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Food and Agriculture Organization of the United Nations

MONITORING EVALUATION AND LEARNING

Concepts, principles and tools

CDAIS

Publications in this series

CDAIS manuals and guidelines

- *Capacity Needs Assessments – A trainers' manual (2nd edition)*
- *Innovation Niche Partnerships – A guide to the coaching process*
- *Organisational Strengthening – A guide to the coaching process*
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CDAIS stories and conversations

- *Building Competence and Confidence in Agricultural Innovation – Stories of Change*
- *Catalysing Innovation in Agriculture – Conversations of Change*

The manuals are intended as working documents. The project supported the development of the Common Framework on Capacity Development for Agricultural Innovation Systems of the Tropical Agriculture Platform, and tested it in eight pilot countries. One key finding was that the framework requires adaptation in each country situation, and as such the manuals are intended as general guides only.

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Published by Agrinatura and Food and Agriculture Organization of the United Nations

Rome, 2019

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Citation

Agrinatura and FAO, 2019. *Monitoring, Evaluation and Learning – Concepts, principles and tools.* Agrinatura, Paris and FAO, Rome. 24 pp.

ISBN: 978-2-35709-006-4 (Agrinatura)
ISBN: 978-92-5-131494-4 (FAO)

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CONTENTS

INTRODUCTION

This document presents the framework into which the monitoring, evaluation and learning (MEL) component of the Capacity Development for Agricultural Innovation Systems (CDAIS) project was conceived, the objectives it pursued, and how it was implemented.

It highlights the concepts, principles and tools that have been used by MEL teams in each of the eight pilot countries. The worksheets that have been developed in parallel to guide the CDAIS country teams on how to apply and use MEL are available at http://www.cdais.net/publications.

1. Background

1.1. CDAIS and the 'common framework' on capacity development

The overall objective of the CDAIS project was to promote agricultural innovation systems that are efficient and sustainable in meeting the demands of farmers, agri-businesses and consumers while facing environmental and socioeconomic challenges. Its specific objective was to establish a global partnership on capacity development in agricultural innovation systems on a sustainable footing, with needs assessed and approaches validated in eight pilot countries – Angola, Bangladesh, Burkina Faso, Ethiopia, Guatemala, Honduras, Lao PDR and Rwanda.

Agricultural innovation system

"a network of actors or organisations, and individuals, together with supporting institutions and policies in the agricultural and related sectors that brings existing or new products, processes, and forms of organisation into social and economic use."

Capacity

"the ability of people, organisations and society as a whole to manage their affairs successfully."

Capacity development

"the process whereby people, organisations and society as a whole unleash, strengthen, create, adapt and maintain capacity over time".

Source: TAP (2016).

The CDAIS project was jointly developed and implemented by Agrinatura-EEIG (European Economic Interest Group) and the Food and Agriculture Organization of the United Nations (FAO). It was conceived to support the implementation of the Tropical Agriculture Platform (TAP) action plan, a G20 Initiative on improving the global coherence of capacity development for agricultural innovation, based on a preliminary diagnosis that many countries are not fully exploiting their innovation potential (TAP, 2016). As TAP partners, and in line with their visions, Agrinatura and FAO collaborate towards a coherent approach to strengthening agricultural innovation systems, guided by the TAP Common Framework on Capacity Development for Agricultural Innovation Systems (TAP, 2016), referred to herein as the 'common framework'. The common framework was tested in the eight pilot countries between 2015 and 2019.

The main assumption of the common framework is that the functional capacities of individuals and organisations must be strengthened to enable them to innovate and, at the same time, reinforce the agricultural innovation system that in turn creates an enabling environment.

The common framework is grounded in three theoretical perspectives that were taken into account during implementation in all countries.

- **A systemic perspective.** Innovation systems are more effective if what affects the relationships between components of the system (i.e. functional capacities) is strengthened. The functional capacities identified in the common framework, also referred to as the '4+1 capacities', are the capacity to (i) navigate complexity, (ii) collaborate, (iii) reflect and learn, and (iv) engage in strategic and political processes, which together result in (v) the capacity to adapt and respond to realise the potential of innovation.
- **A strategic innovation niche partnership management perspective.** This involves a dual-pathway approach of capacity development for agricultural innovation systems at the innovation niche partnership level and at the agricultural innovation system level.
- **A learning perspective.** Agricultural innovation system stakeholders – both individuals and organisations – have to go through a five-stage supervised learning process to develop their capacities to innovate: galvanising commitment, visioning, capacity needs assessment, developing a capacity-development strategy, and implementation.

An **innovation niche partnership** is where several actors interact to solve specific problems and then develop their collective capacities to innovate. It is a locus of learning and experimentation and micro-level transformation.

At a minimum, it is a network of individuals and organisations that are contributing to the same innovation goals. They might not all have the same interests and level of engagement, but they do have common objectives and interactions. At best, it is a community of individuals and organisations that share a common language, vision and strategy, that know how to work together, and that are mutually engaged to achieve innovation.

1.2. Why monitoring, evaluation and learning in CDAIS?

Based on a diagnosis of country needs to develop or reinforce national agricultural innovation systems, the CDAIS project sought to address a wide range of issues. Those issues were broadly related to the lack of efficiency, responsiveness and efficacy of agricultural innovation systems, as evidenced by insufficient demand-driven innovations, a lack of coordination of capacity-development interventions, inadequate capacity-development interventions and too many small-scale interventions with narrow scope mostly focused on individual technical capacities.

In the common framework, assumptions about change mechanisms were based on a large corpus of literature, combining concepts from agricultural innovation systems and systems thinking, capacity development and innovation management literature. In effect, the CDAIS project implemented several pilots at the same time. To capture the diversity of changes, mechanisms of changes and impacts achieved by the CDAIS project in the different countries, the global coordination team decided to develop a monitoring, evaluation and learning (MEL) system at the initial stage of the project.

The MEL system is derived from the principle that continuous evaluation and learning enables adaptive management of transformational projects and, hence, helps improve their performance. Monitoring is used as an evidence-based approach to detect and support changes in knowledge, attitudes and practices within partners of the project to achieve systemic changes and greater impacts.

To test the validity of the common framework, a comparative cross-country analysis was needed to check the theoretical framework against empirical data. Those data were gathered and collected through the MEL system to build these comparisons.

In short, the MEL system was seeking the ‘difference’ that the CDAIS project was making.

2. Objectives and principles of the MEL system

The MEL system in CDAIS had two main objectives: (i) to support project implementation, and (ii) to provide evidence of the changes that the project made. To achieve these objectives, it was designed following nine key principles.

2.1. Support project implementation

The first main objective of the MEL system was to provide a continuous assessment and learning process to help country teams adapt capacity-development interventions in response to specific needs, and thus move towards greater impacts.

