and opportunity for enabling a collaborative and iterative approach to facilitate learning and exchange throughout the CSA network. A commitment to engaging in ME&L contributes to excellence of the CSA network activities for strengthening advisors' capacity to accelerate the adoption of CSF in transforming advisory and agricultural practices.

7 Appendices

Templates for ME&L in TTT

Draft Evaluation of TTT - a training event for Climate-Smart Coaches

1. **General Information:**
a. Name of the Training Event:
b. Date and Location:
c. Name of the Climate-Smart Advisor:

2. **General evaluation** of the various items on the training agenda at the end of each day:

How do you evaluate the different items on the training agenda in terms of both content and methods?

Item	Content (1-5)	Method (1-5)	Suggestions for improvement

3. **Training Content**
a) Rate the relevance of the training content to your role and responsibilities.
b) Rate the clarity of the information presented during the training.
c) Rate how readily applicable the content of the training was.

4. **Trainer Effectiveness**
a) How would you rate the knowledge and expertise of the trainers?
b) Rate the trainers' ability to engage participants and facilitate discussions.
c) Were the trainers responsive to participants' questions and concerns?

5. **Training Methodology**
a) Rate the effectiveness of the training methods used.
b) How do you perceive the balance between theory and practice?
c) How do you perceive the balance between technical content and advisory facilitation methods?
d) What suggestions do you have to further improve the training methods?

6. **Learning Outcomes**
a) To what extent did the training help you better understand climate change and climate-smart practices?
b) To what extent did the training contribute to your advisory skills for climate smart advise?
c) How confident do you feel in applying the training content in your advisory practice?
d) How confident do you feel in creating an inspiring learning environment in your CoP?
e) How confident do you feel in facilitating exchange in your CoP?

7. **Overall Satisfaction**

a) How satisfied are you overall with the training event?

a) What aspects of the training did you appreciate most? ranking

   a. The content on climate change
   b. The content on climate smart farming
   c. Content on climate smart advise methods
   d. Exchange with other CSC, topics and regions
   e. Other, please specify.

8. **Suggestions for Improvement**

a) What aspects of the training could be improved? Content, Methods, trainer, other

b) Are there specific topics or areas you would like to see covered in future training sessions?

c) Are there specific skills you would like to be trained in during future training sessions?

d) What would help you to further your confidence as a CSC?

9. **Additional Comments**

a) Please share any additional comments or feedback about the training event.

The specific tool for the evaluation of the CoP, an adapted version of this instrument, is still under development at the time of publishing.

Initial Overview of the CSA-Capacity Assessment Tool

FOR USE BY CSA for Self-Assessment, Coordinated by CSC

Introduction

The Climate-Smart Agriculture (CSA) Capacity Assessment Tool (CSA-CAT) is part of the ME&L approach for the CSA network which also includes a CoP evaluation tool and a Dynamic Learning Agenda (DLA).

The CSA-CAT is used to assess the development of the capacity of CSA to provide target climate smart advice and to promote sustainable and climate-resilient farming practices. This tool is designed to enable you to assess your capacity development in ten key areas related to climate smart agriculture, utilizing simple quantitative Likert scale answers.

Together with the other ME&L tools, the insight from the CSA-CAT contributes to answering the following questions:

- How did the CSA network strengthen advisors' capacity to provide targeted advice?
- How do the CoPs and CSA network enable advisors to provide targeted advice?
- How does improved climate smart advisor capacity lead to implementing farm-level approaches and solutions developed in the sister project Climate Farm Demo?
- Has the CSA network led to acceleration of the adoption of climate smart farming practices?

Topics Covered:

The CSA-CAT follows the three building blocks of the theory of change of the CSA network:

- Capacity development
- Advisory practice, and
- Climate action.

As the name of the tools suggests the focus is on the first block: capacity development. The other blocks are used to understand the developments and the effects of the developed capacity. The CSA-CAT covers the following topics:

1. Capacity development
    a. Knowledge of CSA practices
    b. Skills - advisory Skills
    c. Attitude -mindset
    d. Specific capacities for CSA
    e. Influence of the organizational and institutional environment on the CSA capacity
2. Advisory practice
    a. Percentage of CSA in current role
    b. Changes in advisory practice
    c. Role perception
    d. Type of advice activities for CSF
3. Climate action
    a. Effects of CSA on farming
    b. Changes in farmer's attitude to CSF
    c. Effects on acceleration of adoption of CSF
    d. Drivers of change

e. Barriers to change.

