Leadership as a Lever for Agroecology

The Case Study of a Leadership Development Initiative in Burkina Faso, Mali and Niger

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Leadership Essentials' participant facilitating an experiential activity during a community members' meeting. Photo credit: Arouna Bayoko.

Executive Summary

The following case study details our process of developing, implementing and measuring a leadership development initiative that was carried out over four years in Burkina Faso, Mali, and Niger. This leadership development initiative, which was funded by the McKnight Foundation, was meant to develop leaders from one of its programs called the Collaborative Crop Research Program - West Africa community of practice. These leaders were smallholder farmers, local researchers, development practitioners, master's students, Ph.D. students, local NGO's and associations' employees, research technicians and assistants, food co-operative representatives, program managers, data managers, moderators/hosts, grain transformers, members of farming cooperatives, and other key stakeholders.

We built the leadership journey following a discovery phase during which we interviewed future participants. First, participants applied to attend a four-day Leadership Essentials program and were selected using criteria (including gender parity) identified during the discovery phase. After attending the program, participants applied their learnings through providing leadership training to their colleagues and the communities they work with. We call this the apply phase. During this period, participants were individually and collectively mentored and coached by CCL Faculty. After the apply phase, the candidates who were the most qualified, motivated, and with the greatest potential in working with communities were selected to attend a five-day Train-the-Trainers program. They were also supported after the program through ongoing coaching and peer mentoring. Finally, the newly certified trainers and some of their managers and Principal Investigators (PIs) attended a Leadership Thematic Group Meeting where they discussed the details of their future leadership development.

In total, for the Leadership Essentials program, we trained 144 participants. For the Train-the-Trainers program, we trained 47 trainers. These participants went on to train 9,385 community members and colleagues.

Our monitoring and evaluation shows that this initiative generated impact at three levels: at the personal, interpersonal and contextual levels. At the personal levels, participants reported an increased sense of self-awareness, a more positive affect (confidence, pride), and consistent adoption of new habits and behaviors (such as seeking and giving feedback or experimenting with new practices of collaboration). At the interpersonal level, participants reported a change in the quality of relationships they have with others around them. This change came from a new perspective in how they understand leadership and how they perceive others. This change also resulted from a commitment to acting more as a giver (rather than a taker) towards others. At the contextual level, participants, community members and PIs reported the establishment of new, shared practices that increased communication, collaboration, decision-making and trust. Community members also reported a positive influence on their communities in the sense that the leadership facilitation and training given by participants allowed women to speak up more and participate equally in the collective decision-making. However, the initiative also created frictions in terms of power dynamics as it challenged some traditional, normative views about who is a leader and who can contribute to leadership.

Finally, during the final months of this initiative, we administered surveys and conducted face-to-face interviews with participants to identify specialized agroecological system leadership capabilities needed to transform agriculture. From their insights, we made a series of recommendations about how to develop those more specialized capabilities by adopting a unique, practice-based development approach that is community-oriented and inclusive.

Introduction

Ten years. That is the number of years left to achieve the Sustainable Development Goals and effectively solve our collectively owned Grand Challenges. These Grand Challenges are problems created and aggravated by humans - our ancestors and us, the organizations and structures we created.

Among our most pressing challenges is ending hunger (SDG 2) by improving food security and nutrition. We must do so while restoring and promoting a sustainable use of terrestrial ecosystems (SDG 15), and ensuring sustainable production and consumption patterns (SDG 12). This must be done while taking urgent action to combat climate change and its impact (SDG 13). All of this suggests that we must rethink the way we practice agriculture and use food systems locally and globally. There must be a positive, irreversible and sustainable transformation of agriculture as a system. That transformation is not only urgent with the global population growing, but also because natural resources are increasingly volatile and under stress (Nelson & Jenkins, 2016). This transformation is made more urgent by the fact that around 2.5 billion people (including small-scale farmers or forest-dependent communities) depend on their livelihoods and many of them live in poverty (FOA, 2016). This is especially the case for women. In other words, the strain on natural resources creates further gender imbalance and inequalities by depriving women of opportunities to achieve economic and social empowerment (economic and social empowerment are key priorities of SDG 5). Thus, transforming the agricultural system becomes not only an emergency in and of itself but it is an emergency because it affects the achievement of a multitude of SDGs, including gender equality (SDG 5) and the elimination of poverty (SDG 1).

Many stakeholders have been collaborating and working steadily over the past years towards this transformation. One of these partnerships is the Collaborative Crop Research Program (The CCRP) of The McKnight Foundation (the Foundation). The CCRP's vision is to contribute to a world where all have access to nutritious food that is sustainably produced by local people (Moore & Cady, 2015). The CCRP does so by supporting collaborative agroecological systems through research and knowledge sharing that strengthen the capacities of farmer groups, research institutions, development organizations, and others (CCRP, 2019a). In other words, the CCRP works to intensify agroecological transformation. This transformation entails the "application of integrated ecological, economic and social principles to the transition of smallholder farming systems, towards greater resilience." (Sinclear, Wezel, et al., 2019: 1). Increasingly, agroecology is being seen as the most sustainable and equitable way to transform and regenerate food systems locally and globally (Sinclear et al., 2019). This is because agroecology is steeped in science and research-based practices while embracing "social and cultural aspects in developing equitable food systems within which all people can exercise choice over what they eat and how and where it is produced" (Sinclear et al., 2019: 2).

Bringing about a more ecological and sustainable agriculture entails a three-tier system transformation at the:

- Smallholder farming communities

- Food and agriculture systems

- R&D system (CCRP, 2019b)

Such a complex change of systems involves a lot of ambiguity. There are no ready-to-wear solutions. Progress is in constant flux according to the interests, passions, and fears of people as well as unforeseeable circumstances (USAID, 2018). What this means for individuals involved in changing the system is that they must transform their mindsets, skillsets, toolsets, and knowledge. By transformation we mean, "physical and/or qualitative changes in form, structure or meaning-making" including "psycho-social process[es] involving the unleashing of human

potential to commit, care and effect change for a better life." (O'Brian, 2012: 670). Gosnell and colleagues further suggest that a systemic change entails changes at the personal, the practical and the political spheres (Gosnell, Gill & Voyer, 2019). At the personal level, individuals must change the way they act and behave. At the practical level, stakeholders involved in projects must transform the way they collaborate, innovate and work together to ensure an effective and sustainable transition towards agroecology. In the personal, practical and political transformation, there is likely to be 'zones of traction' that allow each sphere transformation to feed positively into the other spheres and 'zones of friction' that can slow or hinder the interactive, systemic change (Gosnell et al., 2013).

As the CCRP wanted to maximize its potential, it looked at how this transformation in individuals, between individuals and in their collective practices could be fostered. It became clear that all of the key stakeholders needed to enhance not only their technical agricultural and business skills, but also enhance their leadership and communication skills, ability to cross sectoral boundaries, and work effectively in teams in the three target countries. Collaboration and communication needed to be more effective between university researchers and farmer cooperatives, smallholder farmers, and other local organizations. Thus, a concerted, organized approach was needed to enhance the leadership skills of these different stakeholders to make substantial improvement in developing sustainable local food systems.

CCRP West Africa Community of Practice

For this leadership development initiative, we developed the leaders* of the CCRP West Africa community of practice (CoP). This CoP gathers stakeholders from Burkina Faso, Mali and Niger. Its focus is to improve food security and nutrition for smallholder farming families in these three countries, which rank among the world's poorest countries. Millions of people in this region are malnourished and food insecure (CCRP, 2019c). Food production is hindered by low soil fertility, highly erratic rainfall, and climate variability (CCRP, 2019c). Additionally, parasitic weeds, insect pests and fungal diseases handicap further food production.

The CoP fosters agroecological intensification (AEI) of sorghum and pearl millet-based agricultural production systems. The CoP works to strengthen and develop:
- Improved soil and water conservation and agronomic management
- Better crop activities and seed distribution systems
- Integrated pest management
- Better systems (crop-tree-livestock) integration at plot, farm and landscape levels
- Diversified value chains
- Better diets and nutrition
- Improved income and livelihoods for farming families (CCRP, 2019c).

Table 1. Examples of the CCRP West Africa projects participants were working on during this leadership initiative.
Adapted from Haussmann, Somé & Schuch (2020) and Grobler (2016 a & b)

Name of the CCRP project	Country	Project focus/mission
Child Nutrition	Burkina Faso and Niger	• Improving the nutritional status of children aged from 6 months to 12 years in rural areas. • Involving mothers, producers and other stakeholders (e.g. schools, health centers, community leaders, meal managers) in developing and using local composite flours (cereal-plus-legume or "C+L" flour) of good nutritional value for the preparation of family meals, supplementary food and child-preferred products.
Bambara Nut FRN	Burkina Faso	• Bringing together researchers and about 30 women farmers' organizations. • Conducting research "by women farmers for women farmers' by establishing a farmer research network that works on the transformation of the Bambara nut production system through the application of the principles of agroecological intensification.
FaReNe ("Supporting and strengthening Farmer-led Research Networks to Improve Local Innovation in Burkina Faso and Mali")	Burkina Faso (Eastern and Northern regions) Mali (Ségou region)	• Building a network between producers, researchers and agricultural advisors. • Highlighting the importance of local knowledge. • Promoting local innovations based on ecological principles.

* (smallholder farmers, local researchers, development practitioners, master's students, PhD students, local NGO's & associations employees, research technicians and assistants, food co-operative representatives, program managers, data managers, moderators/hosts, grain transformers, members of farming cooperatives, and other key stakeholders)

Name of the CCRP project	Country	Project focus/mission
Farmer's Knowledge	Burkina Faso and Mali (Semi-arid regions)	• Improving the food and nutrition security - as well as the living environment - of rural families by developing sustainable, cereal-legume cropping systems that take into account the needs and realities on the ground. • Introducing multi-use agroforestry species for nutrition, income, and overall health. • Building a participatory research framework led by agricultural producers to share and scale up their knowledge.
Fonio (Intensifying fonio cultivation in different production areas in Mali)	Mali	• Participatory selection and producing of Fonio (Fonio is an orphan crop that contributes to food security and income generation of smallholder farmers). • Restoring soil fertility through agroecological cultivation techniques. • Identifying the most micronutrient-rich varieties. • Integrating fonio straws into animals' feed.
Pathways to AEI	Mali (Southern region)	• Co-learning between farmers, other local stakeholders and researchers. • Collaborating to identify the best locally adapted criteria, technical solutions and tools needed to transition toward sustainable and resilient farming systems.
Dual purpose sorghum and cowpeas	Mali	• Broadening the window of crop-livestock integration by blending sorghum and cowpea varieties with high-quality grains and crop residues. • Improving human nutrition and animal nutrition. • Training farmers' organizations and junior scientists in new production technologies.
CowpeaSquare	Burkina Faso and Niger (Sahel)	• Improve the cowpea (important legume in Sahel) varietal diversity. • Adapting the technical practices of cropping systems to fit farmers' needs of crop production and processing. • Promoting scaling up of agroecological intensification to increase farmers' incomes.
Networking4Seed	Burkina Faso, Mali and Niger	• Growing sustainable seed systems and reducing production risks by learning from best practices and experiences across three countries. • Increasing farmers' organizations' technical and organizational capabilities and governance through co-learning. • Increasing the availability and accessibility of improved seeds to men and women farmers.
Gimem (integrated management of major insect pests for rainfed crops in the Sahel)	Burkina Faso, Mali and Niger (Sahelian agricultural zones)	• Reducing losses due to pest damage and enhancing pearl millet yields by developing warning and preventive, agroecological systems.
Women's Fields	Niger (Maradi and Tillabery regions)	• Improving women's welfare by increasing the yields of their fields using low-cost, agroecological intensification (AEI) options (e.g. sanitized human urine). • Developing more AEI options based on the specific farmers' contexts and needs.

The Foundation granted funding to CCL to provide leadership development to these farmers, local researchers, scientists, development practitioners, and other key stakeholders of the CCRP West Africa CoP. The overall mission of the leadership journey was to enhance their effectiveness as leaders as well as improve their cross-sectoral collaboration, communication, and decision-making (Vandenbroeck & Beachler, 2015).

A special emphasis was placed on gender equality. Women form a core part of the agricultural workforce and increasing the number of women in leadership positions is critical to not only give women a voice, but also ensure their concerns are represented. Based on our decades-long experience in leadership development, we know that women's involvement improves the way leadership and decision-making are practiced.

We initiated the project with a holistic design approach to help ensure that our leadership programs and solutions were relevant and aligned with the CCRP program.

We launched the initiative to align the timing with the annual gatherings of the CoP in Burkina Faso and Mali in 2016.

The remainder of this report provides the full details of how we designed the entire learning experience.

How Did We Build the Entire Learning Experience?