The CDAIS project proposes a new way to ‘do development’, which is to train and support agricultural innovation system actors so that they become able to autonomously organise themselves and work in a more efficient manner to achieve innovations faster. Doing development this way requires project teams to contribute actively and explicitly to project learning, for instance by providing feedback and reflection in meetings or after-action reviews. This aims at informing and feeding into project decision making processes at all levels (national and global). However, project teams in countries do not necessarily have the necessary skills to do this – or they do not see it as a part of their day-to-day work, and may consequently not make time for it. The MEL system is therefore particularly important to help structure this type of process and to provide the quick feedback loops needed to inform adaptive programming such as that underlying the CDAIS project. In consequence, the CDAIS MEL system was designed and developed as an internal project process that encouraged a culture of learning at all levels, i.e. project teams and boundary partners. In turn, it helped project teams and boundary partners to collectively identify capacity-development interventions that might be the most impactful.

For this, the MEL system provides tools and methodologies to: (i) assess changes in functional capacities and their effects on agricultural innovation systems, (ii) support the adaptation and refinement of capacity strengthening to achieve greater impacts, and (iii) stimulate continuous learning by using participatory monitoring and evaluation approaches.

Table 1 lists the benefits of MEL to project stakeholders, implementers and partners.

Table 1. Benefits of the Monitoring, Evaluation and Learning (MEL) system to project stakeholders

Project stakeholders	Benefits of MEL
CDAIS direct partners and boundary partners (individuals, organisations)	MEL helps partners answer the following questions (among others): • Is what they are doing contributing to the long-term change the organisation/ innovation niche partnership is trying to create? • Are their project activities on track? • Are their partners' activities on track? • Are their activities pursuing the achievement of demand-driven innovation? • Are they experiencing anticipated changes as a result of the project? • Are there any challenges to address? If so, what are they? • **What is working well, what is not, and why? What could be done differently?**
CDAIS implementing organisations	MEL helps implementing organisations answer the following questions (among others): • Are their activities on track? • Are their activities reaching target communities? • Are communities experiencing anticipated changes as a result of the project? • Are there any challenges to address? if so, what are they? • **What is working well, what is not, and why? What could be done differently?**
CDAIS project partners and funders	MEL helps provide insights into (i) lessons learnt during the project and conditions for replicability, and (ii) other possible interventions to develop capacities to innovate, not covered by the project

2.2. Provide evidence of changes

The second objective was to provide analytical tools and methods to measure and compare the performance and relevance of the common framework when applied in eight different country contexts.

The central assumption of the CDAIS project was that functional capacity development is key for a more efficient and responsive agricultural innovation system that will enable more smallholder-centred innovations, making agriculture more productive and sustainable. Other capacities might be needed, depending on the individuals and organisations that are involved, their activities and purposes. The types of needed capacities might also depend on the nature of the innovation process (incremental or radical) and the type of innovations sought (technological, services or organisational).

The MEL system seeks to provide documented evidence – and better understanding – of the leveraging role of the five pre-identified functional capacities but also of other emerging capacities as they are developed in different cases and contexts. The documented evidence provides partners and funders solid feedback on outcomes and lessons learnt.

For this, the MEL system provides tools and methodologies to ensure: (i) a standard and minimal data collection process, and (ii) standardised analyses and reporting on the contribution of the CDAIS project to capacity development and the advancement of innovation.

Table 2. CDAIS project Monitoring, Evaluation and Learning (MEL) system components and purposes

MEL component	Purposes
Tracking and monitoring	• 'Tracking' refers to a periodic process of identifying changes in stakeholder capacities to innovate, using progress markers • It supports the monitoring process: 'monitoring' refers to the monitoring of stakeholder objectives, activities and capacities to achieve innovation, and analysis of the information to guide the design of capacity-development interventions, in light of project resource constraints
Internal evaluation	• 'Internal evaluation' refers to the assessment and analysis of capacity needs, contributions of the CDAIS project to capacity development and possible impacts • It is conducted at the start and the end of project implementation by the project implementers • Capacity assessments made at the beginning of the project are used as a baseline to be compared with the final capacity assessments at the end of the project
Learning	• 'Learning' is the process through which information generated from tracking, monitoring and evaluation is reflected upon and intentionally used to continuously improve the capacities of project partners and the ability of the project to achieve impacts

2.3. Key principles for the design of the MEL system

The MEL system was developed, implemented and adapted throughout the CDAIS project (2015–2019). It was designed to track, monitor and evaluate outcomes in a participatory manner that enabled, on the one hand, learning and capacity development of project partners and, on the other hand, learning and adaptation of the implementation strategy for project implementers.

The key principles for the design of the MEL system were the following.

1. About the participants

- Adopt a participatory approach to identify and evaluate outcomes and thus enhance ownership of the process.
- Work with all key actors of the innovation niche partnerships and agricultural innovation system to establish dialogue in developing and using the MEL.
- Acknowledge that different stakeholders may have different understandings of 'capacity development' and of the purpose of the MEL.

2. About the process

- Use iterative, continual, reflective feedback approaches to determine what is happening in the capacity-development process and why it is happening.

3. About the data

- Focus the MEL approach on the capture of observable changes during the project, from inputs to outcomes. Some tools could be proposed to national partners for future impact assessment.
- Combine methods to generate both quantitative and qualitative data – this leads to more comprehensive understanding and comparability among innovation niche partnerships and countries.
- Ensure comparability of key data across countries – the use of MEL tools, approach and results will help to build comparison between innovation niche partnerships and between countries.
- Ensure credibility and trustworthiness of data for all parties (innovation niche partnership and national stakeholders, donors, TAP partners).

4. About time and cost

- By adopting this iterative and continual coaching approach, ensure MEL is relatively low-cost and not too time consuming for both those collecting data and those responding.

3. The MEL framework

3.1. MEL at the two levels and three dimensions of interventions

The MEL system tracks changes at two levels (innovation niche partnership level and national agricultural innovation system level) in three dimensions: individual, organisational and systemic.

- **'Individual dimension'** refers to capacity development of individuals such as national innovation facilitators (NIFs), innovation niche partnership actors, policy makers or organisations' employees who are involved in an innovation process in one way or another.
- **'Organisational dimension'** refers to capacity development of organisations involved in the activities of innovation niche partnerships, either as innovation support service providers or as innovation project promoters.
- **'Systemic dimension'** refers to the capacities of a network of actors that are engaged in joint actions for reinforcing the agricultural innovation system by bridging its four elements: research and education; bridging institutions such as agriculture extension and innovation support service providers; business and enterprise; and the enabling environment (policies and institutions).

Processes and interventions to be monitored and evaluated at each level are shown in Table 3.