How to Use the Tool

For each of the ten topics, you will find a set of Likert scale questions (1 to 5) to quantify your thinking about your role, knowledge and skills and reflect on your development and recent training. Additionally, reflection questions are provided to encourage you to step back from the 'everyday' considerations and identify areas for improvement. These questions can also be used to stimulate exchange with the other CSAs in your CoP.

Stepwise process to use CSA-CAT in a CoP:

1. Rate your knowledge, skills and attitudes using the provided Likert scale (1 to 5), with 1 being the lowest and 5 being the highest in all cases.
2. Reflect on the questions to gain insights into your strengths and opportunities for growth.
3. Use the reflection questions as inspiration to exchange insights and experiences with your fellow CoP participants.
4. Use the insights to make an inspiring tailor-made CoP action plan for the coming year.
5. Use this tool regularly to track your own progress, foster continuous improvement, and contribute to the advancement of Climate-Smart Agriculture.

Dynamic Learning Agenda

The DLA presents and organises all learning questions which have and require attention in the CSA network. The agenda evolves over time depending on the needs and learning of the network, questions are answered or receive less attention and new learning questions arise.

As a learning device, the DLA brings focus and collective ownership of the ME&L process. The DLA is organised in three levels of questions: the central ME&L question, several subcategories and within each specific questions. The main following sub questions are as follows:

- Capacity Development: How to strengthen advisors' capacity for Climate Smart Advice?
- Learning: How to support learning between farmers, advisors and countries, over time, based on experiences?
- Advice Practice: How to improve advisory practices to increase farmer support, transfer knowledge and tailor advice?
- Advisory Tools: What are effective advisory tools for CSF and how to effectively make use of them?
- Engagement of Farmers: How to effectively engage farmers to adopt Climate Smart Agriculture?

The extract from the DLA shown below shows all questions harvested during initial phase of the project. These will be edited, revised and updated throughout the CSA project.

Capacity Development	Learning questions
How to strengthen advisors' capacity for Climate Smart Advice?	How to train advisors to be inclusive of diverse types of farmers? What are suitable measures to evaluate capacity development? Where to find suitable advisory trainings? How can advisors take actors outside of agriculture into consideration? How to effectively show farmers opportunities for climate action? How to learn how to talk to farmers and understand their needs and fears? How to motivate advisors to become successful climate smart advisors? How to measure the effect of the CoPs on advisors' capacity building and CS-advisory services in a region? How can advisors convince farmers who might be hesitant/antagonistic towards change? How to enable advisors to practice active listening? How to adapt advisory approaches on climate smart farming to different types of farmers? How can advisors take into account specific contexts (social, regional, technical, etc.)? How to raise awareness about climate smart advice among a wider group of advisors? How can advisors show the added value of being climate resilient?

Learning	
How to support learning between farmers, advisors and countries, over time, based on experiences?	How to change from linear knowledge transfer to circular/decentralised knowledge (co)creation and transfer? How to be open to experiences from other countries and be ready to implement tools and practices from outside? How can climate smart farming be more profitable? What are specific climate smart farming practices? How to be open to experiences from other countries and be ready to implement tools and practices coming from outside? How can climate smart advisors quickly understand the context of a farm that wants to be climate smart? How to understand with the farmers what are the real tangible benefit about climate smart farming? How to transfer knowledge for climate in practice? How do we know what is the most urgent topic/problem in your region (and the project should focus on)?
Advice Practice	
How to improve advisory practices to increase farmer support, transfer knowledge and tailor advice?	How to better understand the relationship between climate resilience and business resilience? How can advisors maximise their influence? What are the most efficient ways to advise farmers to implement climate smart practices? How to evaluate the whole farm effect of techniques (economically, environmental and socially)? How do we know different compensatory measures from NSP: eco-schemes, agri-env etc? How do I find the right incentive (economic - e.g. financial program for example; ideological etc) for the farmers to implement the solutions I'm offering? How to involve food chains for systemic change? How will the markets drive the adoption of climate smart practices by growers? How do we find out if/which farmer's current problems are related to climate change issue? How can we combine technical effectiveness to economic profitability of CS advice? How to justify adoption of measures that could have negative short term effect on production/business? How to keep in mind other aspects: social and economic?
Advisory Tools	
What are effective advisory tools for CSF and how to effectively make use of them?	How to properly monitor climate action and results? What are the most effective advisory approaches to engage farmers in climate action? What are ways to show/communicate rewarding mechanisms? How to transfer the innovative tools to the advisors? How to connect financial benefits for the farmers with the adoption of climate smart practices? How do we develop sound, harmonised, precise, accurate, tailored assessment tool(s) to measure footprint? How to measure risks of change / practice adoption versus benefits?