We adopted a holistic design approach to develop the entire learning experience as well as the monitoring and evaluation. We specifically chose this design approach as it focuses on understanding the specific individuals, their interactions with others, the work they do together and the context in which these individuals work together (Sepers, 2017). Thus, integral designing focuses on the interconnected whole. This provides program designers with an in-depth view of how the entire system functions and can be transformed through leadership without causing unnecessary frictions along the way. Additionally, integral designing is collaborative and cyclical in nature. It starts with the beneficiaries of the learning experience and constantly moves between different creative stages to ensure that the beneficiaries' input is always integrated. Our approach has five main phases: Discovery, Ideation, Development, Implementation and Scaling.

Discovery

The first stage of our holistic design is discovery. Vicky Grobler (the Program Director) visited Niger and Burkina Faso for the CCRP's annual gatherings in March 2016. This discovery stage consisted of four interconnected steps: connect, understand, collect critical data, and analyze the data to identify the core leadership needs. After the Foundation awarded CCL the grant to carry out this leadership initiative, we had initial conversations with the CCRP West Africa regional team (at the time Bettina and Hamado), to align our common vision for the four-year partnership.

In the grant application, CCL had made a proposal laying out the key components to the leadership development journey. This proposal included two face-to-face components that would happen back-to-back:

- a four-day, face-to-face Leadership Essentials (LE) program to be delivered to groups of 24 participants in each of the three countries involved in the initiative;

- a five-day, face-to-face Leadership Essentials Train-the-Trainers (TOT) to the 8 most motivated and qualified participants from each country (Vandenbroeck & Beachler, 2015).

The proposal also included ongoing coaching and digital learning opportunities. Finally -and most importantly in terms of maintaining the integrative design process- our proposal included a discovery phase. We wanted to put aside the proposal and approach the leadership initiative as a collaborative learning journey starting from the insights and lived experiences of the future participants. These participants were the ones who in practice enacted the agroecological transformation and it was important to take time to connect and discuss with them to fully understand their professional and lived experiences with leadership.

Our discovery approach was holistic and insight-oriented. By holistic, we sought to look at the individuals, the relational dynamics between them, and what they were trying to achieve together. We were looking for key insights (Dalton, 2016). First, we wanted to uncover fundamental human truths (Dalton, 2016) about our future participants. We wanted to connect with them as humans and understand who they were, what motivated their behaviors and actions, how they viewed the world, what their leadership needs were and how they linked leadership to their mission of intensifying agroecology.

In other words, we wanted to step outside of our original proposal, see the world as our future participants saw it, and understand what truly mattered for them. We also wanted to gain insights into the larger life story of these people we were going to serve and accompany for four years.

During these sessions, we listened with an open mind so that we could perceive clearly and deeply the complexity of the context in which the attendees were working, especialy in terms of the social dynamics between the CCRP members. We also wanted to have conversations to identify key leadership needs and gaps that would make a significant impact on AEI if successfully developed.

To achieve this, Vicky first talked to every attendee of the CCRP annual gatherings in Niger and Burkina Faso either in one-on-one interviews or in focus groups during lunch breaks. While connecting with attendees, Vicky focused on asking questions and actively listening. Table 2 lists the questions (which come from CCL's discovery questions database, developed over decades of research) along with the area of insight they helped us understand.

Sorghum diversity grown in association with cowpea. Photo credit: Bettina Haussmann.

Table 2. Sample of discovery questions

Area of insights	Questions
Intrinsic needs, aspiration and motivation (with evaluation/success criteria)	What is your professional journey so far? What does it mean for you to work on the CCRP projects? What kind of leadership development or experience have you had before? What would it mean for you personally to be part of this leadership initiative? Do you see yourself as a leader? (If yes, why? if no, why? and what is a good leader for you?) How would you behave and would you act differently as a leader as a result of attending the leadership initiative?
Leadership gaps/opportunities (with evaluation/success criteria)	What are the leadership gaps (individual and collective) that need to be addressed to enable AEI? What factors (cultural, organizational, etc.) will influence the success of this initiative? What would success look like if the initiative were successful? What differences would you see? What would be the impact on the AEI? What else do we need to be aware of about your leadership needs?
Culture/context (with evaluation/success criteria)	Which project are you working on? What are the most complex aspects of your project? What kind of resistance are you encountering? How are you dealing with that? How are the current leadership capabilities enabling or constraining the AEI change? Who are the communities you work with? What are the key cultural conventions (e.g. women not being involved in decision-making because they are not perceived as leaders) that guide those communities? How will this initiative likely affect those conventions? How will the communities react to that change?
The CCRP system alignment (with evaluation/success criteria)	How are the different stakeholders collaborating? What are the specific skills that need to be improved to make the collaboration more effective? How will you know that collaboration is improving? Which stakeholders would benefit significantly from being part of this initiative? Who might not be on board and why? What is the best time to do this work?

In parallel to the interviews and focus groups, Vicky carried out ethnographic participant observation (Spradley, 1980). We wanted to directly observe our future participants as they were interacting in real time, without any inferences or judgments. This allows listening to what is being said, both emotionally and physically. In other words, what we wanted to observe was the microcosm of the CCRP leadership culture to understand the points of intervention in how they collaborate or communicate among others. By doing so, we also wanted to see how the broader social culture affects the interactions: Is there a gender difference in the interactions? Is there a reliance on authoritative figures? For instance, the discovery process revealed that Niger's stakeholders seemed to be more dependent on authority than in Burkina Faso.

After the first round of interviews and observations, Vicky connected with the lead designer (Sandrine Tunezerwe). Sandrine would carry out a "stop and reflect" debrief with Vicky. More specifically, she asked Vicky two types of questions:

- What are you learning so far in the discovery? How are you interpreting their values, aspirations and needs based on your observations? How might we leverage the insights for the second round of interviews and observations?

- What are you learning about yourself in the process?

During the debrief, Sandrine also added her own interpretation of the emergent insights based on her expertise in design and having lived in Burkina Faso for a limited time. This means that the brainstorming around ideation was started at that point although it was informational in nature.

Another objective of the discovery phase was to further discuss key details of the initiative - including selection criteria, the venues, and the logistics requirements - with the CCRP West Africa regional team (Bettina, initially with Hamado and then with Batamaka) and the attendees. All of them suggested for instance having a gender parity as a selection criterion because women had significant and central roles in guaranteeing the success of agroecological intensification.

The last objective of the discovery phase was to discuss with the attendees what would be the ideal time frame to train them especially taking into account the rainy season and the political contexts (elections in one of the countries).

Following the discovery phase, two internal documents were developed (Grobler, 2016a & b). These documents contained the key findings shared by the attendees and critical data from the participants' observations, which the CCL team incorporated into the program design.

Ideation

After the discovery phase, we started the formal ideation phase. In this phase, our program design team seeks to identify the emerging themes and draft a blueprint that explicates the overall leadership development frameworks and the journey's design flow. This phase comprised three stages: Sharing, Diagnosis, and Flow Designing.

Sharing

First, the entire CCL Team working on the initiative (Anne, Sabine, and Sandrine) held several meetings with Vicky on her return. The first aim of these meetings was to hear Vicky share her visit and the main highlights. The second aim was to see if the Faculty team we had originally thought of would fit in well with the participants. Sabine and Vicky were our original Faculty choice because they had been training together for the previous 5 years in African countries.

The French-speaking African participants they had trained valued the fact they are two very caring trainers, who were always available to support participants even outside the modules. In our past trainings, our participants who were less fluent in French also liked the fact that French is Vicky's second language. That usually allowed the more self-conscious participants to feel more at ease with their level of French. Both also had experience in coaching groups over a long period of time. Finally, they had already worked with the lead designer and were aligned in terms of being adaptive on the ground and able to change the program's content according to critical and key unexpected events or interactions between participants. The third aim of the sharing meeting was to decide when and where the programs would be run. After that, the lead project manager (Anne) was able to draft the consolidated project planning for the initiative and identify the best way to go about managing the logistics on the ground in collaboration with the CCRP West Africa regional team member based in Africa.

Diagnosis

After the sharing stage, CCL's lead designer and M&E advisor (Sandrine) carried out a diagnosis. This stage first consisted in analyzing the data from the discovery phase to look for emergent themes. For the analysis, Sandrine adopted a two-staged approach. In the first stage, she conducted an inductive analysis, meaning that she analyzed the collected data to find emergent themes and did not use a guiding theoretical lens (Horth, Sharpe, & Hoole, 2014). In other words, findings (gaps and needs, primary issues) emerged out of data itself. After inductively identifying the themes, she adopted an iterative process. This means that she went to look into the extant literature on leadership development including CCL's own approaches (e.g. Van Velsor, McCauley & Ruderman, 2010) and general human development (e.g. Spiral dynamics theory by Clare Graves) to find the best frameworks that would help interpret the emergent themes theoretically.

Overview of emergent themes (from data)

Identified leadership needs

In terms of leadership needs, the stakeholders identified areas of development at the personal, interpersonal (relating) and practice (collective doing) levels. Almost none of the stakeholders had any formal leadership development prior to this intervention. A core need was to transform their mindset into how they see, think, and feel about themselves being leaders. In other words, there was an identified need to develop and increase their self-awareness and confidence as leaders. Additionally, they called for a mindset shift around what positive and effective leadership means and how it is practiced. "Leadership is not only about favoritism, a position to take advantage of or telling people what needs to be done or making decisions for them". What this quote suggests is that the interviewee, like many other interviewees, may have not known what positive and effective leadership looked like, but they knew in practice what type of toxic leadership they did not want for their project. The various stakeholders emphasized the need to provide a leadership model that is also inclusive in nature. By inclusive, they meant that it must focus on everyone, including women, especially those who may not have formal education or hold hierarchical positions. They also meant that it must be about relationships with others and how they all work together to intensify agroecology in their specific projects.

Interpersonal relationships and shared practices were the second and third needs the stakeholders identified. They specifically called for a change in their ways of perceiving others, their ways of relating to others, and their ways of doing work collectively. As explained in the introduction, AEI requires relationships and innovative ways of collaborating. What the stakeholders shared is that the systemic change they seek to create can only happen when there are positive and collaborative relational dynamics among the different stakeholders. The different people coming together must be able to know that their peers have the best intentions and are committed, as one participant put it, "to understand where people are coming from, able to relay the ideas to others and then asking for their input". Additionally, they must enable each other by listening for their ideas and encouraging everyone to speak up, especially women and stakeholders who are introverted, by effectively communicating throughout their work, by providing each other feedback, by experimenting with new practices together, and engaging in continuous learning to innovate. What all the stakeholders emphasized is that all relationships must be guided by a key motto: "do no harm". Do no harm is a core value in the work they do with the local communities. Each project is specifically designed so as not to harm the communities they serve. Stakeholders asked to have the same approach in terms of their leadership development. Thus, they asked to have a program that can help change behaviors to guarantee their success. One participant gave an example of the "do no harm" gap in their ways of relating to and working with others. They reported that some peers believe they know it all and others know nothing. This in turn leads to dismissive behaviors and practices that harm the team spirit and collaboration. These behaviors and practices tend to create boundaries that may negatively affect their AEI mission. Stakeholders wanted to be developed so that they become effective leaders who are "pre-occupied by what is good for the community" and who are also able to turn that mindset into collaborative and communication practices that value everyone's inputs and that increase community's equality in participation.

Implications of the identified leadership needs on the overall direction

Overall, attendees identified foundational leadership mindsets, skillsets and practices, knowledge sets, and toolsets as leadership needs. These are the fundamental capabilities that are essential for them as leaders, and that can be transferred across a wide variety of situations, practices, and interactions to increase personal and collective effectiveness. These capabilities act as a foundation for the specialized AEI skills that make up strong systems. In other words, the foundational capabilities are critical capabilities that act as a 'zone of traction' toward and different kinds of mindsets, mental models, relationships/connectivity (to other people

and to nature), skills, and approaches in order to contribute to the more transformative changes needed to deepen and spread regenerative agriculture/agroecology. They also act as a zone of traction for systemic change as they positively alter leaders' foundational ways of being, thinking, perceiving, feeling, and relating in a way that brings about a positive transformation on shared practices of collaboration and interactions. In other words, to use terminology from Gosnell et al. (2019) terminology, foundational capabilities are likely to bring about an intermediate transformation to the 'personal sphere' and some aspects of the 'practical sphere'. This intermediate transformation can then be expanded upon by AEI capabilities, which generate deep-level transformation including in the political sphere. This is critical to understand because it means that the intermediate transformational impact of the foundational skills cannot be confused with the deep-level transformational impact of more specialized AEI skills. They concern changes about different components of a system as these are different in their transformative effect. However, both are complementary and critical. Both participate in the process of positive social change, that is to say, "the process of transforming patterns of thought, behavior, social relationships, institutions, and social structure to generate beneficial outcomes for individuals, communities, organizations, society, and/or the environment beyond the benefits for the instigators of such transformations" (Stephan, Patterson, Kelly & Mair, 2016,)

Other discovery themes

Finally, stakeholders also identified the need to have tools that they could immediately apply as soon as they were back at work. They specifically asked for "quick tools, easy to use and immediately applicable". This request was critical because many of the local communities they work with are illiterate. As future participants to the programs were to become leadership facilitators, they needed to have tools that were visual, simple, and accessible to all types of people. Having those tools was also critical because it would allow them to treat everyone as equal and thus avoid harming someone who may be illiterate by bringing in tools not adapted to their needs.