Table 3. Processes and events assessed within the MEL system

Level		Processes to be monitored and assessed	Related capacity-development interventions to be assessed
Country	Agricultural innovation system	• Improvement of the institutional and policy context for innovation niche partnerships, through: - the capacity development of National Innovation Facilitators; - the emergence and/or strengthening of innovation support service providers; - the development or improvement of policies promoting agricultural innovation	• National Innovation Facilitator training and mentoring • Marketplace event • Policy dialogue • Setting up of a national innovation platform • Capacity-development activities for innovation support service providers
	Innovation niche partnership	• Innovation niche partnership stakeholders' capacity development • Contribution of functional capacities to advance innovation	• Capacity-development activities for innovation niche partnerships and their relevant member organisations

3.2. MEL at agricultural innovation system level: identifying the impact pathway

3.2.1. Key evaluation questions

- Taking into account the way it has been designed and implemented, how did the CDAIS project contribute to improvements in the effectiveness of the agricultural innovation system in a given country?
- Was the CDAIS approach relevant to the intended users? In other words, did it suit the priorities and policies of the target groups, recipients and development partners? Did it in fact engage target populations and promote continuous learning? What factors influence the sustainability and replicability of CDAIS approach at global level?

3.2.2. Realist evaluation

By applying the common framework in eight different contexts, CDAIS was testing a theory about what might cause changes within an agricultural innovation system. It was therefore assumed that in different contexts changes will be reached through different mechanisms, such that the project cannot simply be replicated from one context to another and automatically achieve the same outcomes. Theory-based understanding about 'what works for whom, in what contexts, and how' is, however, transferable.

A realist evaluation approach has particular implications for the design of an evaluation and the roles of participants. For example, rather than comparing changes for participants who have undertaken a project with a group of people who have not (as is performed in randomised controlled or quasi-experimental designs), a realist evaluation compares 'context–mechanism–outcomes' configurations within the project. It may ask, for example, whether a project works more or less well, and/or through different mechanisms, in different localities (and if so, how and why); or for different population groups (e.g. men and women, or groups with differing socioeconomic status).

Moreover, different stakeholders will have different information and understanding about how the project is supposed to work and will therefore implement it differently.

Data collection processes (interviews, focus groups, questionnaires, etc.) should partly be constructed to identify the particular information that specific stakeholder groups will have, and thereby allow theories about how and for whom the project 'works' to be refuted or refined.

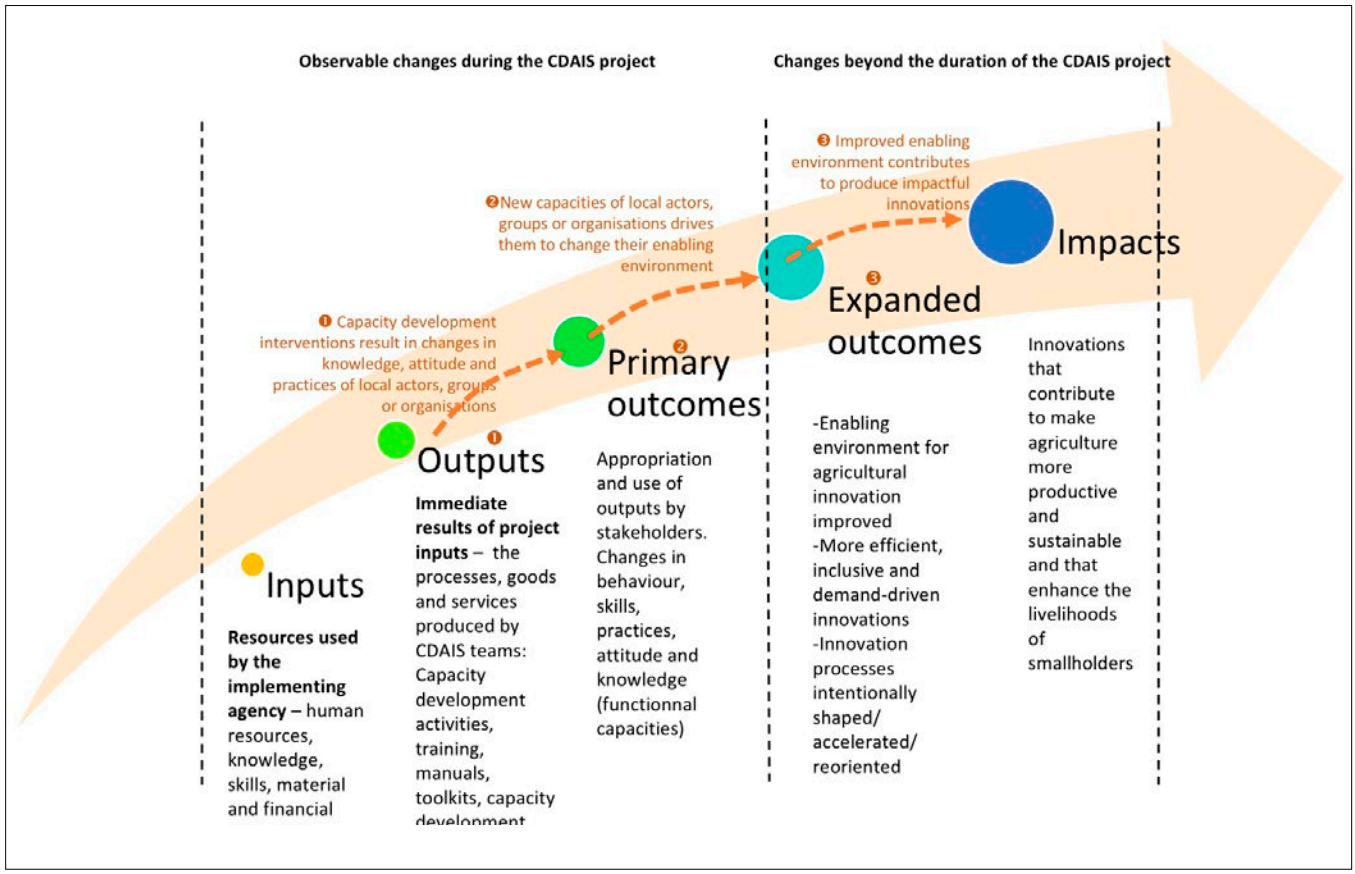
3.2.3. CDAIS theory of change and ex-ante impact pathway

The theory of change of the CDAIS project was initially developed at the beginning of the project and refined during the mid-term evaluation. The main assumptions are explained in the common framework, i.e. the development of 4+1 functional capacities in three dimensions (individual, organisational and systemic) using a dual-pathway approach (at innovation niche partnership and national system levels) should help to reinforce agricultural innovation systems and make them more effective in a diversity of contexts.

An ex-ante impact pathway scheme maps the inputs, outputs, and expected outcomes and impacts that might be produced within a project (see Figure 1).

