Setting partnership for climate change adaptation in the CCAFS Yatenga site, Burkina Faso

Analysis of gaps and opportunities

Working Paper No. 176

CGIAR Challenge Program on Climate Change, Agriculture and Food Security (CCAFS)

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CGIAR RESEARCH PROGRAM ON Climate Change, Agriculture and Food Security CCAFS

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Abstract

This paper analyzes patterns of social interaction within the organizations working in the Yatenga province of Burkina Faso, and develops purposive partnership framework that can facilitate the scaling up of the action research outputs and outcomes. A diagnostic tool for evaluating group functioning was used to elucidate the current situation of partnership development in this province. Further, partnership and networking was analyzed using the network density which describes the portion of the potential connections in a network of organizations that are actual connections. The results suggest that the desired partnership as requested/expected by stakeholders is far from working as it could be. The stakeholders therefore agreed that network density need to be increased for future partnership, with clearly defined vision, shared responsibilities in generating knowledge and results, and capacities to monitor, evaluate and communicate on the program impacts. For this purpose, future partnership need to combine scale-based and competency-based frameworks to be beneficial at scale and pulling together organizations' competencies. Implementing both frameworks would lead to an effective partnership on climate change adaptation in agriculture and food security. However, the successful development of this purposive partnership will require capacity development for the group of partnering organizations.

Keywords: Partnership, networking, climate change adaptation, Burkina Faso.

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Contents

Tables

Figures

Abbreviations and Acronyms

ADEFAD:	Association d'aide aux enfants et familles démunis
APROS:	Association pour la promotion des œuvres sociales
CCAFS:	Climate Change, Agriculture and Food Security
CGIAR:	Consultative Group on International Agricultural Research
CREDO:	Christian Relief and Development Organization
CVD/VDC:	Comité Villageois de Développement/Village Development committee
ECLA:	Association Être comme les autres
Ex.s:	Extension services
FNGN:	Fédération Nationale des groupements Naam
GDM:	General Directorate of Meteorology
HCP:	Haut Commissariat de Province
IDO:	Intermediary development outcomes
INERA:	Institut de l'environnement et de recherche agricoles
INSS:	Institut des sciences sociales
IUCN:	International union for conservation of nature
NGOs:	Nongovernmental organisations
RDEP:	Regional Directorate for economy and planning
SP/CONASUR:	Secretariat Permanent/Conseil National du Secours d'Urgence
SP/CONEDD:	Secretariat Permanent/Conseil National de l'Environnement et du Développement Durable
UFROAT:	Union des Femmes Rural Ouest Africain et du Tchad
WFP:	World Food Programme

1 Introduction

The Consultative Group on International Agricultural Research's (CGIAR) program on Climate Change, Agriculture and Food Security (CCAFS) is aiming to address the complex and dynamic relationships between climate change, agricultural practices and food security. Its strategy for impact recognizes that good research may only be one of the multiple cornerstones of research for development. As such, attention should also be paid to partnership development, scaling up, cross-disciplinary, capacity enhancement and enabling governance and policy (CCAFS, 2009). In West Africa, the program is implementing a participatory action research to address the problem of community vulnerability to climate variability and change. Hart (1996) defined action research as "problem-focused, context specific, participative, involving a change intervention geared to improvement, and a process based on continuous interaction between research, action, reflection and evaluation". Eden and Huxham (1996) argued that in action research, the research output is a result from the involvement of participating individual members of one or several organizations on solving a problem of concern to them.