In addition to the key leadership needs identified at the personal, interpersonal and practical levels, the discovery also uncovered a key need when it comes to the learning approach, especially from women. They asked to have enough "time to understand and get comfortable with the content" because the content was likely to be very new and they wanted to have time to integrate it so that they would be the best advocates and facilitators. An additional request was also to help them think about how to frame the knowledge they would be transferring especially when they would be training other women. In other words, they asked to have time to think about how to frame the knowledge after their leadership training, as "men might be very skeptical that their wives, mothers or daughters might be taken away from their daily tasks". We fully integrated these two needs when we designed the face-to-face leadership programs.

Finally, the diagnosis allowed identifying the key criteria upon which candidates would be selected at entry level. Given that the candidates to the leadership initiative would not only be trained as leaders but also as leadership facilitators to train others, stakeholders suggested to send out a call for individuals who are active and connected members of the CCRP projects who would be able to commit to this journey. They also called for gender parity and language specification. We integrated all their suggestions. Additionally, we also developed selection criteria for the phase where they would transition from being trained leaders to leadership facilitators. Table 3 details the selection criteria.

Table 3. Participants' selection criteria

Face-to-face programs	Selection criteria
LE Program	• Gender parity: the PI had to nominate men and women at an equal ratio. • The participants should be nationals or people residing in the targeted countries for one year or more and having the intention to reside in these countries for at least 3 years post program. (This criterion was to guarantee the viability of the training after the end of the initiative.) • The participants should be members of a CCRP Project team and with a preference to have already attended a CCRP program and have knowledge of the CCRP principles. • The participants needed to be able to speak and write in French. • They needed to be available to attend all 4 days of the program. • They needed to be open to team work and working in gender-mixed teams. • They should have a first experience in accompanying and/or training others in the local community. • They would need to be willing and committed to communicate their evolution to the CCL Faculty.
TOT Program	Participants must have complied with all the requirements of the application phase after the first Leadership Essentials Program. They must have: • Informally facilitated two agreed-upon modules with a group of people (colleagues, family, and or community members) • **Asked for constructive feedback from these people (need to be able to report the feedback back)** • Documented their application experiences in a CCL-created reflection diary • Sent the reflection diary to CCL Faculty within the agreed deadline • Attended the peer support and group coaching meetings according to agreed timeline

Implications of the selection criteria

Within the leadership development field working on Grand Challenges associated with the UN Sustainable Development Goals, there are generally two ways to select and develop leaders. The first way is the quantitative approach. This usually entails including everyone in the training. People in masses are trained at the same time or over a period. While this process is inclusive (everyone participates), it does not generally come with post-program support or a defined application phase.

The second approach is qualitative in nature. Gender-balanced criteria such as those that were identified by CCRP attendees are developed and selected groups of people attend the training. In this qualitative approach, these groups do not only obtain training for themselves but they are trained to share what they learned with others and are supported as they enable others in the capabilities they themselves have acquired. Thus, this qualitative approach has an embedded scaling element to it. However, as with any approach, it has its own limits. First, although it provides a more holistic approach to learning, it is also based strongly on personal self-motivation and a strong entrepreneurial mindset. This means that it encourages participants to own their personal development. After the face-to-face training, many participants go on to share what they learned with their colleagues and communities and therefore become candidates to the second phase of the initiative. Other participants may not transfer what they learned but use it for their personal growth as leaders. Still other participants may want to take on the facilitation journey but will not go for it because the challenges in overcoming social expectations - for instance, for some women - and the price to pay in dealing with these challenges may be too high. Thus, it is both a self-selecting and self-eliminating process.

The qualitative approach may also have a hidden, negative outcome. Participants who become facilitators and go through the whole process may develop a position of privilege in the process. This privilege may in turn create new power dynamics that can cause frictions with people who may have held traditional power. What that meant for our M&E is that we had to look not only at the impact the participants were making but also at the challenges and frictions that were appearing in the course of their facilitation.

Women leaders in Mali. Photo credit: Bettina Haussmann.

Identifying the most suitable leadership development approach

Based on the iterative process that incorporated these emergent themes, models on leadership development, and human development approaches, Sandrine ideated a specific leadership development model for the initiative. CCL incorporated an expansive model of leadership into its program design, which helped frame how participants acquire foundational leadership capabilities that in turn help amplify specialized AEI skills.

Attendees to the CCRP annual gatherings identified needs that allude to a "whole system" approach to leadership development. Historically, leadership has been viewed from an individual-centric perspective (me). This view corresponds for instance to the Great Man Theory. These types of me-centric views tended to look at the traits of the person who was assumed to be born a leader, to be a man, hence the misogynistic title. Other models developed over time. These models have been relational and focused on individuals interacting (us).

Over the past few decades, the leadership development field has recognized 'whole system' approaches that look at leadership as the interplay between an individual (me), other people (us) and their context (context). CCL's own view of leadership fits into that 'whole system' perspective. At CCL, we define leadership as a social or relational process that enables a group of individuals to work together as a cohesive group to produce collective results – results they could never achieve working as individuals (McCauley, 2014). What this means is that leadership happens "through the interactions and exchanges among people with shared work" (McCauley, 2014: 1). Within the context of the UN SDG and Grand Challenges, this also means that leadership is a process that is co-produced by multiple people. Everyone, regardless of their roles, education, gender, or worldviews has a role to play. Every person can contribute to leadership. Thus, leadership is not only individual (me), but also collective (us) and contextual (i.e. happens within a certain workplace, environmental, social, cultural and local context).

This means that, in terms of leadership development, we must take these three 'spheres' into account as it is this expansive approach that is likely to allow a positive leadership change that in turn would enable further development of AEI. This means that the content to be provided to an individual leader must also be able to be transferred to the people around them and must resonate with the context they all work in. Thus, the leadership development must be simultaneously personalized (me-oriented), social (us-oriented) and contextualized (see figure 1 on the next page). In concrete terms, ME first focuses on the subjective interior domain of the leader's life: their beliefs, mental models, thoughts, or emotions. In other words, leadership development at the me-level focuses on helping them become more aware and ultimately transform their ways of being, feeling, perceiving. Additionally, the ME-level concerns who we are and how we act as leaders when we move in the world. While the first part of ME is an internal work, the second part of ME concerns how that internal work shows up in the working context and during interactions with others. The US-level concerns the collective development. More specifically, this level would for instance concern shared values (stemming from a common culture for instance), mutual understanding (about what they are trying to achieve for instance in terms of AEI) and shared practices (for example, collaborating, feedback giving, or experimenting). Leadership development at this level entails providing for instance the CCRP participants with experiences that alter their ways of relating, working together, and allowing them to transfer those new ways to their interactions with others. The CONTEXT-level is the 'non-people' part of leadership as our colleague Bert de Coutere says. This context entails the local, environmental and cultural, as well as the 'organizational' (the CCRP) context. In other words, the context is the frame in which they work together. The way people perceive their context will shape their behaviors. Thus, a change in the context starts from a change in how individuals and collectives perceive it and how they work together as a result of those different perceptions. In other words, leadership development at this level may include reshaping the frame of the context as a space of opportunity that can lead to profound transformation

through different practices.

The tricky part of the ME-US-CONTEXT is that it is dynamic. It is not only interdependent but the interplay between the three entities continuously changes over time and may hold different importance at different times. There may also be 'zones of tractions' and 'zones of frictions' in this interplay.

The discovery themes make the 'me', 'us' and 'immediate context' (CCRP projects/workplace) more predominant. This means that, given that the context is about succeeding in the transition toward agroecology, the development of the people both as individuals and as collective collaborating together will ultimately change the way they approach AEI and practice it, thus eventually transforming their context. What this meant for us was that we were going to focus on ME and US and gear participants towards applying their learning within their immediate and tangible context. The broader and societal contexts can only be wholly transformed through application of specialized AEI skillsets, mindsets, toolsets, and knowledge sets.

Figure 1. Me-Us-Context model
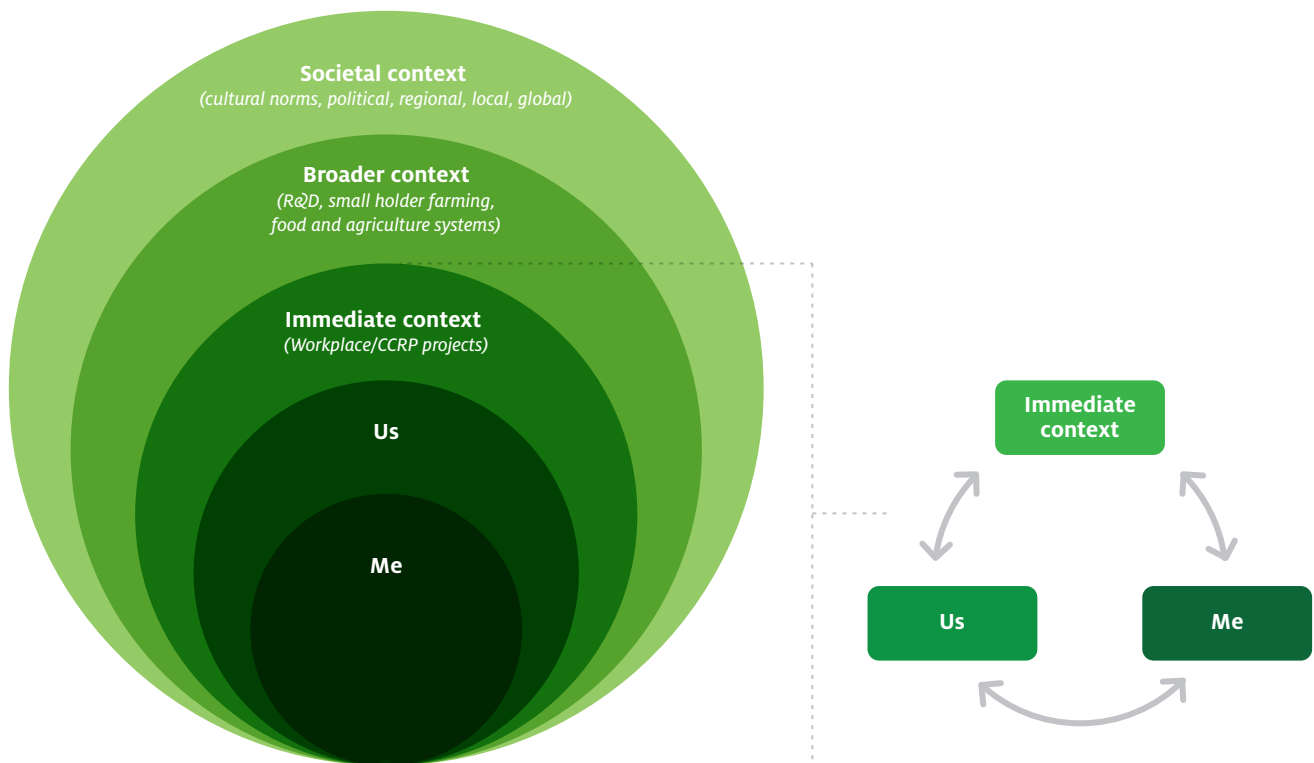
What that also meant for us is that we would be focusing on dynamically transforming our participants. We needed to adopt an ongoing capability approach in doing so. In other words, during the leadership programs, they would be doing activities to unlock their new mindset, knowledge set, skills and toolset. Doing these activities would bring about new insights into how they can act, behave and collaborate differently once back in their context. With these insights, they would build an action plan to practice their newly acquired capabilities until they become proficient at them. They would also enable others (US) by sharing these capabilities, as they would be sharing them during their collective work. From the CCL side, this ongoing approach also meant that we would need to build an explicitly defined apply phase, during which we would provide ongoing support and positive challenge to help the participants effectively succeed in their transformation as leaders and in their shared practices with others. In other words, we had to think in terms of blended learning. Within our work on Grand Challenges, we do not understand blended learning as only a diversity of digital and non-digital formats (e.g. classroom experience, virtual group coaching or peer support group, assignments). We conceive of blended learning as fully embedding social learning (developing content that can speak back to the other people, peers, and colleagues who did not attend our training and the specific working context and situations) into our leadership solution.

As explained above, the discovery themes concern foundational leadership capabilities and not AEI specialized capabilities. The latter capabilities are the ones that can bring about a deep-level transformation at the broader context. As shown in the picture above, the context is a big component of a system. It entails not only the workplace setting, but also the local, cultural, environmental, political, or inter-institutional spheres. This initiative aimed at positively affecting the working context of the participants.