While inputs and outputs are usually fairly easy to identify, it is harder to determine the nature of outcomes and impacts, their actual place and role in the impact pathway, and the contributions of capacity-development interventions in their production. Outcomes are strongly linked to capacity strengthening at individual, organisational and systemic levels. These are the necessary changes in capacities (that enable stakeholders to join and amplify the innovation process) that will eventually lead to actual impacts. In some cases, these changes can happen fast and be observable during the lifetime of the project. In other cases, it could take longer, according to the opportunities that stakeholders will have to implement new activities. Assessing impacts was considered beyond the reach of the CDAIS project.

Figure 1. Ex-ante impact pathway of the CDAIS project



THE MEL FRAMEWORK

Inputs:

Inputs are the *resources used by the implementing organisations*: human resources (Agrinatura Focal Persons [AFPs], FAO Country Project Managers [CPMs], National Innovation Facilitators [NIFs], National Project Coordinators [NPCs] from relevant national institutions, field staff, capacity-development experts or subcontractors), knowledge, skills, material and financial resources.

Outputs:

Outputs are t*he immediate results of project inputs* – the processes, goods and services that CDAIS staff produced. Examples include: training of National Innovation Facilitators, inception workshops, needs assessments, policy dialogues, capacity-development activities, classroom-based training, training manuals, and research and assessment reports or strategy documents (capacity-development plans). These immediate results are directly controlled by the implementing organisation. They include all the facilitation activities, capacity building and mentoring with innovation niche partnership and agricultural innovation system stakeholders. They do not include what the individual group does (or does not do) with the new knowledge, skills or attitudes emerging from these activities.

Primary outcomes:

Primary outcomes are *observable changes in the behaviour, attitude, practice and/or mindset of direct project 'beneficiaries'.*

Outcomes result from the appropriation and use of outputs by these first project beneficiaries (NIFs, partnership stakeholders, national organisations, national innovation platform and CDAIS country partners).

A project can thus only *influence* outcomes; they are not under control of the implementing organisation.

– At the *partnership* level, outcomes correspond to joint actions, i.e. activities that are collaboratively decided and designed (with the support of NIFs) and executed by partnership stakeholders and aimed at increasing collective efficiency and thus collective capacity to innovate. Joint actions can address two different areas related to internal and external issues from partnership stakeholders' perspective, respectively:

- Management issues related to the innovation process itself, at the innovation niche partnership level (new governance tools, new strategy, etc.)
- Partnerships, negotiation or advocacy issues to address technical, organisational or financial challenges with external stakeholders (policy makers, donors, industries, input suppliers, banks, etc.)

– At the o*rganisation* level, outcomes correspond to new initiatives to better support partnership stakeholders: new strategies, new vision, new support services or funding opportunities

– At the *individual* level, outcomes correspond to changes in the behaviour, knowledge or activities of partnership stakeholders. For example, members of the national innovation platform or policy makers, following national workshops or events (marketplace) and policy round-tables.

Expanded outcomes:

Expanded outcomes are changes in the functioning of the agricultural innovation system – i.e. becoming more effective, efficient, responsive and/or sustainable. They arise from individual and organisational capacities to innovate and correspond to the overarching capacity to innovate at the national level.

They can be revealed by the scaling up of innovation support processes, allowing innovation niche partnerships to enter the mainstreams of agricultural development. They also imply that changes become observable at the level of the innovation processes themselves: the innovation processes are shaped, accelerated and/or modified in an intentionally manner.

Expanded outcomes make the probability of impacts greater or closer.

The CDAIS project considered that expanded outcomes made the strengthening of the agricultural innovation system irreversible, in contrast to primary outcomes that may produce no effect in the absence of incentives.

Impacts:

Impacts refer to the long-term, sustainable changes in the livelihoods of farmers, the state of the environment and the conditions of rural poor, resulting from the spread or adoption of the innovations.

Due to the long-term horizon and the increasing influence of a wide range of contextual factors over time, functional capacity-development interventions can only contribute (partially and indirectly) to these enduring results in society or the environment.

3.2.4. Actors of change and threshold of irreversibility

The different types of stakeholders in a capacity-development project are distinguished by their level of involvement: actors from the direct project sphere, boundary partners and beneficiaries.

Boundary partners "are those individuals, groups, and organizations with whom a program interacts directly and with whom the program anticipates opportunities for influence." These actors are called boundary partners because, even though the programme will work with them to effect change, it does not control them. The power to influence development rests with the partners. The programme is on the boundary of their world. The programme tries to facilitate the process by providing access to new resources, ideas or opportunities for a certain period of time. A single boundary partner may include multiple individuals, groups or organisations if a similar change is being sought in all.

Actors from the direct project sphere are those, belonging to a boundary partner that are directly working in the project; this is the case, for instance, of the members of an innovation niche partnership.