During the participatory planning process of the action research in Burkina Faso, all stakeholders (researchers, extensionists, NGOs, local communities, administration officers) recognized that partnership was essential to the successful implementation of the community level work (Somda *et al*., 2014). This is consistent with the emergence of partnership development in the past decade. It also reflects a desire to move from the development of policy and the planning and delivery of services within fragmented organizational and professional silos to an integrated multi-sectoral and multi-professional approach which will deliver outcomes (Atkinson, 2005). In addition, collaboration and partnerships between agencies, professions, and across sectors in the delivery of public services is now a major policy goal across both the developed and developing world (Miller and Ahmad, 2000). This notwithstanding, working in partnership is very challenging, complex and multi-faceted, and the efficacy of a partnership model as the mechanism for the delivery of improved outcomes should not be taken for granted (Atkinson, 2005). It is therefore crucial to elucidate the complexity and the multi-faceted nature of partnership to be developed in Yatenga, Burkina Faso. It also implies answering the following questions:

- What does partnership mean for the diverse organizations and professions involved?
- How partnership is currently implemented among organizations and professions?
- What is the desirable partnership structure for the involved organizations and professions?
- How can the partnership contribute to the CCAFS program impact pathways?

The overall objective of this paper is to analyze patterns of social interaction within the organizations working in Yatenga province, Burkina Faso and to develop purposive partnership framework that can facilitate the scaling up of the action research outputs and outcomes. More specifically, it describes the current situation of networking and partnership among various organizations and individuals, identifies the gaps and opportunities, and suggests partnership schemes that can ensure the achievement of the program's intended impacts.

2 Why investigate partnership development in Yatenga, Burkina Faso?

The success in partnership development requires the involvement of multiple categories of actors and or institutions, including farmers, policy□makers, researchers, the private sector and civil society. Working with these multiple actors is often referred to as partnership, without clear definition of the type of relationship. Building purposive partnership in support of CCAFS was necessary because in areas such as the Yatenga region, interventions are fragmented among multiple organizations with limited scaling-up of results and impacts on the ground (Lenhardt *et al*., 2014). On this premise, CCAFS cluster in West Africa is engaged in partnership development and capacity enhancement to ensure that research for development is cross-disciplinary and that the outputs and outcomes are scaled up to enable good governance and policy for agriculture and food security in the context of climate change.

Prior to the diagnosis of the partnership, a participatory vulnerability assessment and adaptation planning, monitoring and evaluation system was developed and implemented. The results from this work (Somda *et al*., 2014) suggested that partnership is an important strategy for climate change adaptation at community and provincial levels. This raised the question on how partnership can drive the intended impacts of the CCAFS program for this region in particular, and West Africa in general. Subsequently, what could be CCAFS's impact pathways, if partnership for climate change adaptation is effective?

But, what does this partnership concept entail? In business literature, partnership is a type of business organization in which two or more individuals or organizations pool money, skills, and other resources, and share profit and loss in accordance with formal and/or informal terms of the partnership agreement (Horton *et al*., 2009). In agricultural research and development, Horton et al. (2009) defined partnership as a sustained multi-organizational relationship with mutually agreed objectives and an exchange or sharing of resources or knowledge for the purpose of generating research outputs, or fostering innovation for practical ends.

To date, very little research has been conducted on partnership, particularly in developing countries. Sanginga (2006) noted that, despite increasing interest and support for multi-stakeholder partnerships, examples of successful partnerships are uncommon or undocumented. Consequently, it has not been possible to tap in the actual and potential roles of partnership in international agricultural research for development. Since partnership was reported by CCAFS and its stakeholders in the Yatenga site of Burkina Faso, there was a need to further investigate this concept and the appropriate framework for its implementation.

3 Frameworks and tools for analyzing partnership development

We used the social network framework (Steinhaeuser and Chawla, 2009) and the diagnostic tool for evaluating collaborative functioning (Taylor-Powel *et al*., 1998) to analyze the partnership development. In social network analysis framework, each individual or organization is represented by a node in the network, and there is an edge between two nodes if a social interaction has occurred at any point in time between the two individuals or organizations represented by these nodes.

A partnership analysis workshop was organized in 2012 to build common understanding of and commitment to CCAFS's programme stakeholders in the Yatenga province of Burkina Faso. This three-day workshop started through conveying information about CCAFS and its funded projects to participants. The presentations emphasized on knowledge mobilization, the field activities being conducted in Tougou as the entry climate-smart village, the issues of partnership as raised by the stakeholders and the level of connectivity among them.