After framing the emergent themes within the expansive model, we then engaged in an iterative process to clarify and align the outcomes and impact.

Production of Mugdugu (traditional snack based on pearl millet and groundnut) at Lebda, Burkina Faso. Photo credit: Fatoumata Hama Ba.

Intended outcomes and impact

To clarify the impact, we looked in parallel at the discovery themes with the expansive model and two other sources: We looked at what the CCRP attendees had shared about what success would look like if this initiative was effectively implemented. We also analyzed the CCRP theory of change leadership and AEI theory of change. The CCRP theories of change pointed to the deeper-level, systemic AEI change, while the CCRP attendees' input alluded to the intermediate, fundamental change that needed to happen before and was conducive toward the deeper-level impact. Our intended impact was to start building and equipping a generation of leaders with a different leadership ethos[1] that could facilitate and drive towards a new level of interdependence, empowerment and inclusive collaboration within their CCRP projects, teams and communities.

In order to reach that impact, there were three types of outcomes that needed to happen as a result of the initiative. These are short-term outcomes (under a year), mid-term outcomes (between one and two years), and long-term outcomes (between three to five years).

Table 4. Expected outcomes by type of outcome

Type of outcome	Expected outcomes
Short-term	• Participants feel confident as leaders (regardless of their educational background and gender). • Participants practice their newly acquired leadership capabilities in their CCRP projects and teams. • Participants share their newly acquired leadership capabilities by facilitating agreed-upon leadership modules with key stakeholders (peers, colleagues and communities).
Mid-term	• Newly-certified facilitators expand their leadership facilitation to the communities they serve and the teams they work with. • New ways of effective collaborating and communicating (inside their CCRP project teams and communities) emerge as a result of this leadership initiative.
Long-term	• There is an increase sense of psychological safety among the CCRP stakeholders (i.e. the CCRP members take interpersonal risks in sharing ideas, giving and receiving feedback, talking openly about challenges, admitting mistakes and seeking others' help when a different perspective is needed).

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1   By ethos, we mean different mindsets, knowledge, behaviors and attitudes, skills, and dispositions toward collaboration and associated practices.

Flow designing

After identifying the impact and expected outcomes, we moved to designing the overall flow of the leadership journey. As part of this, we pinpointed down the activities that participants would do during the journey to achieve the identified outcomes and impact. To design the activities, we mapped out the experiences and situations participants must live and experiment with during the journey so that they could succeed in achieving the set outcomes. We also asked ourselves: what do they need to know (new knowledge) in order to achieve those outcomes? What mental shifts must happen during the training? How can we get them to experiment (practice, fail safely and learn) with the new skills we were focusing on? What tools could we provide them with to reinforce their new knowledge, mindset and skillset once they go back home and how could those tools also enable others around them? This design approach is known as the logic frame approach. Incorporating stakeholders' perspectives, we map backward starting from the impact and the outcomes so that the activities specifically target these intended outcomes and impact.

The original overall journey has four stages: Prepare, Engage, Apply and Reconnect (PEAR). PEAR was the best journey as it aligned with the leadership needs identified by stakeholders as well as the intended impact and outcomes. A fifth stage (Celebrate and Shape) was added later on to close the initiative and engage in discussions with stakeholders about the key AEI leadership skills needed to achieve the agroecological transformation. We outline each stage below.

Picture 1

Picture 2

Picture 1: Participant sharing the social identity module with a local community. Picture 2: Social identity map from a participant.
Photo credit: Vicky Grobler / Arouna Bayoko.

The learning journey comprises of two sets of face-to-face programs. The first program is a four-day Leadership Essentials (LE) program. The second program is a five-day Leadership Essentials Train-the-Trainer (TOT). Only LE participants who have been successful (i.e. fulfilled application criteria) in the Apply phase are selected to attend the TOT. The choice of a TOT was motivated by different factors. CCL developed this model over fifteen years through participative collaboration with many individual leaders and communities in Africa. This model allows providing in-depth, more specialized knowledge in terms of facilitation to participants who have been actively sharing their learning with their colleagues and communities. Additionally, the model has been proven to help build more sustainable communities of practices, as participants co-share and learn from each other's failures, struggles and successes. Additionally, it allows them to trust and engage in more long-term co-facilitation after the program.

A. Prepare

The Prepare phase is a critical phase that allows participants to mentally prepare for the LE program. One week before the start of the training, CCL Faculty sent a welcome message to all participants. In this message, we invited the participants to start thinking about who they were as leaders, and what they expected from this training. We also asked them to think about a key challenge they would like to give themselves and achieve during that week. On the first day of the training, the participants would share these reflections together (put visibly on a wall for everyone to see) and come back to them multiple times during the program as a way to self-monitor their progress.

B. Engage

In the Engagement phase of the LE program, participants met for a four-day face-to-face training. In this program, we covered the themes identified in the discovery and ideation phases.

The objectives of this program were to:

- Identify one's strengths and developmental areas as a leader
- Understand how to build quality relationships and effectively collaborate with others
- Acknowledge and encourage every leader's contribution to the leadership process
- Span all types of boundaries (cultural, gender, etc.) and work with diversity
- Build solid foundation for a supportive community of practice, make a positive and sustainable difference in that community
- Build a culture of dialogue with the different communities who are part of the CCRP network.

In order to meet these objectives, the training was divided into the following four main themes that were delivered over four days: 1) knowing oneself; 2) building solid relationships; 3) expanding boundaries; 4) making a difference together. A key thread to the program was women empowerment. We decided to embed this key thread in several modules because this approach has proved to be much more successful in our African programs.

We addressed each theme by means of experiential activities, real-life situations, simulations, group discussions, and self-reflection. We included facilitation practice to allow participants to prepare effectively for the post-training and the application of what they had learned in their daily lives.

Table 5. Snapshot of the experiences and tools participants lived and experimented with during the training

Simulation	Participants took part in a simulation based on a key common challenge they face, which aimed at enhancing their capacity to collaborate with each other, work across boundaries and promote gender equity. This simulation, which also focused on gender dynamics, is unique and was created specifically for this program.
Experiential activities	We utilized challenge-oriented, experiential, team-based activities that leveraged participants' own experiences in co-creating solutions to enhance leadership skills. To name just a few: Helium stick (focus on making leadership happen), 'Move the food' (focus on collaboration), 'Color-blind' (focus on communication), blindfold trust walk (focus on trust and active listening).
Card decks	First, we used Visual Explorer™. It is a set of 100 images that were used to guide conversations about defining what effective leadership is for the participants. We also used Values Explorer™ deck. This card deck helped participants explore and understand what core personal, organizational and societal values guide their actions as leaders. Then, it helps them understand how these values can create opportunities for building positive relationships in their working environment and communities. They also explored how these values can create frictions and hinder project progress, and what they can do about it.
Self-assessments	During the program, participants were asked to make a short self-assessment of their social identity and leadership brand. They also completed the Change Style Indicator® (CSI), a leadership assessment designed to measure their preferred style in approaching and addressing change.

It provided them with insights on personal preferences for managing through change and provided context for how those around them might perceive and respond to their preferred style.
The trainers used this assessment to link it with the theory and practice of effective stakeholder communication and change process. Other self-assessments included the Emotional Intelligence self-assessment, the Active Listening self-assessment, and the Influence self-assessment. |
| Key leadership challenge and peer sharing | Participants were given the opportunity to apply what they had learned to a specific leadership challenge they had identified. They also discussed their key leadership challenge with fellow participants who in turn provided their own input and advice. |

C. Apply

The Apply phase of the LE program lasted between 7 and 12 months, depending on each participant's circumstances. In the first month, participants started to carry out the personal development plans they had developed during the engage phase. They continued to practice their new capabilities in different working situations. They informally facilitated two modules (Social Identity and Feedback) with their closest colleagues or family members and got feedback from them. These two modules were chosen because they allow to get to know others in the process and create a different way of communicating.

Participants also filled in a reflection diary. This allowed them to see their progress. After the first month, participants who wanted to be considered for the second face-to-face Train-the-Trainer (TOT) program, were expected to share their reflection. For these future TOT participants, CCL Faculty (Vicky and Sabine) provided ongoing support. This support took the form of monthly virtual group coaching (via Skype or conference calls – conferencing in multiple callers (the latter only occurred 3-4 times due to connectivity challenges that prevented the use of Skype) and individualized advising and mentoring (via WhatsApp or phone) for participants who had specific challenges or opportunities to do more facilitation. These calls took place monthly and the duration varied from 30 minutes to 2 hours depending on participants' needs. This support also involved sending participants videos repeating the content they had learned through the LE program so that they could deepen their understanding of it and become more comfortable at sharing it with more people. We did not introduce any new content because if we had, it would have not been an apply phase but a virtual re-engagement one. Apply phase can only be about applying (practicing, failing or having difficulties, strengthening until becoming expert at the new skills, for instance) what they already learned. Additionally, Vicky supported them by attending their self-managed peer support group. This group was created during the LE and was meant to help participants keep in touch and co-facilitate some modules in the interdisciplinary projects they were working on. Finally, in this phase, participants developed their own facilitation notes of one module of their choice, for which they received CCL feedback. Some of these facilitation notes had also been translated into the local dialects they work in.

D. Reconnect

The fourth phase, Reconnect, was about certifying the participants who had been selected to attend the Leadership Essentials TOT. This phase had three stages.

In the first stage, the CCL Faculty (Vicky) who had been mentoring the selected participants asked them to share any additional challenges (other than the ones addressed during the monthly individual and group coaching sessions) they were facing and questions they had as leadership facilitators. This information was used to inform the TOT design, including the toolkit that the lead designer created for the program.

In terms of designing the TOT, we followed the same approach as the LE program. The TOT was also framed using the same expansive model for leadership development. The objectives of the TOT were to:

- Understand all the essentials for successful facilitation

- Increase the participants' facilitation skills by practicing for three days.

The first day was focused on providing the future trainers with key foundations in facilitation (e.g., how to prepare, how to manage group dynamics, how to deal with different learning styles, etc...). We also started the first day with the reflection questions sent pre-program which came back to their facilitation experience during these past months. The idea here was for each person to speak briefly: 'Say your name and country' 'Explain

which modules you facilitated' and 'how you lived the experience?' 'What went well?' 'What went wrong?' 'What did you learn about yourself?' 'What would you have done differently?' 'What questions do you have about facilitation?' The second day consisted as a reminder of eight key LE modules by CCL Faculty (Sabine and Vicky). On the third and fourth days, participants prepared their modules in pairs or trios and started to facilitate them in front of their colleagues. After each facilitation, Sabine and Vicky provided real time constructive feedback on their performance. Their peers also provided written scoring for the facilitation. The fifth day was dedicated to strengthening their dialogue facilitation skills. For this, we provided participants with an African story incorporating leadership tools they had learned which participants facilitated using the newly acquired skillset and toolset. On that fifth day, participants also created their own experiential activities.

During the week, we had allocated time for the community of "new" facilitators to think about how they wanted to organize themselves in sharing support, information and content after the TOT. The West Africa CoP Liaison Scientist (Bettina Haussmann) framed the context of this part and provided additional support to CCL trainers during the session. Using the CCRP values that had been shared by Bettina, CCL then invited the participants to talk about their expectations of the community and think about what had been working well in their peer support approach so far, what had not worked well and what they needed from each other. The participants also discussed how to share content. This was especially critical because some of them had translated the LE content into local languages or adapted it for illiterate people whom they would continue to develop after the TOT. Finally, the participants used the CCRP principles to think about how to further integrate leadership content into their CCRP project and embed it even more to the local context. Each president of the local communities (in Mali, Burkina Faso and Niger), elected democratically by participants attending the LE programs, worked with their groups to assess how they could achieve that.

After the TOT, the community of facilitators continued to facilitate programs in their respective communities, supported virtually by Vicky who followed up with them.

E. Celebrate and Shape

During the regular checking up with the CCRP West Africa regional team (Bettina and Batamaka) and the International Program Officer from the Foundation (Megan), we discussed the possibility of having an additional stage to the initiative. This additional stage would serve as a way to celebrate the achievement of the initiative by getting both participants, some of their managers and PIs to share the transformation they went through. This stage was also created to help establish a Leadership Thematic Group and get these stakeholders input into their future leadership development, especially as it is likely to focus on AEI specialized skills. To prepare for this stage, we sent participants a survey, which was created through a collaborative and iterative process with Bettina, Batamaka and Megan. This survey sought to find out three elements. Firstly, we wanted to understand how they had used the foundational leadership skills they gained in the past two years to increase their personal effectiveness as a leader (personal level). Secondly, we wanted to assess the impact they had been having as leadership facilitators in their CCRP team (team level) and in the farming communities they work with (community level). Thirdly, we wanted to understand, based on their insights, what type of additional support and training was needed to help the CCRP community increase its collaboration and impact in the farming communities it serves. For this third objective, we incorporated into the survey, the AEI specialized skills that had been identified by the Foundation. The results were used to frame the face-to-face meeting of the Leadership Thematic Group. Our designing of the meeting was a collaboration between CCL, Bettina, Batamaka and Megan.