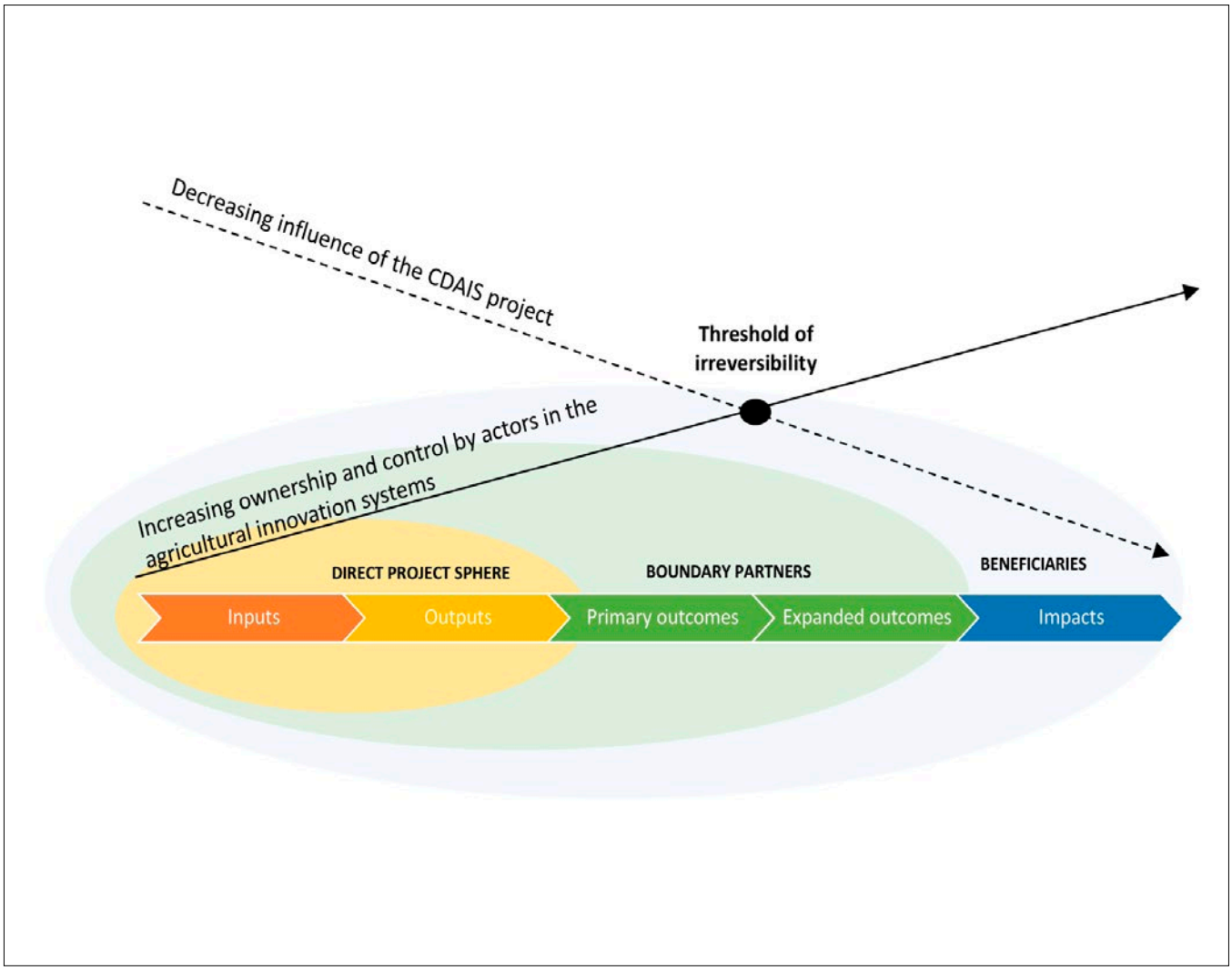
Beneficiaries are the wider range of actors and the communities that, within or outside of the project sphere, benefit from the progress of direct actors and boundary partners, and, in the case of capacity development for agricultural innovation systems will benefit of the intended innovation.

Source: IDRC (2001).

Not all outputs, outcomes and impacts in the theory of change will be relevant in all countries. Thus, the exact pathways of change will also vary by country depending on the different capacity needs, resources and contexts. A capacity-development intervention may lead to very different results in different partnerships, in different organisations, and in different innovation systems. Equally, there may be outputs, outcomes and impacts that are not represented in the ex-ante impact pathway. Only the most common changes that are expected to occur can be described before interventions start. The ex-ante impact pathway also gives information about the most important preconditions for achieving the project goals. The views of stakeholders are particularly important for the MEL process, especially for identifying the possible mechanisms of change from their perspective as boundary partners in the project.

There are also different options of pathways of change – towards developing functional capacities and strengthening the agricultural innovation system – depending on the national context, the positioning and influence of the project and other capacity-development situations or interventions in relation to agricultural innovation support that may happen in parallel to the project's own activities. In countries where the concepts of agricultural innovation systems and capacity development for agricultural innovation systems are relatively new, the focus is likely to be on raising awareness and training in the CDAIS approaches. In more mature innovation systems or in countries with stronger or more defined agricultural innovation policies, there is a greater possibility that opportunities exist for engaging quickly in more collaborative work to bring about systemic change.

Figure 2. Actors of change and threshold of irreversibility of the CDAIS project



Outcomes might be reversible if the boundary partners (individuals or organisations) do not have an incentive – or overall favourable conditions in their environment – to put their functional capacities into use. In the early stages of a project, the project team plays this incentive role that is supposed to decrease as the agricultural innovation system is strengthened (providing favourable enabling conditions). Capacity-development interventions implemented by the project should aim at creating the conditions for learning and acting in a transformative way, i.e. to innovate in a collective manner, responding to farmers needs and ensuring impacts. However, the theory of change assumes that the influence of the project will decrease as a growing number of agricultural innovation system actors – including those at institutional and policy making levels – take ownership and control of the CDAIS approach itself. We assume that at a certain point (that may vary from a country to another) a threshold of irreversibility should be crossed, ensuring the realisation of the innovation while contributing to the strengthening of the agricultural innovation system as a whole.

3.3. MEL at innovation niche partnership level: Supporting and assessing capacity-development processes

3.3.1. Key evaluation questions

- How did the coaching process of innovation niche partnerships contribute to develop functional capacities of partnership actors (individuals and organisations)?
- How did the functional capacities of innovation niche partnership actors contribute to accelerate or achieve innovation processes?

Coaching process – The 'coaching' of innovation niche partnership aims at supporting the collaborative work to achieve innovation. In the CDAIS project, the focus of the coaching was to develop their functional capacities and achieve innovation.

3.3.2. Participatory outcome mapping

The technique of outcome mapping is used to capture the understanding and expectation of the different groups of people of an innovation niche partnership: direct partners, boundary partners and potential beneficiaries. Outcome mapping helps innovation facilitators learn about the influence or progress of change among direct partners in the innovation niche partnership. It therefore helps them to think systematically and practically about what they are doing and to adaptively manage variations in strategies to bring about desired outcomes.

Outcome mapping starts from the view that development comes as a result of complex interactions between different actors, forces and trends. As it is difficult to attribute development impact to interventions directly, outcome mapping focuses on contributions of interventions to developmental results. In doing so, it focuses on people. Outcome mapping shifts the focus of development from bringing 'changes in states', to 'changes in behaviour, relationships, activities or actions' among those in innovation niche partnerships. Progress markers are used as indicators of those changes. They are statements of desired overall behavioural changes that the boundary partners would like to exhibit by the end of the capacity-development activities. They are identified in a participatory manner at the beginning of the project intervention and are regularly evaluated and refined throughout the coaching process of innovation niche partnership stakeholders.

3.3.3. Progress markers

Progress markers describe the gradual or milestone changes in a boundary partner as it progresses from its current situation to full achievement of the innovation project, or the improvement of its situation, from the very first steps right through to deep transformative changes.

Identifying realistic and observable progress markers is essential to the success of outcome mapping. Progress markers provide a framework for observing changes in boundary partners' actions, interactions, relationships, procedures or policies over time, and can measure the direction of those changes in relation to the agreed intention.

Within the MEL system, progress markers help reveal patterns of changes during progress towards the capacities to be developed at the partnership level (see Table 4). They are used by different groups of actors in different ways:

- by National Innovation Facilitators to fine-tune their coaching process according to the achievements made during learning cycles at t1 and t2 (see 4.1 The MEL phases and times);
- by innovation niche partnership actors and other direct beneficiaries as milestones of their innovation project;
- by the country team as a tool for assessing outcomes at the end of the project;
- by the global team as a tool for transversal (cross-country) analysis.