	What are the most effective advisory approaches to engage farmers in climate action?
Engage Farmers	
How to effectively engage farmers to adopt Climate Smart Agriculture?	How can famers' knowledge be acknowledged by science and policy? How to engage the 'average' farmer in the topic of climate smart farming? How to foster/influence the mindset shift of the farmers? How to convince and involve the average farmer on the topic of climate smart farming? How to engage with farmers that have not used advisory services or authorities in the past? What motivates farmers to take action towards climate proof practices? How to support climate smart farmers to support other farmers in climate smart activities? How can we hear (understand) farmers' problems in order to understand their cause? How to make climate change an important and interesting issues for the farmer (as it is not economic or technical issue)? How to convey the urgency to mitigate but also to adapt practices? How to show farmers the benefits of climate smart farming?

8 References

Amin, H., Scheepers, H. and Malik, M. (2023). Project monitoring and evaluation to engage stakeholders of international development projects for community impact, International Journal of Managing Projects in Business, Vol. 16 No. 2, pp. 405-427. https://doi.org/10.1108/IJMPB-02-2022-0043

Arnold, R. D., & Wade, J. P. (2015). A definition of systems thinking: A systems approach. *Procedia computer science*, *44*, 669-678

Bailey, A. (2014). Once the Capacity Development Initiative is Over: Using Communities of Practice Theory to Transform Individual into Social Learning, The Journal of Agricultural Education and Extension, 20:4, 429-448, DOI: 10.1080/1389224X.2013.846871

Collins K., Ison, R. (2009). Jumping off Arnstein's ladder: Social learning as a new policy paradigm for climate change adaptation. *Environmental Policy and Governance*, 19(6), 358–373. https://doi.org/10.1002/eet.523

Dolinska, A., and d'Aquino, P. (2016). Farmers as agents in innovation systems. Empowering farmers for innovation through communities of practice. Agricultural Systems. 142. 122-130. 10.1016/j.agsy.2015.11.009

EIP-AGRI (2021). *Climate-smart agriculture Solutions for resilient farming and forestry*. eip-agri_brochure_climate-smart_agriculture_2021_en_web_final.pdf (europa.eu)

Eriksen, S., Schipper, L., Scoville-Simonds, M., Vincent, K., Adam, H., Brooks, N., Harding, B., Khatri, D., Lenaerts, L., Liverman, D., Mills-Novoa, M., Mosberg, M., Movik, S., Muok, B., Nightingale, A., Ojha, H., Sygna, L., Taylor, M., Vogel, C., West, J. (2021). Adaptation interventions and their effect on vulnerability in developing countries: Help, hindrance or irrelevance? World Development, Volume 141. https://doi.org/10.1016/j.worlddev.2020.105383

FAO (2010). *Climate-Smart Agriculture: Policies, Practices and Financing for Food Security, Adaptation and Mitigation*. Food and Agriculture Organization of the United Nations, Rome. http://www.fao.org/docrep/013/i1881e/i1881e00.htm

FAO (2019). *The 3 pillars of Climate-Smart Agriculture and the Sustainable Development Goals*. Food and Agriculture Organization of the United Nations, Rome. https://www.fao.org/3/ca5778en/CA5778EN.pdf

Haldrup, S. (2022) Rethinking monitoring and evaluation in complex systems — when learning is a result in itself. UNDP Strategic Innovation Unit, UN. https://medium.com/@undp.innovation/rethinking-monitoring-and-evaluation-in-complex-systems-when-learning-is-a-result-in-itself-3d1fc90d22fc

Haldrup, S (2023) How do we measure systems change? UNDP Strategic Innovation Unit, UN. https://medium.com/@undp.innovation/how-do-we-measure-systems-change-26af77dc4fb8

Hiatt, J. & Hiatt, J. (2006). ADKAR: A Model for Change in Business, Government and Our Community. Prosci Learning Center Publications, Fort Collins, USA.