The Leadership Thematic Group met for two days. Based on the survey's results and the identified intention, the meeting's objectives were to:

- Share and celebrate their journey as facilitators with their peers.

- Increase their facilitation skills by gaining additional facilitation tools.

- Share best practices with peers.

- Increase their capacity to understand power dynamics within the communities with which they work.

- Explore and identify together the key AEI skills necessary to amplify the transformation towards agroecology.

- Build together a thematic group in leadership and establish an action plan that will allow continuous development.

The meeting used the same interactive approach as for the other two face-to-face programs. The techniques used were those from the art of hosting, a world café, a hackathon, CCL's transformation explorers, and experiential activities.

Farmer-to-farmer learning during an exchange visit. Photo credit: Roger Kaboré.
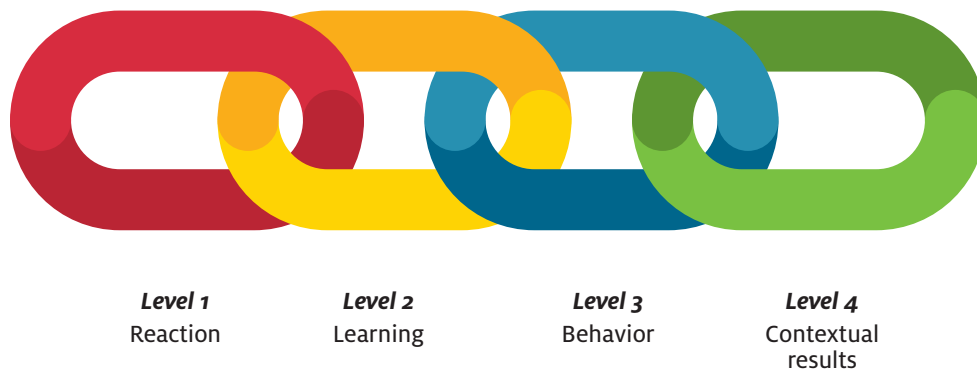
Monitoring and Evaluation

M&E Overview

The leadership journey we conducted over four years entailed change in the beliefs, habits and behaviors and practices of the leaders and facilitators who went through it. Such a change is never simple, linear or fast. From a monitoring and evaluation (M&E) perspective, we adopted an adaptive, iterative and responsive process through which we would collect data via multiple methods along the way. We would then use the data in real time to make sense of what was going on, and to adapt the different components of the learning journey according to the insights we were gaining from the collected data.

Table 6. Monitoring & Evaluation

	Monitoring	Evaluation
Purpose	Track any change from the baseline conditions we had identified and correct any arising problems/adapt content to improve efficiency and achieve the desired outcomes.	Validate what results were achieved, how and why they were or were not achieved.
Focus	Effect on participants, relevance to their situations, viability beyond face-to-face program	Outcomes and impact on participants, their colleagues and peers, their collective work, and the communities
Timing	Continuous, throughout the initiative	Periodic: measurement at significant moments of the initiative (end of a face-to-face program, end of year, etc..)
Sources	Daily assessment (written evaluation) and trainer's observation of participants; individual and group coaching and mentoring throughout the initiative	End of program's evaluations, surveys, individual and group phone calls.

We used the monitoring and evaluation components in a complementary way to assess the different levels of impact and friction of the initiative. For the levels of impact, we started by using the modified version of Kirkpatrick training evaluation framework adapted from Barr's six-level classification (Barr et al., 2005). This framework resonated with the initiative's intended impact and outcomes as well as the three spheres (me-us-context) we were focusing on in all the leadership development phases. According to the modified Kirkpatrick model, there are four levels of impact to monitor and evaluate. Level 1 is the reaction of the participants. The M&E at this Level 1 entails understanding how the participants are experiencing and reacting (favorably, unfavorably, indifferent, etc.) to the learning. Level 2 is the learning, that is to say, to what extent are the participants acquiring or have they acquired the intended attitudes, knowledge, skills and tools based on their participation in the program. Thus Level 2 is divided into two subsets: 1) a change in attitude, which includes for instance a different way of relating to other colleagues and peers; 2) a change in knowledge, skills and tools that are likely to alter the way they work and collaborate with others.

Figure 2. Levels of Impact

| **Level 1** | **Level 2** | **Level 3** | **Level 4** |
| Reaction | Learning | Behavior | Contextual results |

Level 3 is about behavioral change. M&E for this level entails looking at the extent to which participants apply or share with others what they learned during the program once they are back in their daily jobs. Level 4 concerns broader, contextual change and is about understanding to what degree the targeted outcomes at the organization (The CCRP) and community level are achieved as a result of the various programs and the reinforcement/support system provided to participants along their learning journey. This Level 4 has two aspects: change in organizational practices and community outcomes. For this initiative, change in organizational practices concerns increased and more effective collaboration within CCRP project teams. Change for the community concerns an increased sense of psychological safety whereby community members, including women, can speak up, propose their ideas, inclusively talk about them and equally engage in collective decision-making.

Effective M&E must be explicit in this chain of evidence. First, it must show the impact on the individual participants who attended the initiative. A leadership initiative "should have an impact on the individual who experiences it" (Martineau & Hannum, 2004, 17). As human beings are different, this impact can vary. The individual variation is likely to depend on both the content and design of the initiative and the personal development needs of each individual participant (Martineau & Hannum, 2004). Additionally, the variation may also be due to other factors such as readiness, personality or contextual factors (McCauley & Hughes-James, 1994). Contextual factors could be higher family demands for women. In our M&E, we focused on identifying the levels of impact, understanding how the different parts of the initiative contributed to these impacts and the variations between participants. To do so we used the monitoring and evaluation components in a complementary way.

Figure 3. M&E and levels of impact
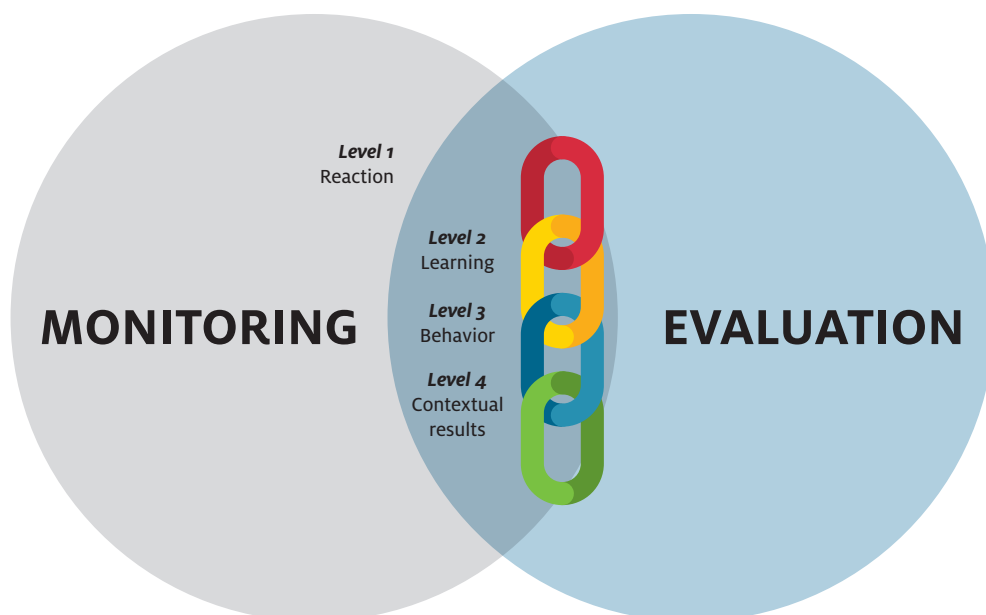
First, for Level 1 impact, we used the monitoring component. During the face-to-face programs, CCL Faculty (Sabine and Vicky) observed the reactions of the participants: How did they welcome the different modules, activities, simulations? How did they experience them (positive, negative emotions, confusion, revelations)? Depending on their reactions, Sabine and Vicky would either keep the same approach to the facilitation and the flow of the content, or adapt it in the moment to make the learning more relevant and impactful for the participants and their context. If they needed to take more time, they would also take it, so that the participants had the space to go deeper into certain topics.

At the end of each day, participants filled in an assessment, asking them to rate the extent to which they were satisfied with the daily modules. The assessment also included three open questions: What modules did you find useful and why? What modules did you not find useful and why? What questions do you still have? Each night, Sabine and Vicky would go through each assessment form and collide the questions, which they addressed the next day during a Q&A.

The process described above is referred to as an In Action Review (IAR) whereby they collected data in real time, learned about what was working or not, and adjusted the learning experience to increase its efficiency. After the program's run, they did a After Action Review (AAR) with the lead designer, where they shared the adjustments they made. The entire team would discuss which adjustments were to be fully integrated in the design because they spoke to all the countries and which adjustments may be kept to Sabine's and Vicky's decision in the moment according to participants' cultural context. This monitoring approach was also done throughout the initiative, beyond the face-to-face programs. As Sabine and Vicky provided ongoing individual and group coaching and mentoring, they adopted the same IAR approach and provided real-time advice and suggestions to help participants stay on track in their learning and behavioral change, and in generating positive community outcomes. Thus, monitoring was also used as a complement to assess Level 2 to Level 4 Impact.

Evaluation was critical for Level 2 to Level 4 impact. The approach to evaluation was to use multiple methods (qualitative methods combined with quantitative data point sections using a Likert scale) at significant points in time of the initiative. Thus, it is a mixed-method approach with a clear leaning towards qualitative methods.

Data collection

First, at the end of each face-to-face program, participants were asked to provide a global evaluation of the whole program. Using a Likert scale, participants rated the extent to which the objectives of the programs were met. Then, they rated the program's design and facilitation. For instance, they rated the extent to which the content was clear or whether the facilitators actively listened to them and supported them to grow during the week. They could also provide open feedback to both Sabine and Vicky. In the last part of their evaluation, the participants were asked to rate the program in terms of:

- Impact (e.g. what overall impact did the program have on me?)

- Efficacy (e.g. to what extent did I achieve the challenge I had set for myself at the beginning of the program?)

- Relevance (e.g. to what extent did the various examples, modules, experiential activities resonate with my daily work?)

- Viability (e.g. to what extent has the program helped me identify all the necessary resources I will need in the future to achieve my development objectives?)

Second, during the Apply phase, participants filled in a reflection diary where they reported on their progress. They sent a single diary but their reflection ran over their development for the first four weeks after the face-to-face program. In other words, they filled the diary progressively over a four-week period. The diary focused on their personal change, the state of progress of their personal development plan, and the feedback they received from their peers, colleagues or families after training them in two of the modules they had learned themselves during the program. Some questions included for instance:

- What is the most significant change you notice in yourself after the program?

- What changes have you seen as a result of attending the program? (in your work, in your relationships with communities)? How has the program helped you make these changes? What factors in your daily life facilitated these changes (e.g. family support, etc.)? Could you have undertaken these changes without having attended the training?

- Are you satisfied with the changes you have made? Why?

- What do you think will be the impact of these changes on those around you (colleagues or communities)?

- What obstacles have you faced in the past four weeks as a leader? (An obstacle can be internal to yourself or external, that is to say coming from other people around you).

- What solutions have you identified to deal with these obstacles?

- How are you achieving your personal development plan?

- Do you think you are likely to continue with your personal development plan in the coming weeks?

- How did you experience facilitating the two modules in front of your entourage?

- What are your strengths and areas for development as facilitators?

- How was their feedback? (Participants collected the feedback from their entourage, and reported it in the diary and explained their relationship with the people who had provided feedback). How did you react to their feedback? Did you find it constructive? If yes/no, why?

During the Apply phase, Sabine and Vicky continued their observations and were able to adjust their coaching and mentoring according to what participants were sharing.

For evaluation, we also used an impact survey towards the end of the initiative. The survey's objectives were to:

- "Understand how you used the leadership skills you gained in the past two years to increase your personal effectiveness as a leader (personal level).

- Assess the impact you have been having as a leadership trainer in your CCRP team (team level) and in the farming communities you work with (community level).

- Understand, based on your insights, what type of additional support and training is needed to help the CCRP community increase its collaboration and impact in the farming communities it serves."

Finally, during the Leadership Thematic Group meeting, which closed the initiative, we also collected data via table group discussions using visual explorers and a hackathon approach. For the Thematic Leadership Group meeting, we invited 24 participants from the initiative. These participants were selected because of their high motivation, their successful journey, their fighting spirit and resilience, their active membership in the CCRP community, and their high volume of trainings with diverse groups under the supervision of the CCL Faculty. The selection also relied heavily on the guidance of Bettina and Batamaka who looked more closely at the activity of the CCRP projects in general. Additionally, we also invited six managers and other PIs. These individuals, who work on the CCRP projects, did not attend our leadership trainings. Their presence allowed us to gain objective insights into how the leadership initiative had impacted their teams and the communities they serve. They also provided their views on how their colleagues evolved through the initiative. Their insights served as a way to confirm or provide nuance to the insights from our participants.