Table 4. Examples of progress markers

Innovation niche partnership	Priority objectives	Strategy	Capacities to be developed at the innovation niche partnership level	Expected changes: progress markers from stakeholders' perspective (extracts)
Drip irrigation systems for small family farms (Burkina Faso)	Improve technology and make it accessible to smallholder farmers all over the country	Develop a local manufacturing base for making and repairing the equipment needed Raise awareness and knowledge among smallholders on the economic and environmental advantages of the technology	Capacity to collaborate Capacity to reflect and learn from past experiences	**Expect to see:** • A leader of development organisations is identified who acknowledges the challenges to be overcome • The leader has the requisite skills for driving the agenda • The leader supports the collaborative development of a strategic road map to scale the technology **Like to see:** • Public research is willing to implement a collaborative research and development project integrating local artisans to co-develop technologies **Love to see:** • The Ministry of Agriculture agrees to give priority to private sector development in the scaling out of the technology • The Ministry of Agriculture agrees to integrate the technology into its advisory system

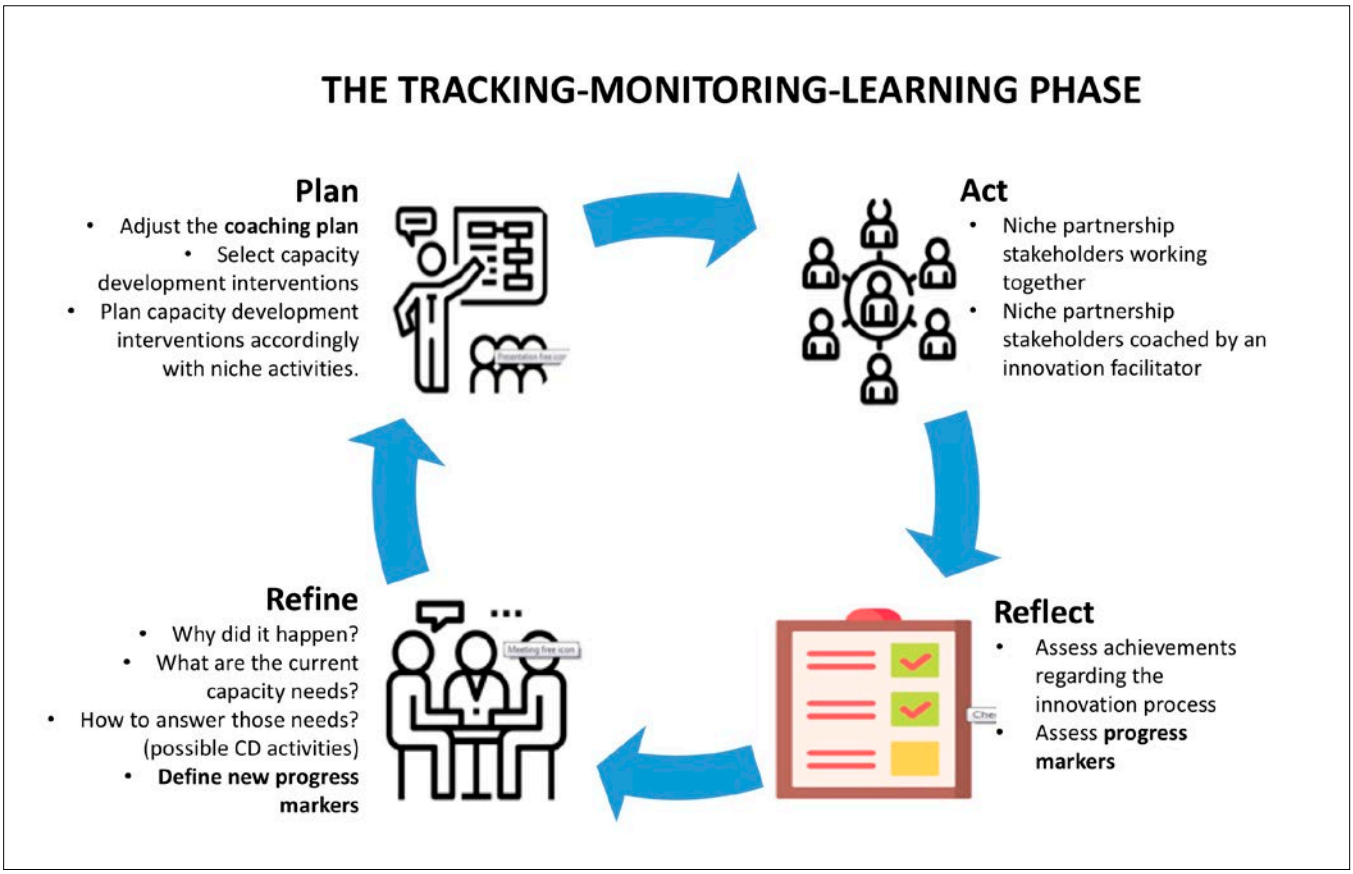
3.3.4. Embedding MEL and experiential learning cycles

At partnership level, the MEL system is embedded into the learning cycles of partnership stakeholders and innovation facilitators. Learning is the process by which knowledge is created through the transformation of experience, with the experiential learning cycle comprising of four stages.

1. Concrete experience – a new experience or situation is encountered, or an existing experience is reinterpreted.
2. Reflective observation of the new experience – of particular importance are any inconsistencies between experience and understanding.
3. Abstract conceptualisation – reflection gives rise to a new idea, or a modification of an existing abstract concept the person has learnt from experience.
4. Active experimentation – the learner applies the idea(s) to the world around to see what happens.

The MEL data are used as inputs for learning cycles.

Figure 3. MEL embedded into learning cycles at the partnership level



4. MEL times and tools

4.1. MEL phases and times

At the country level, a three-phases approach has been adopted to implement the MEL system.

Phase one (t_0): before capacity-development activities start

- At partnership level: capacity needs are assessed, innovation projects identified and explained, a coaching plan is designed to develop the capacities of actors towards realising their innovations.
- At national agricultural innovation system level: key organisations are identified, innovation facilitators are recruited, and the existing enabling innovation and agricultural policies are reviewed.
- MEL provides tools to form a baseline, ex-ante outcome pathways and set progress markers.

Phase two (t_1, t_2): during capacity-development activities

- At partnership level: capacity-development activities are implemented.
- At agricultural innovation system level: policy-dialogue activities are implemented.
- MEL provides tools to track and monitor ongoing changes in the three dimensions (individual, organisational, systemic).