Kacou, K. P., Ika, L. A., & Munro, L. T. (2022). Fifty years of capacity building: Taking stock and moving research forward. *Public* Administration and Development, 42(4), 215–232. https://doi.org/10.1002/pad.1993

Kuchenmüller, T., Chapman, E., Takahashi, R., Lester, L., Reinap, M., Ellen, M., Haby, M. (2022) A comprehensive monitoring and evaluation framework for evidence to policy networks. Evaluation and Program Planning, Volume 91, 2022, 102053, https://doi.org/10.1016/j.evalprogplan.2022.102053

Labarthe, P., Caggiano, M., Laurent, C., Faure, G., & Cerf, M. (2013). *Concepts and theories available to describe the functioning and dynamics of agricultural advisory services.* Available at: https://agritrop.cirad.fr/570834/1/document_570834.pdf. Accessed 15 October 2024

Luli, F. (2024) Ethical Considerations in Monitoring and Evaluation (M&E). Available at: https://www.evalcommunity.com/career-center/ethical-considerations-in-monitoring-and-evaluation-me/. Accessed 2 January 2024

Markiewicz, A., & Patrick, I. (2015). *Developing monitoring and evaluation frameworks*. Sage Publications. https://doi.org/10.4135/9781071878774

Mathé, S., G. Faure, A. Knierim, A. Koutsouris, T.H. Ndah, L. Temple, B. Triomphe, E. Wielinga and E. Zarokosta, (2016). Typology of innovation support services, Deliverable 1.4 AgriSpin project https://agrispin.eu/wp-content/uploads/2016/10/Report_Typology.pdf

Noltze, M., Köngeter, A., Römling, C., Hoffmann, D. (2021). *Monitoring, evaluation and learning for climate risk management*. OECD Development Co-operation Working Papers, No. 92. OECD Publishing, Paris, https://doi.org/10.1787/58665de0-en.

OECD (2002). *Glossary of Key Terms in Evaluation and Results Based Management*. OECD, https://www.oecd.org/dac/evaluation/2754804.pdf.

OECD (2019), Open Government in Biscay, OECD Public Governance Reviews, OECD Publishing, Paris, https://doi.org/10.1787/e4e1a40c-en

OECD (2020). Common Ground Between the Paris Agreement and the Sendai Framework: Climate Change Adaptation and Disaster Risk Reduction. OECD Publishing, Paris, https://dx.doi.org/10.1787/3edc8d09-en

OECD (2021), Applying Evaluation Criteria Thoughtfully, OECD Publishing, Paris, https://doi.org/10.1787/543e84ed-en

Serpe, L., Ingram, M., & Byom, K. (2022). Nimble adaptation: Tailoring monitoring, evaluation, and learning methods to provide actionable data in complex environments. *New Directions for Evaluation*, 2022, 97–106. https://doi.org/10.1002/ev.20523

Sutherland, L-A., R.J.F. Burton, J. Ingram, K. Blackstock, B. Slee and N. Gotts, (2012). Triggering change: Towards a conceptualisation of major change processes in farm decision-making, Journal of Environmental Management, Vol. 104, 2012, p. 142-151. https://doi.org/10.1016/j.jenvman.2012.03.013

TAP (Tropical Agriculture Platform) (2016a) Common Framework on Capacity Development for Agricultural Innovation Systems: Conceptual Background. CAB International, Wallingford, UK.

https://www.cabi.org/Uploads/CABI/about-us/4.8.5-other-business-policies-and-strategies/tap-conceptual-background.pdf

TAP (Tropical Agriculture Platform) (2016b) Common Framework on Capacity Development for Agricultural Innovation Systems: Guidance Note on Operationalization. CAB International, Wallingford, UK. https://www.cabi.org/Uploads/CABI/about-us/4.8.5-other-business-policies-and-strategies/tap-guidance-note.pdf

UK Government (2019) Monitoring, Evaluation and Learning (MEL) in Conflict and Stabilisation Settings. Stabilisation Unit, London. Available at: https://www.gov.uk/government/publications/monitoring-evaluation-and-learning-mel-in-conflict-and-stabilisation-settings-a-guidance-note. Accessed 10 January 2024

UN (n.d.). Capacity-Building. UN, https://www.un.org/en/academic-impact/capacity-building

van Wessel, M. (2018). Narrative Assessment: A new approach to evaluation of advocacy for development. Evaluation, 24(4), 400-418. https://doi.org/10.1177/1356389018796021

Wenger, E. (1998). Communities of practice: Learning as a social system. The Systems Thinker. 9

Wenger-Trayner, E., Wenger-Trayner, B. (2020) Learning to make a difference: value-creation in social learning spaces. Cambridge University Press, Cambridge.

Funded by
the European Union

This project has received funding from the Horizon Europe research and innovation programme under Grant Agreement No 101084179.