In a summary, the M&E had a mixed-method approach with a clear leaning towards qualitative methods (e.g. diaries, open-ended surveys and evaluations, individual calls). However, there were also quantitative points collected such as satisfaction on the daily assessments.

Table 7. Summary of data collected and number of responders.

Data collected	Number of respondents/ participants
Daily assessment (face-to-face LE programs)	144
End of face-to-face LE program evaluation (global evaluation)	144
Faculty observations of participants during face-to-face LE program	144
Individual and collective coaching mentoring (during the Apply phase)	72
Daily assessment (face-to-face TOT program)	47
End of face-to-face TOT program evaluation (global evaluation)	47
Participants' accounts of their own facilitation journeys (TOT program)	47
Faculty observations of participants during face-to-face TOT program	47
End of initiative survey	37
Visual explorers and hackathon (during the Leadership Thematic Group meeting)	32

Participant overview

Participants were from three countries: Burkina Faso, Mali and Niger. Given this fact, we had to divide them in cohorts. Instead of dividing the group into cohorts by country, we chose to have Cohort 1 and Cohort 2 according to the year in which they started their learning journey. Thus, Cohort 1 started their learning journey in Year 1 and Cohort 2 started their learning journey in Year 3.

Cohort 1 consisted of 72 participants (24 participants per country). In Year 1, CCL delivered the LE program to 48 participants (from Burkina Faso and Niger). These 48 participants were trained in groups of 24 in their respective countries. Due to the political context, CCL Faculty facilitated the trainings back-to-back. This means that CCL Faculty travelled over two weeks to Niger and Burkina Faso to deliver the programs. The remaining 24 participants from Mali were trained in LE program in Year 2.

Cohort 2 consisted of 72 participants as well. They were trained following the same approach. In Year 3, we trained 48 participants (from Burkina Faso and Niger) and in Year 4, we trained the 24 Malian participants.

For the LE programs, we trained 144 participants in total. Additionally, we trained the three CCRP West Africa regional team members who were managing this project with us.

From the LE program, all 144 participants engaged in an Apply phase. Following the Apply phase, 24 participants from the 72 participants from Cohort 1 were selected to attend the TOT at the end of Year 2. For Cohort 2, there were equally 24 participants selected to attend the TOT at the end of Year 4. However, only 23 participants from Cohort 2 were trained in TOT because one participant could not make it to the program at the last minute. In summary, we trained 47 participants in TOT.

Impact data analysis

To guide the analysis of the data, we used three key standard questions:

- What actual impacts did the initiative generate for the immediate participants, their relationships with others, and the context in which they work?

- How and why did individuals vary in terms of their learning and journey's outcomes?

- How did different parts of the initiative contribute to these different impacts?

Our analysis ran over four years as data was gathered. After each data collection phase, the Program Director (Vicky) and lead designer and M&E advisor (Sandrine) would immerse themselves in the data as they were gathered. Some data was also translated verbatim in English. We shared them with the CCRP West Africa regional team through after-program reports and annual reporting. We engaged them in dialogue to understand the general trends and emerging outcomes. Thus, over the years, we captured some emerging categories inductively. After all data had been gathered, the lead M&E proceeded to the broader and more formal analysis. She adopted an inductive approach which, this time, was guided by the emergent categories we had inductively captured over the years as well as the categories from the initiative's intended outcomes. She started by inductively analyzing the whole data as a single 'dataset'. She took this decision in consensus with the CCL team because the intended outcomes were to be achieved across different parts of the initiative. However, after finishing all the analysis, she also adopted a differentiated approach where we looked at each part of the initiative individually and how it contributed to the different impacts. In terms of induction analysis process, we again followed CCL's guidelines which are based on established inductive approach such as the Strauss and Corbin method.

We present and discuss the result of the analysis below.

Impact Findings

What actual impacts did the initiative generate for the immediate participants, their relationships with colleagues, and communities, and the context in which they work?

Personal Impact (Me Level)

Disclaimer: All participants' names and countries are fully anonymized. We equally use gendered descriptors (e.g. female participant, women participants, women, male participant) in some parts of this section to embody a shared or differentiated effect among the majority of participants. The choice of anonymisation is due to the type of relational and confidentiality agreement we had with participants.

A. Self-Awareness

The first visible changes for participants happened in their own self-awareness. Participants who attended the LE program reported a shift in their knowledge of themselves. "I discovered many things I was unaware about. It opened my eyes". First, they gained insight into who they were, that is to say, their own self-concept. For instance, following the change module, a participant shared that "I was unaware of this particularity (of mine) as I thought everyone reacted in the same way. This module truly helped me to understand who I am." This echoes what other participants shared about the whole program. It "allowed me to do a self-reflection about me deep-down, to ask myself what I stand for and what my community says about me". Many felt that "this knowledge was the cornerstone for me to become a great leader". This self-insight did not stop there. One of the modules we did, my heritage module, was about their legacy, how they would be remembered after their death. Participants engaged in an experiential activity where they shared what they had written about themselves. The participants felt not only that "it was very emotional" but also it opened them to be vulnerable and go further into making an accurate assessment of themselves. "My heritage module: it is something that I usually don't share. I identified my strengths and weaknesses and who I would like to be." Additionally, through the simulations and experiential activities with their peers, they were able to understand how they act in real time. This highlighted to the participants some of the negative behaviors. For some participants, they learned that they were not as inclusive as they thought they were:

> "The Boundary Spanning Simulation made a big impression on me as we need to think big and include the others. I was very disappointed that we kept the information that the others needed. We should have given it to the other groups. I have learned a lot about sharing."

For others, it was a complete reveal in terms of their listening and communication skills. They had not realized that they were lacking in active listening or getting others to understand them. As a participant shared, they learned "the errors that I make regularly". For a few participants, the program was a safe space where they explored to what extent their behaviors were hurting others. For instance, this was the case for one of our male participants. When he came to the program, he set himself as a challenge to become more aware of when he does not act as a leader. His main problem was the use of pressure and control as a way to try to influence others around him. The module on influence was a revelation for him. He reported finding it useful because it "allows me to know how to influence others without hurting them." He also got to understand how his negative behaviors were linked to certain mental models. "I have learned to know myself, and to explain certain of my behaviors". "Everything depends on your mentality". Many of the female participants also shared this realization about the impact of mental models.

What this helped them do is gaining insights into "what separates me from my collaborators and I took measures after the training to overcome those boundaries". In other words, once participants had gained an in-depth view of who they were in their humanity and its complexity, they were able to develop plans to "correct myself and better collaborate with others".

For the participants who were selected to attend the TOT, their self-awareness also entailed other aspects. For instance, they also came to be aware of their own body. "I had no idea about the importance of body language". "It helped me to understand certain movements I do." Additionally, participants also came to realize how their body language can be "the source of motivation or demotivation of participants. Either you get them on board or you lose them."

In summary, the first impact on participants concerned their own self-awareness: who they think they are, how they think, what they believe about themselves, and how they move in their interactions.

B. Affect

The second impact on participants involved changes in their confidence and pride.

Confidence

Throughout the face-to-face programs and apply phases, participants came to develop positive feelings about their ability and actions. "I was able to achieve some objectives that I had in mind and didn't think I was capable of achieving. I am no longer afraid to face people regardless of the social situations. I feel always positive and I only think about moving ahead". Participants from all backgrounds felt the same. For instance, one male participant shared that he had always been simultaneously intimidated, petrified and not comfortable to speak in public. His discomfort was also heightened by the fact that he does not have formal education. By going through the whole initiative and becoming a leader-facilitator, he was able to grow confidence in himself and put himself more out in there. As a result, at the end of the initiative, he received an invitation to travel abroad and present the work he is doing on the ground. In the same way, another male participant, who is formally educated, saw his confidence increase through the leadership initiative. He reported that the initiative allowed him to increase his confidence by strengthening his leadership skills and empowering him to take more responsibility in his project and academic work.

The women participants also felt this confidence, as effective leaders:

> "Over the past weeks, I have noticed that I have become someone who is able to guide, inspire others. I can also lead initiatives, other colleagues and my entourage through my capacity to mobilize commitment (energies) toward a collective direction and action. In a word, I would say that I have become a competent leader".

In addition to developing confidence as effective leaders, women participants also reported another aspect of this confidence: they felt courageous and assertive enough to 'speak truth to power' whether it is at home or at work:

> "Before the training on leadership, I had a serious problem. I could not speak up during a discussion. I was not able to make myself heard. The training helped me take the decision to deal with this challenge that was causing me problems in my own family".

In a similar fashion, a female participant explained that she gained the confidence to speak to her husband, as the latter was not caring about her and the children or involving himself in the children's religious and modern education. "This training allowed me to take my courage and explain to him the place that our children have to occupy in our lives. And I can tell you: the following week when he was travelling, he called for the first time to ask about how we were doing". This suggests that that the newly felt confidence led the participants to take actions. As we shall see later on, this resonates with a broader impact that was detected in their habits and behaviors.

Finally, for women, confidence also entailed becoming comfortable with being vulnerable and trusting others. "I understood that I could be vulnerable in certain situations and I could see in my entourage the people I could trust more". This confidence to be vulnerable and trust was built through experiential activities such as the trust walk whereby participants are put in a vulnerable position and must rely and trust peers to guide them and care about them while they are working towards achieving a common mission.

Pride

Participants also shared a sense of pride. Pride has three aspects. First, participants who went on to share their learning after the first program, felt proud to give back to the community and make them discover something new. "For me, it was a feeling of joy and pride to be able to share these modules with the community. They told me they had never heard of social identity and feedback". Second, pride also developed as a result of getting ongoing regular feedback from entourage and seeing how well they were perceived. "I was happy. These are constructive feedbacks. They show me how my entourage feels positive about me. This encouraged me to do better and to seek other feedback to correct myself and succeed even more". Thus, the second aspect of pride is about themselves and how they are being perceived. As suggested by this quote, this sense of pride also led participants to undertake more action to keep developing themselves. Finally, participants felt proud because they came to change in ways that make them more content with their own being and in their relationships with others:

> "Personally and in my interior life, I feel happy. I don't have many regrets like before. And I feel that my colleagues are satisfied with me because after a conversation they can get what they need from me without any difficulty as it was the case before".

In summary, participants felt a deep sense of pleasure and satisfaction from the added value they were able to bring to their community and colleagues, and from the ways in which they managed to grow, change and become positive and collaborative. What this implies is that participants went through a process of forming new habits and behaviors. Habit and behavioral change was another key category of impact, which we detail below.

C. Habits and Behaviors

Throughout the face-to-face programs, participants were able to experiment with new habits and behaviors. For instance, during the LE program, they practiced how to give and receive feedback. They also engaged in different activities about effective collaboration and communication. Each day, they would engage in reflective thinking. They took time to think about the experiential activities and analyze their own actions, decisions and reactions. At the end of the program, participants also both individually and collectively planned and organized how they were going to continue experimenting with the newly acquired habits and behaviors.

During the Apply phase, participants confronted their personal development plans with the reality of their work. Many adopted different tactics to ensure that they had the time, the focus and the energy to firmly root their new and more effective behaviors. These organizing tactics included, for instance:

- "In the first time, I made a general assessment of all my professional activities (looking at progress states) and I organized myself to program in my new leadership activities"

- "I started by re-reading all the modules and then I put them in practice myself before transmitting them to others"

- "I designed a memo (technical formula) that allowed me to constantly remember my development objectives"

- "I dedicate one day a week to make the evaluation of my progress and check whether I am not being trapped in routine"

All of this suggests that participants first ensured that their new habits and behaviors were going to stick by embedding them into their daily work, but also by defining their priorities to stay on track throughout their learning journey.

After planning and organizing, participants then engaged in a practice of strengthening. This practice of strengthening has three interrelated stages for participants. They took time to pause and reflect. They experimented with practices. In the experimenting phase, they also asked for feedback and faced a series of emotions. Then, they tried again until there was a sustainable behavioral change.

First, participants reported that, following the training, they tended to be more reflective and think through their behaviors using the training modules as a lens. As a male participant shared four weeks after his first ever face-to-face training, "every action that I currently take is analyzed from the perspective of leadership principles. Each day, I do a self-evaluation of my actions and unfortunately, I see that I am still far from my objectives". In a similar fashion, a female participant also reflected back on the training and the tips and advices received. "With each situation that I come across, I go back to the practices we did and the anecdotes shared by the two facilitators. Then I make the link with my own situation". What this means is that "since this training, I do not react immediately. I take all my time and my decision is more sound". Although participants tended to take their time, it does not mean they did not engage in experimenting. Quite the contrary.