After taking stock on CCAFS's ongoing activities, participants were divided into two gender-based groups for data collection using the diagnostic tool for evaluating group functioning (Taylor-Powel *et al*., 1998). This tool comprises 12 topics that were discussed by each gender-based (women and men) group: (1) existence of shared vision, (2) goals and objectives, (3) responsibilities and roles, (4) decision making procedures, (5) membership, (6) conflict management, (7) leadership, (8) action plans, (9) relationship/trust, (10) internal communication, (11) external communication, and (12) evaluation. The 12 discussion points aimed at elucidating the current situation of partnership building in the Yatenga province. In addition to this situational analysis, participants also described their expectations of the project for the next ten years. The following questions were asked to measure success:

- What are the next users now doing differently?
- How are outputs disseminated (*scaling out*)?
- Did some of the partners have better access to the outputs than others? Which, and why?
- What political support is nurturing this spread (*scaling up*)?
- What have next and end-users learnt and are applying (actionable knowledge)?
- What are the end-users doing differently?
- What benefits are they enjoying as a result of the project?
- Are some end-user groups benefiting more or less than others?

This questioning process was adapted from the impact pathways analysis (Douthwaite *et al*., 2007; Springer-Heinze et al., 2003).

Finally, participants were asked to develop network map using the following steps:

- Develop network maps showing the main actors involved and how they are related (mapping research, scaling up, and scaling out)
- Network relationships
- Discussion: themes, incentives, barriers, opportunities, change agents, etc.
- Develop a network scaling strategy
- Measuring network performance (indicators and tools)

At the end of the workshop, qualitative data was gathered and analysed using various analytical techniques. First of all, analysis was carried to understand the relationship development with respect to the actors' institutional affiliation. This allowed clarifying how relationships are currently formed between different organisations working at different scales of intervention.

Secondly, the current situation of the partnership and networking was analysed using the network density which describes the portion of the *potential* connections in a network of organizations that are *actual* connections (Otte and Rouseau, 2002). Network density was calculated as the actual connexion between one organisation and the other divided by the potential connexions that could exist. Equations 1 and 2 provide the formula for computing the network density:

(1) $PC = \frac{n*(n-1)}{2}$; where PC is the potential connexions between organisations; n = the number of nodes or organisation in this case;

(2) $ND = \frac{AC}{PC}$; where ND = network density, AC=actual connexion between organisations and PC is the potential connexion.

Two types of network density were calculated. The first is in relation to organisations working at the same scale (intra-scale density), which elucidates the degree of collaboration between actors at the same scale. The second network density was computed for the overall stakeholders participating in the workshop. This depicted the overall network density irrespective of the scale of intervention of the organisations.

The density of interactions is estimated using known interactions divided by maximum possible interactions. Ideally, fully interacting organizations would have a density of interactions of 1.00 or 100%. Below 0.5 or 50% is considered a weak interaction. Two densities were estimated: one for the intra-scale of interventions and another for the overall interactions. This measurement is intended to give a sense of how well communication pathways in the current partnership and networking could be capable of getting CCAFS-generated information out to the network participants. Note that 21 organizations were involved in data collection during the partnerships' analysis workshop. However, information gathered was valid for 19 participating organizations.

Building on the situational analysis of partnership and networking, and on the participants' perspectives in terms of effectiveness of partnership to support the CCAFS program delivery and impact pathways, new patterns of partnership development were designed to fit the impact pathways of the CCAFS program.

4 Results and discussion

4.1. Stakeholders affiliations and the current main roles of their organizations

Figure 1 depicts the stakeholders' position with respect to the scales of interventions. They can be grouped into six scales of intervention. The first level is the community-based organizations called the village development committee. They serve as contacts/entry points for the community and the outsiders willing to work with the community members, and help promote development.