Phase three (t3): after completion of capacity-development activities

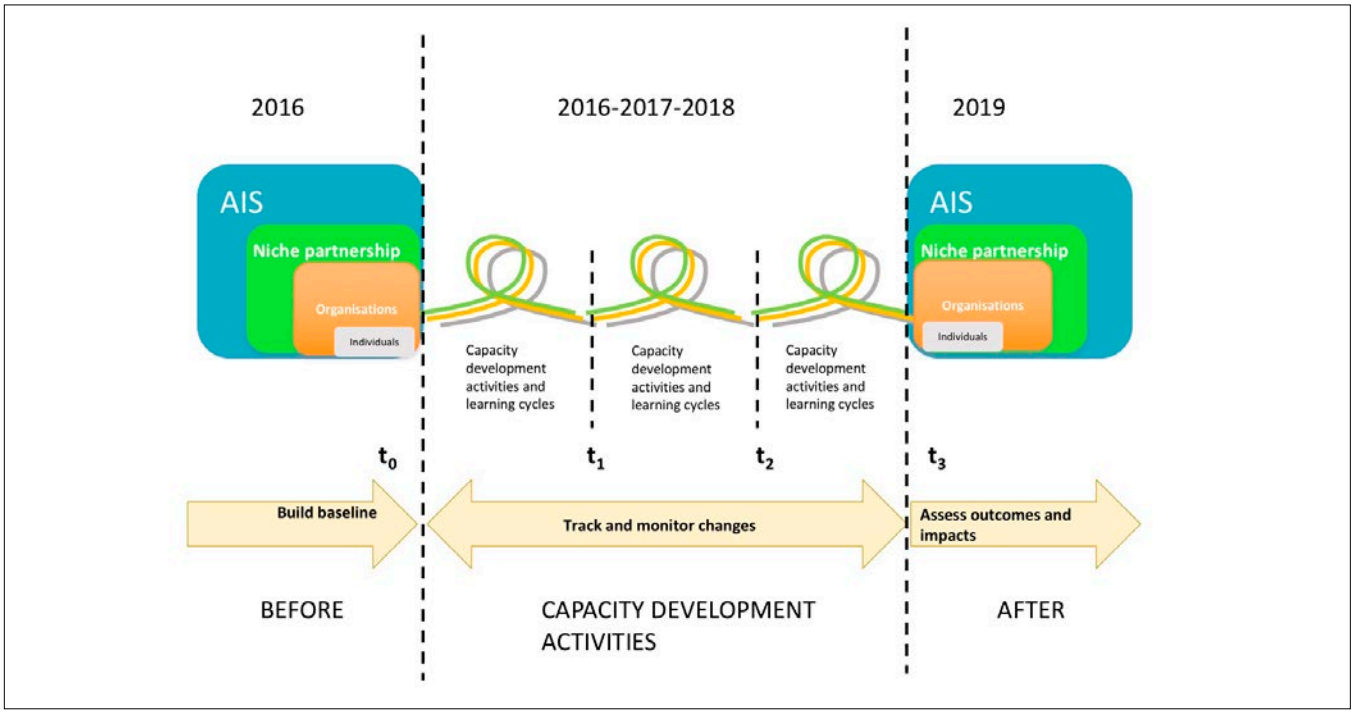
- At both levels, outcomes are assessed, and a country-wide analysis is performed, as is a cross-country analysis.
- MEL provides tools and methodologies to collect and compile end results at both levels, and combine them into ex-post outcome pathways.

To have reference points to measure changes achieved by the project, various timings were proposed to set a tentative coordinated pace to the project implementation across the eight countries:

- t_0 is before capacity-development capacities are launched;
- t_1 corresponds to the end of the first learning cycle, approximately 5–6 months after starting capacity-development activities;
- t_2 corresponds to the end of the second learning cycle, approximately 5–6 months after t1;
- t_3 is at the end of capacity-development activities.

Synchronisation of MEL and capacity-development activities in the three phases is shown in Figure 4.

Figure 4. Times and phases of MEL in the CDAIS project



AIS: agricultural innovation system; CD: capacity development.

4.2. MEL tools at agricultural innovation system level

Table 5: Minimum common tools for MEL at the agricultural innovation system level in the eight pilot countries

Time	Tool	Short description	Learning events
Baseline (t_0)	**Scoping study**	A study based on interviews with key informants is used to map agricultural innovation system stakeholders, identify innovation political agendas, and assess strengths and weaknesses of the agricultural innovation system	**National validation workshop** Presented the results of the capacity needs assessment to agricultural innovation system stakeholders and jointly validated pre-identified possible impactful capacity-development interventions
	NIF radar	NIF radar is a self-assessment tool for National Innovation Facilitators (NIFs), focused on progress made in their skills, knowledge and attitudes	
Monitoring (t_1, t_2)	**Stories of change**	Stories of change is a tool for communicating progress and the value of the CDAIS project in an accessible way. Stories were regularly collected and written by country teams	**Meetings of the technical project committee** The country team regularly met to adapt the implementation strategy on the basis of feedback from participants and the identified capacity-development needs
	Event log	Event log is an online system that captures (i) information on the organisation of events (when, what, why, how), and (ii) participants' evaluation and learning after each workshop or event	
Assessing (t_3)	**Self-assessment radar for NIFs**	NIFs assessed their progress for key skills for the facilitation of innovation processes	**Final assessment workshop and national CDAIS forum** Validated the *ex-post* impact pathway and designed an exit strategy using inputs from the results of the MEL system
	Enabling environment questionnaire	A study based on interviews with key informants, used to assess changes in the institutional and policy context that enable innovation in the country	
	Ex-post impact pathway	Draws the causal relationships between inputs, outputs, outcomes and potential impact, thus documenting how change was generated in the agricultural innovation system through intervention at all levels (individuals, innovation niche partnerships and organisations) and the policy-dialogue activities	

4.3. MEL tools at innovation niche partnership level

Table 6. Minimum common tools for MEL at partnership level in the eight pilot countries

Time	Tool	Short description	Learning
Baseline (t_0)	**Innovation timeline**	The timeline is a method for joint reflection on a network process. It helps participants to share perceptions on what is going on. It uncovers the history of the network, pivotal moments and the next steps	**Capacity needs assessment workshops and outcome mapping** With the help of the facilitator, translating the theory of change into actions Designing a coaching plan, including vision, capacity needs, capacity-development strategies and progress markers
	Network analysis	Network analysis takes stock of who forms the network of innovation actors and the nature of interactions between them (provision of services, information and knowledge, funding, etc.) and whether they are actually supportive to the innovation project	
	Capacity assessment questionnaire and scoring tool	This is an individual evaluation of the functional and technical capacities of the group that forms the innovation niche partnership. A scoring tool and a coxcomb graph are used to represent the level of capacities	
	Progress marker identification	Identify progress markers according to the capacity-development strategy	
Monitoring (t_1, t_2)	**Progress marker evaluation and refinement**	Assess whether progress markers have been met, exceeded, or whether there has been a deviation from the initial progress markers that were identified	**Reflection and refinement (R&R) workshops** Based on the monitoring results, reflecting on the coaching plan and refining it if needed
	Enriched innovation timeline	Collect stories of small victories, learning situations, and failures with partnerships, organisations, and other stakeholders including direct beneficiaries Help stakeholders to select the stories that drove the most significant changes in the innovation process and in their innovative capacities Report them on the timeline drawn during the capacity needs assessment. Write the associated stories	
Assessing (t_3)	**Capacity assessment questionnaire**	Assess the progresses made for each functional capacity in the course of the project, based on individual perceptions	**Evaluation workshop** Based on the assessment of progresses made, identifying with innovation niche partnership actors how they can continue by themselves without external support
	Updated NetMap	Assess the current actors in the network: who has dropped out and who has joined? Assess the nature of relationships between actors (interpersonal, influenced by market stakes or organisational stakes) Assess whether these relationships have evolved during the project	
	Contribution analysis diagram	Contribution diagram links the project's outputs to changes in capacities and related outcomes. It seeks to describe and weight the contribution of the former to the latter	