Experimenting was a new habit that all participants reported on. Experimenting started in the 'classroom', and participants continued it in their Apply phase. First, participants continued to experiment with key practices gained during the training. "I adopted feedback in my communication habits and I changed the way I used to do it". "I always look to understand the social identity of the person I communicate with". "I reduced my time of speaking while I paid attention to actively listen to others". "I apply emotional intelligence on myself so that I can better adapt in my new team".

One male participant who used to revert to pressure in his work with the communities reported that in his experimenting, he totally avoided it. "I avoid it when I am doing activities with the communities. I use more rational argumentation and use examples of other communities where the common interest allowed them to become more agroecological".

For participants, experimenting also entailed sharing some of the new skills, practices, knowledge and tools they had acquired. For instance, after the first month post-training, they provided two informal trainings to either their families, colleagues or communities. They continued to do so over the entire learning journey.

Simultaneously with experimenting, participants were also able to make their own self-assessment of their progress. For instance, after her training, a female participant brought in a different style of communication with the communities she was training in being more innovative. After several trainings, "I noticed I was able to communicate more easily with these communities". For the experimenting that entails sharing content, participants asked for their peers, families and communities' feedback. For some, the constructive feedback confirmed that they were on the right track. For others, the feedback allowed them "to see my strong points and my areas to improve in how I facilitate the modules". Still for others, the feedback was a moment of reckoning which acted as a wakeup call to show them how some of their behaviors affected others.

Table 8. Example of feedback provided by community members to participants

Example of feedback and participant reaction
Feedback from a community member: "During your facilitation of social identity, you did not explain well what you were expecting from me when you gave me the exercise to do. The impact it had on me: I did not feel very motivated because I thought it was not very important, otherwise you would have taken more time in your explanation." Participant's reaction: "I felt I was not good at teaching. This feedback caught my attention because my usual habit is not to take a lot of time to explain things. I don't want to lose time on things. I am very impatient to move from one thing to another. This showed me that I have to work to be more available and patient."

For some participants, the biggest learning in terms of feedback seems to have been around their lack of active listening and inviting others to speak up. This left many participants dealing with strong feelings. "I felt selfish and (thought there was) a certain truth in the feedback". "I was completely discouraged and demoralized. But I ended up pulling myself together and seeing things positively". As this participant shares, her peers who went through the same experimenting were also able to make a use of the feedback and try again. After trying again, her communities thanked her being "patient, respectful", and bringing to them a subject that was relevant to their lives. Thus, her new habits and behaviors got confirmed through affirmative feedback from the communities she was serving. What this also suggests is that, in the course of their learning journey, participants came to go through transformative change in themselves and in how they interact with others.

Interpersonal Impact (Us Level)

A. Relationships

Data shows a change in the quality of relationships with others. This change entails three transformations: a shift of perspective in how they understand leadership and how they come to think of others (new perspectives), a commitment to acting as a giver towards others (giving).

New perspectives

On the first day of the LE program, participants explored together and discussed what leadership means and what effective leadership looks like. This continued throughout the program. What participants came up with was a different perspective of leadership as a social process. It emerges from the interactions and actions of individuals. What this meant is that they could not become effective leaders without changing the way they relate and interact with those around them. Leadership became for them all about "collaboration, interaction and realization". With this new perspective in mind combined with what they had come to learn about their peers and how they think, they came to have a different understanding and appreciation of others. As one participant shared, his biggest perspective shift was "accepting the other". Many participants shared this feeling:

- "the most significant change I noticed after this program is that in a community, we are different and it is important not to always see someone as negative. You must also see the positive sides of this person and how they can contribute to the development of the community".

- "I tolerate more differences (of opinions, perceptions, actions) as I tell myself that we think and act differently because of our social identities"

This oftentimes led participants to change the way in which they interact with those around them. "I invest a lot in building mutual respect with and for others. I avoid being violent to or under-estimating any person". Additionally, it led them to think about how they can enable others so that they are more effective in achieving their common goals. "It is the spirit to help others that improved in me. I want to accompany them when they need me".

Giving

Research from Adam Grant shows that in today's world, success depends critically on how we interact and act with others (Grant, 2013). Are we taking from others without giving anything back? Are we seeking mutually beneficial give and take? Are we givers who make those around them better and help the overall team's collaboration and performance?

Participants became givers to others. Givers are people who tend to be other-focused and want to enable others to help the whole community. For participants, giving first entailed sharing the newly learned skills, knowledge and tools so that others could benefit from it. Second, giving also entailed proactively mentoring others. "I mentored two more junior colleagues and provided them with regular feedback during their work". Others sponsored and mentored women. Additionally, whenever colleagues were struggling with specific projects, participants would help them make sense of it by providing leadership tools and tips. "I shared all I knew to help them prepare". What this in turn does is to start enabling an entire community to work toward common goals.

Context-Level Impact

In the same way that this learning journey had an impact on the individuals who directly experienced it, the data shows that there was an impact in the immediate context (workplace and the CCRP projects). In our original development model, we had stated that one intended impact was to positively affect the immediate and tangible context (workplace, the CCRP projects). This constitutes the first context level. The other two levels were broader and tangible (R&D, smallholder farmers, food and agriculture), and societal (political, regional, national, and global). We did not believe that this intervention could significantly influence those two levels, as influencing those levels would have required a different approach than the one we chose.

As explained earlier, we adopted an approach though which we train a group of individuals who in their turn transfer their learning by facilitating it to their teams and communities they work with. Critics of this approach may point out that while the individual changes are clear, it is less clear what the impact would be on those who were trained by the participants. In other words, there may be little to no certainty that the depth of impact seen within the individual participants is likely to be the same for the people trained in the field. Taking this into account, we built data collection into the program's M&E plan that would show if our participants' actions had any impact in the context in which they work (at their workplace and in their CCRP projects with communities). For instance, we asked our participants to capture the feedback they were receiving from their communities or colleagues after their training. Some of the communities' feedback givers explained how they would use the modules to help their communities. Additionally, during the Leadership Thematic Group meeting, PIs who had not attended any of the training, reported having observed an impact on the level of collaboration, communication and participative decision-making in their teams and the communities they serve.

These insights came to complement the self-reporting of the participants. Participants provided information about the projects they were involved in. More specifically, we asked them how they used the learned leadership skills to facilitate collaboration among their teams. Ideally, it would have been great to go on the ground and do focus groups with the communities and some of their colleagues. However, we also recognize the positive impact that has been reported from the three different perspectives. As we will explain in the last section on future development of AEI leadership, this positive impact actually holds the key to how to create AEI-specific leadership mindsets, mental models, relationships, skills and approach to fully transition toward agroecology.

Shared practices

The leadership initiative allowed the CCL team to discover and adopt new shared practices in the participants' work. These practices in turn enabled leaders to increase collaboration, decision making and communication. Throughout their learning journeys, participants shared with their colleagues key modules they had learned. Three were especially critical: leadership, feedback, and social identity. For instance, the leadership module centers on a view of leadership as a social process that has three outcomes namely, direction, alignment and commitment (McCauley, 2014). What this means is that leadership emerges through interactions with others. Each person, man and woman, farmer and researcher, illiterate and literate, contributes to leadership. Each has a role to play (e.g. speaking up to share ideas, providing feedback, etc.). Within the West African cultural context and customs, this resonates with the local orientation towards community and communalism. Thus the aim of sharing modules and associated practices were to activate the community orientation and enable everyone to understand how their own attitudes, identities, skills could have a positive impact on their collective work.

Once participants had shared key modules, their teams adopted them as their own collective practices. "We initiated a feedback practice to allow people to be more assertive and free to express themselves, even in front of a manager". "Feedback is now given at the right time and to the concerned people". Other teams reported that, thanks to the view of leadership as a social process, "every person in the team intervenes in the decision-making and everyone's ideas are welcomed". This participative decision-making was also noticed with the partners. "Decision-making is more participative with the partners". The increase in effective collaboration seems to have ultimately changed the way teams work. Some participants noticed "a better organization, a fair distribution of roles between team members".

Respondents who did not attend the training explained how their colleagues who attended our initiative transformed and positively affected others around them. For example, one respondent explained the transformation generated by one of his female colleagues. This female participant is a widow and mother of several children. Through the training, she literally "came out of her shell. Before she was very self-conscious about her lack of formal education/level of French and never took initiative, nor spoke up and lacked self-confidence". The respondent went on to share that, when they did some technical trainings, this female colleague and others started to include leadership trainings in the villages. This has changed the mindset of not only the women they work with, but more importantly also the men. Four years into the leadership trainings, the female colleague and the others are now much more respected and have gained a deeper trust from the men and village chiefs/mayors. An example he shared is that, when important decisions are discussed with the mayor/village chiefs, she is now part of the dialogue and play an active role in the decision-making. The leadership trainings did not only benefit her but also the women and men in the villages. The respondent went on to share that these leadership trainings have also improved collaboration, dialogue, and alignment between the CCRP projects in different regions as everyone speaks the "same language" and they are working together to increase the sustainability of agroecological intensification.

This insight from the non-participant respondent highlights three things. First, at the organizational level, the shared practices that were adopted by the different teams led to an increased effectiveness in their collaboration. This echoes a female participant who trained all the members of her senior team and colleagues in leadership. She shared how she came to observe "the establishment of a trust climate among colleagues, the desire to do better and achieve the same objective, good communication and fluidity of information, the end of extreme meanness and rejection of others". Second, the respondent's insights also show how these practices came to take root into the local villages and communities. Our participants officially trained 9385 community members. We say 'official' because those are the numbers participants reported in the official system. However, some participants did not have time to report their own contributions. Thus, this number is likely higher than our records indicate.

Many participants equally reported this insight of improved collaboration and communication:

"Before the training there was a tension/frustration when working with farmers on the ground. We felt that farmers were so set in their ways – wanted proof of successful outcomes and in general were averse to taking risk. After the farmers attended the leadership trainings, we noticed a massive improvement in communication, empathy, feedback and collaboration between all the main actors in the communities they work in and the completed value chain of the agroecological intensification process."

According to this participant and one of his peers who is a farmer who also attended the training, this brought different partners to do very innovative experimentations. They shared that it previously would have been challenging to implement the plan, however this was no longer the case as they had implemented effective leadership using the CCL Direction-Alignment-Commitment and our own model (SBI) for giving feedback and breaking down the mental models. They had become more open-minded and are now working together to achieve their common goals.

Third, the respondents' insights also allude to another impact that was noticed at the community level: gender participation. In the same way as our women participants were empowered through their learning journey, "now women can speak before everyone and communicate with the men on many topics". What this suggests is that the roles of women might have been enhanced as a result of the initiative. Within the West Africa cultural context, for historical and traditional reasons, women are heavily involved in agriculture, as it is a way of providing for their families. Most women in the rural agrarian regions may not have had the chance to go to school and have developed a knowledge through other women (e.g. mother, aunt) who informally share their practices (Ben-Ari, 2014). Although women play a vital role in agriculture, their voices have traditionally been absent or underrepresented in leadership and decision-making (Nelson & Jenkins, 2016). Our leadership initiative seems to have provided them with a platform to raise their voice and be heard by men. What this also suggests is that their views (given their specific, in-depth knowledge of the fields) and needs (as they work in their own fields) may have allowed them to develop a more systemic way to think and develop solutions that can work for everyone. What this also implies is that the initiative may have positively affected traditional normative views of leadership and decision-making as being a male-only capability.

Although gender participation was noticed as an impact, participants also reported both a variation in gender participation and a series of frictions encountered by some of the women. First, some participants could not get all the women to the training because some were very busy with their work and could not attend. Additionally, in some villages, women explained that, according to their village tradition, they could not attend the training because the men said they were the head of the household (i.e. they should know more than the women). What this suggests is that a friction that appeared in the field involved power dynamics. This explains the fact that gender participation may have not been consistent across all villages and communities.

Power dynamics was also a friction that a few of our participants faced when they wanted to share their learning with their managers. This explains why a few participants struggled for some time. For these participants, what made a difference is the community of participant peers and the coaching they received in the Apply phase to overcome the friction. Although their journey was successful at the end, they had a variation in their learning. This is not unusual in and of itself. In actual fact, variation in the learning is something we observed in the data and report on below.

How and why do individuals vary in terms of their learning and journey's outcomes?

Overall, the change that our participants went through can be divided into four different types of categories. The variation in learning and outcomes for participants is due to individual and contextual factors.

A. Change type 1 – Fine-tuning

A minority of participants experienced an incremental change. First, for at least five participants, this incremental change was a fine-tuning as they had already some knowledge and skills in leadership and felt confident in their capability as leaders. They took advantage of the LE training to strengthen in the areas they were already strong and fine-tune core behaviors and attitudes. Thus, their individual factors were different from the rest of the group.

B. Change type 2 – Staged evolution

A few participants also experienced an incremental evolution because they got caught back into the routine that slowed them down and failed to put in place tactics to save their learning time:

> "My principal challenge is the tendency to 'do as usual'. Routine has oftentimes slowed the rhythm I had taken and the focus I had put to my leadership learning. So, my obstacle during my progression has been a lack of organizing and routine. I was drawn, two weeks after the training, into a very busy schedule that offered me little time and space for my leadership development".

However, participants in this group were eventually able to change their approach following the individual and group coaching by getting tips and help from peers. For example, some peers paired up with them to co-facilitate some training as a way to put them back on track. Thus, in this group, the peer support and CCL Faculty's coaching provided a positive contextual factor that helped speed up again their learning. What also seems to have helped in this group is the shared desire to truly help improve and enable their colleagues. Thus, the desire to make meaningful contribution acted as a personal motivator.

This category also includes participants who needed time to build confidence. "It was very difficult to feel comfortable in this "new skin" but after a while, I relaxed and learned to feel at ease in this skin that was not mine to start with". As this participant suggests, she needed to be on her own time, get comfortable with and digest the internal change she had gone through in the face-to-face program. She also received the help of her peers at various stages. "My peers from the training helped me tremendously because they gave me feedback each time I did something that was not effective as a leader".

Additionally, in this category, there are very few participants who were slowed down because they had to change the perception of others around them to get the right support system to succeed. "It was difficult to convince my entourage (colleagues and community) to come to my facilitation because they were not used to socializing with me… I went to them with smile and modesty, and told them I had a gift (the training) I wanted to share with them".

All participants in this stage also seemed to have experienced some mistrust from their managers following their training. This was a paradoxical situation for them because their training allowed them to build more collaborative relationships with colleagues. Finally, participants in this category faced some other external challenges such as finding the time to do all the training they wanted and combine them with their other activities. Some also had to deal with the fact that some communities' members were busy with work, and other events. "Socio-cultural events like weddings, funerals have limited the participation of some farmers to the different training sessions".

C. Change type 3 – Revolution

The vast majority of participants fit into this category. For those who went on to become leadership facilitators, the actual realization that they could do it and were able to see others do it convinced them to try. This was especially the case of women participants:

> "The examples shared by the trainers (Sabine and Vicky) on the challenges they had to overcome as women. Also, one of the participants confided in me and said that at the beginning she had serious difficulty in speaking up in public but she was able to overcome her challenge and let go of what others thought and of their judgment. During the training, I noticed that she contributed a lot. I told myself "since, I am not the only one, I will also overcome my challenges"

This woman participant went back home and started to share immediately with her family. The effect was positive as her family became her main support. Her sisters accepted to become her pilot trainees. In addition, "my husband supported me a lot in preparing for the facilitation".

While her entourage was able to support her immediately, for three male participants, the entourage needed a bit of time. These three participants went through such a positive and extreme change during training that their entourage actually needed time to adjust to their different personality:

> "As external obstacles, there was incomprehension from entourage with regards to the brutal change in my behavior. [...] I was a timid and discrete person. Then I became open, wanted to assert myself during meetings and with my family. That was not easy (for them) at the beginning. I had to be courageous and be patient (with them)".

Finally, we have some data (shared by some participants with Vicky) suggesting that some participants in this category decided to stop after the LE training. While the other profiles in this category went on to achieve the entire journey, some participants went through a revolution that allowed them to see that becoming a facilitator was not for them and as a result, they preferred to continue their own journey with their newly acquired skills. Other participants also used this as a moment to individuate from their cultural expectations. For instance, in their culture, there is an expectation to be collectivistic, give back, and share with the community. During the LE training where all participants worked together to design the boundaries of their peer support groups, these participants realized that they did not want to go that way. Thus, they made the revolutionary decision (in relationship to their cultural expectations) to give themselves priority and choose a more person-oriented journey on their own terms after the training.

D. Change type 4 – Stopped learning

While many women participants went through a revolution supported by their entourage, a few saw their entourage stop their learning. "Some want to defy me; some are against the changes I am operating". It seems that some participants were expected not to change and continue to support their entourage in the ways that this entourage wanted them to. This resistance in turn seems to have created a fear of failure, which "blocked me often in my initiative and decision-making". Eventually, "I gave up some of my ambitions to support the others (the entourage)". Thus, their contextual factors were negative to the point where the participants were forced to make the best decision they could to continue living in that environment.

How did different parts of the initiative contribute to these different impacts?

All parts of the initiative contributed to generating the personal impact. Both the face-to-face programs, the Apply phase, the peer support, individual and group coaching allowed participants to build and solidify new mindsets, habits and behaviors, skills and practices. This was also the case for the interpersonal impact although the Apply phase was more critical as it provided participants with many opportunities to interact and act with their peers and communities. With regard to the organizational and community impact, the Apply phase significantly contributed to generating that impact level. The face-to-face programs played a foundational role in building toward that impact by providing participants with the shared practices they transferred to their teams and communities. The peer support, individual and group coaching allowed participants to continually adjust those shared practices to achieve effective collaboration.

Looking Ahead: Agroecology System Leadership Development

This leadership initiative focused on foundational leadership capabilities, which are transferable to a wide variety of situations, practices, and interactions and are essential to increase personal and collective effectiveness.

A few months before the end of this initiative, McKnight and CCL started to think about what future development could look like. This request matched the general acknowledgment by many people in the agriculture R&D that they need entirely different kinds of mindsets, mental models, relationships/connectivity (to other people and to nature), skills, and approaches in order to contribute to the more transformative changes needed to deepen and spread regenerative agriculture/agroecology.

With this in mind, our impact survey incorporated a specific section on the agroecological system leadership. Two unexpected findings came out from the survey. First, it seemed that the word 'system leadership' may not have been resonating with respondents. This is not unusual in itself. Respondents may not use the term in their work. Second, some of the capabilities pre-identified by international thinkers on the subject were not as important for them. However, respondents were identifying specialized agroecological leadership capabilities (e.g. power sensitivity or network leverage) needed to become agents of transformative change.

What this meant for us is that it was critical to discuss with the participants face-to-face how they understand and define system leadership for ecological and sustainable agriculture, and define how it can help them succeed in their challenge of achieving sustainable agroecology (Grobler, 2020). In other words, we wanted the relevant people to identify the kinds of dispositions, attitudes, skills, beliefs and behaviors needed for this type of leadership.

During the Leadership Thematic Group Meeting, we used a hackathon approach (with CCL's Visual Explorers and following the art of hosting methodology) to get participants to work in alternating small and bigger groups to develop their ideas.

The brainstorming on what system leadership for ecological agriculture means generated several definitions. Participants then discussed these definitions and agreed on a definition that was accurate and relevant for their context: "A leadership, which is based on the understanding of the agricultural and environmental systems, and that engages all the actors in the agroecological transition." In other words and to use the other definitions' fine-tuned details, agroecology system leadership is a collective process through which all stakeholders of the system engage with each other through co-creation and co-learning by mobilizing their different motivations, worldviews, knowledge (including local). The end goal of this process is to foster and achieve an agroecological transition that can work for everyone locally and for nature herself.

Participants shared that achieving this end goal requires change in the behavior of actors focused on sustainable agriculture. They need to be able to engage in a partnership that makes them grow. Additionally, they must have a systemic expertise (including a good understanding of local knowledge) of the AEI process.

What these participants' insights allude to is in actual fact the three core capabilities that system leaders must display to foster collective action and achievement. According to Peter Senge and his colleagues, individual system leaders have the ability to: 1) see the larger system, 2) foster reflection and more generative conversations, and 3) shift the focus from problem solving to co-creating the future (Senge, Hamilton & Kania, 2015).

When our participants talk about engaging in a partnership that makes them grow, this entails identifying the AEI system actors to partner with, to understand their needs, capabilities, and motivation, to use that as a way to self-reflect on how their own thinking works. In other words, the presence of all the different perspectives allows seeing parts of the system that one may not be aware of and understand how one's thinking and actions can in turn impact an unknown part of the system. Partnering for growth and developing a systemic expertise encompasses engaging in more generative AEI-oriented conversations. Finally, change in collective behavior can only happen through collective doing, that is to say, engaging in practices that generate a different outcome than their current one. Those practices are not about problem solving but more about leading and managing the paradoxes inherent to AEI. These practices may also be about fostering AEI innovation. All of this suggests that the development of agroecology system leadership requires a different approach.

We recommend adopting the approach below, which borrows key principles from human ecology development (development in context and with the entire network of individuals, groups and communities needed to transform the system) and from social movement in terms of organizing for social change). This approach is also recommended because it is more aligned with the West African cultural and agrarian norms of community and it builds on this initiative where participants developed an understanding of leadership as a collective, social endeavor. Finally, this approach allows the full participation and equal voice of women (smallholder farmers, producers, etc.) alongside male stakeholders.

Developing transformative leadership practices

The way in which participants defined agroecology system leadership entails a communal approach. This specific leadership is not only a social process like CCL's model but it also requires a real-time, in-context developmental approach to emerge. This means that an effective development approach would be to focus on all stakeholders as they are working together in their environment, in real time. It is when they are working and interacting that the best collective learning can happen.

One way to do so is to introduce transformative leadership practices (with their associated tools). We define these practices as different and new AEI system-focused ways of leading (relating, conversing, co-creating, co-learning and working) that ultimately transform the individual and collective mindsets, habits, behaviors, and modes of operating, which fastens the full transition toward agroecology.

Table 9. Examples of transformative AEI-focused, leadership practices

Capabilities	Examples of practices
Seeing the AEI system	'Networking diagnosing and system mapping' to identify who is there, what part of the system they know and lead and how different parts interconnect. 'Paradoxes mapping' to understand the different paradoxes at the heart of the system that must be leveraged to achieve an effective system transformation. Etc…

Fostering AEI generative conversations	'Through looking' (e.g. partner shadowing, learning journeys, mentoring) to learn from partners how their side of the system function (expanding AEI knowledge) and the connective points that could be used to increase AEI effectiveness. Etc...
Co-creating AEI widespread innovation and action	'Vision building' to cultivate a shared vision for the AEI change and enable mutual accountability progress. 'Local/global appreciative inquiring' to capture what is already existing and working to avoid reinventing the wheels. 'Ideating' (e.g. via hackathons, art of hosting) to co-create future action. 'Collabing' (collaborating through incubator and innovation labs) to experiment some AEI innovations. Etc...

Such transformative leadership practices are democratic and inclusive in the sense that every actor of the system can participate in them. Thus, these practices increase gender equality in decision-making. Additionally, different actors can facilitate such transformative practices. In other words, they do not create hidden privileges for some people as anyone can take the lead in facilitating them. Even system leaders who are illiterate can facilitate them. For instance, they could receive a solar-power audio toolkit in their own languages explaining to them how to facilitate their own transformative practices. Furthermore, during collective events, individuals can also develop new skills and change attitudes and behaviors. If some individuals need further help, mentoring as an interpersonal, transformative practice could be put in place to help them change at their own rhythm. Thus, transformative practices can allow both individuals to work to transform themselves and their immediate spheres of influence and entire collectives to develop new, whole AEI mindsets, attitudes and behaviors and knowledge. This is vital because innovation and systemic change need a critical mass of people with these different dispositions to influence positively the rest of the system.

This leadership development journey that results in systemic change starts with a discovery process similar to the one detailed above to observe all system actors in their natural setting and identifying at what point to weave in transformative practices in their daily work and interactions. Then, in a second phase, it is about introducing these practices and letting the system leaders own their facilitation. In other words, they try them (supported by written or audio guidelines) and see how it works. This in a way shadows the co-creation and co-learning that must happen in their AEI work. Thus, experimenting with transformative practices at the beginning allows them to practice what they are trying to achieve in their actual work. All of this suggests that in this type of leadership development journey, participants are not only at the center of the learning, they shape it and lead it. They are co-learning partners and facilitators to each other. It is through that that these different system leaders build trust, psychological safety and mutual accountability. This is critical because systems transform at the speed of trust, psychological safety and mutual accountability.

Lessons Learned

On the CCL side, this entire journey has been one of co-learning and growth. Throughout this four-year journey, we worked with our partners from the CCRP West Africa regional team and the Foundation to achieve this successful outcome. Our biggest takeaway from our relationship is the critical importance of adaptive and learning-focused partnerships to support leadership programs such as this. We all continually engaged in a dialogue to understand and adapt to the needs and local realities of our participants. We checked on our own mental models and provided regular feedback and insights to feed further development to make this a collective success. Additionally, we adopted the same approach in the administrative and financial management and reporting side of the project. Every person on this partnering was animated with a willingness to understand, learn the constraints of each side and adapt systems and forecasts to reflect that complex reality. We were very privileged to have such open, transparent and learning-focused co-partners.

Rural panorama illustrating cop-tree integration. Photo credit: Rik Schuiling / TropCrop-TCS.

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