5. MEL in practice

5.1. Coordination of the MEL system

The project established MEL teams at the global and country levels. The global MEL team helped to take informed decisions, validate evidence of progress, and reinforce the project goals and approach. It also provided methodological inputs, guidelines, backup and coaching of MEL country teams.

MEL country teams were largely embedded in the respective country teams and worked in close collaboration with the team of innovation facilitators (i.e. the coaching teams) that were responsible for designing and implementing capacity-development activities. The collaboration was fostered by creating spaces for reflection and sharing both before and after capacity-development intervention cycles.

MEL country teams also had direct roles in helping the coaching teams prepare workshops, register the capacity-development processes and provide support to the innovation facilitators through on-the-spot monitoring and recording of participants' reflections. In addition, they provided analytical reports that helped the country team further analyse the activities of the project and interact with the various actors. In several countries, the innovation facilitators also took a share of MEL activities by participating in the recording and analysis of activities and participants' actions and reactions.

5.2. Perceptions of value and benefit

On the one hand, the MEL system is an internal coordination and management tool, on the other hand it is a feedback mechanism to those who designed the TAP Common Framework and to the funders of the CDAIS project. Both dimensions were rapidly put into practice, but were not immediately valued as such by the country teams, which were dealing with actors in search of support for activities that would serve their own purposes. There was therefore a progressive shift from the global coordination team to the country teams in terms of perception of value, purposes and quality of the MEL system. This was largely due to a learning process of concepts that were unequally known and mastered, but progressively started to make sense as activities were implemented, monitored and evaluated and the proposed tools and concepts were actually applied. The ability to measure the effects of the project was enhanced over time, as activities provided more 'results' to be evaluated and analysed. Alongside this, the usefulness of the MEL system in enabling the required analysis also increased. The learning curve, however, proved arduous and was often questioned by the teams themselves. The facilitators would see it as an extra burden and control, so tools meant for back-office management (e.g. the coaching plan) were presented to partnership actors and used directly for data collection, adding more complexity to the complexity.

Progress markers generated a great deal of confusion at first, as they are not part of standard monitoring and evaluation (M&E) procedures. It was hard for actors to differentiate progress markers from indicators, so they questioned why CDAIS did not simply use indicators. The main turning point in the adoption of the MEL tools and concepts by the teams was the first Reflection and Refinement (R&R) workshop, organised after the first learning cycle: there the MEL tools (coaching plan, progress markers, innovation enriched timeline, output timelines, analytical reports) started to make sense because they allowed the teams to pause the capacity-development process, take a step back to analyse it and, together with other actors, jointly measure progress made and make informed decisions about the next steps. Having completed this learning process, the now skilled experts are an asset for their countries.

5.3. Challenges in gathering, analysing and using information

5.3.1. Moving towards more consistent and better-quality data

As teams would not immediately perceive the relevance and usefulness of the MEL tools and they lacked practice in their use, the initial use of tools was erratic, and the data collected was not as accurate as it could have been.

Field support and joint analysis brought by the global MEL team gradually helped refine the collection and analysis of data. A feedback loop was also created among the country teams by which the more they performed MEL-based analysis and used MEL as a management tool – thanks to which they could not only show their results but also adjust their performance – the more they perceived its usefulness and relevance, and the more they harvested and provided quality data. Substantial progress was made in the last six months of activities due to a conjunction of the following factors:

- one or more full learning cycles had already been implemented;
- the process for R&R workshops was detailed and workshops were organised in all countries;
- guidelines had been developed and agreed, concepts were explained and in-the-field support was brought to all countries;
- the need to show results became more pressing as the end of the project neared.

The interest by all teams in understanding and measuring the impact they had produced grew as a reasonable amount of data had been accrued from activities and a sufficient length of time allowed had passed to enable retrospective analysis and measurement of their own progress in delivering the project.

5.3.2. Ensuring the right people participate

It is worth noting that when Agrinatura Focal Points were permanently posted in the countries, the learning process was shorter as support was provided on a regular basis in terms of both explaining the concepts and showing how and where to apply them concretely. However, in each country, a dedicated MEL focal person at the field level was hired and trained to drive the whole process.

Equally, in all circumstances, MEL was rightly regarded as a tool to support implementation, and its full adoption required both the country team and the AFP to adopt it and promote its use. With field support, it became clear that MEL is a common tool that can and has to be used by all team members, particularly during workshops. All team members then had the opportunity to try using MEL tools, and which proved useful in the preparation of the R&R workshops and other moments of analysis.

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Acknowledgements

The MEL system has been developed by the global MEL working group and tested, step by step, by each country team with the support of their Agrinatura Focal Points and FAO members. As such, we acknowledge all the MEL country teams, Agrinatura Focal Points and FAO members listed below.

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FINANCIAL SUPPORT

This project was implemented with the financial assistance of the European Union

GLOBAL PARTNERSHIP

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Food and Agriculture Organization of the United Nations

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Angola

- Instituto Superior de Agronomia (ISA), Universidade de Lisboa
- Instituto de Investigação Agronómica (IIA)

Bangladesh

- Natural Resources Institute (NRI), University of Greenwich
- Bangladesh Agricultural Research Council (BARC)

Burkina Faso

- Centre International de Recherche Agronomique pour le Développement (CIRAD)
- Ministère de l'Enseignement Supérieur, de la Recherche Scientifique et de l'Innovation (MESRSI)

Ethiopia

- iCRA
- Ethiopian Institute of Agricultural Research (EIAR)

Guatemala

- Agenzia Italiana per la Cooperazione allo Sviluppo (AICS)
- Ministerio de Agricultura, Ganadería y Alimentación (MAGA)

Honduras

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Copy-editing
Guy Manners, Green Ink

Photographs
CDAIS unless otherwise stated

This project was
implemented with the
financial assistance
of the European Union