The second level of organizations is composed of local non-governmental organizations working in several rural communities for various aspects of rural development. They were represented at the workshop by ECLA specialized in non-formal education and alphabetization; APROS involved in training and support for sustainable management of natural resources; ADEFAD for the promotion of livestock, small loans to women, agriculture (seed supply), awareness raising on education and health; and BIBIR providing financial support to Yatenga communities in the fields of agriculture, health and education. Finally the FNGN, a federation of farmers' organizations in the Northern region is providing multiple services to rural communities through outreaches and information sharing in creating stakeholders' awareness to food security.

At the third scale of intervention, there are decentralized agricultural extension services in the areas of crop, livestock production and environment and sustainable development. Specifically, the decentralized services of the Ministry of Agriculture and Food Security are responsible for outreach, information and sensitization of stakeholders to crop production. The regional and provincial services of the Ministry of Animal Resources are in charge of animal production and health. The regional and provincial services of the Ministry of Environment and Sustainable Development are responsible for the preservation and conservation of the environment and the implementation of environmental policies at the local level. The group was represented at the workshop by representatives of regional, provincial and departmental officers.

Figure 1: Spheres of interventions of participating organizations

Representatives from regional and provincial administration form the fourth level of intervention. Organizations at this level are responsible for the coordination of national policies at the regional and/or provincial levels. The Regional Council is in charge of coordination and leadership development, the definition and implementation of actions in relation to the decentralization of government affairs (education, health, natural resources management, land use, etc.), and the facilitation of dialogue among development actors at the regional level. The Prefecture provides control and coordination of the departmental services of the national government. The Regional Directorate of Economics and Planning ensure the coordination of regional and local development planning and the decentralized cooperation.

At the fifth scale of interventions, country-wide organizations are listed and operate from the government headquarters. The Permanent Secretariat of the National Council of emergency (SP/CONASUR) is in charge of the prevention and management of disasters and humanitarian crises. The Permanent Secretariat of the National Council for the Environment and Sustainable Development (SP/CONEDD) coordinates the elaboration of environmental policies, monitoring, and coordination of international conventions on the environment. The General Directorate of Meteorology (GDM) provides climatic data, regulates, plans and implements policies in relation to weather and climate. The institute of environment and agricultural research (INERA) and the institute of social science (INSS) implements research activities to generate knowledge and technologies in agricultural and social sciences. In addition to governmental agencies, there are nongovernmental organizations with similar territorial scope and therefore at the same scale of interventions. This is the case of CREDO, whose role is to improve the living conditions of population through support to food security, livestock and income generating activities for women.

Finally, a sixth scale of interventions was identified that is composed of organizations with supra-national and international scope of interventions. At this scale, there were four organizations: (1) the International Union for Conservation of Nature (IUCN) whose role is to influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable, through generation of knowledge and field demonstrations; (2) the World Food Programme (WFP) who engages in eliminating hunger and poverty in the world by responding to emergency needs and supporting economic and social development; (3) the Union of Rural Women of West Africa and Chad (UFROAT), an African nongovernmental organization whose role is to strengthen the capacity of organizations, associations and NGOs of rural women, promote networking and provide support to information and communication; and (4) the Climate Change, Agriculture and Food Security (CCAFS) Program which generates knowledge and support the development of sustainable agriculture and the adaptation of actors to climate change.

From the above, it can be seen that the CCAFS program in Yatenga is connecting organizations and individuals from various areas and scale of intervention. The areas include agriculture, livestock, forestry, economic planning, and public administration and decentralized governments. The scales go from community through sub-national to national and international based organizations. All these areas and scales are very concern about climate change, agriculture and food security in the selected site. The diversified structure of these groups can be tapped into forming a tightly connected community with many social pathways through which knowledge may flow and network of institutions can be expanded.

4.2. Analysis of the current partnership and networking among participating organizations

The situational analysis of the partnership and networking among the participating organizations was done in two directions. The first looked at the level of interaction among organizations located at the same scale of interventions and estimation of the density of interactions (Table 1).

At the time of the workshop, the overall densities of interactions between the participants were very weak, between 0.02 and 0.23. The highest interactions were found with regional/provincial extension services with 23% density. This was followed by the interactions with rural community-based organization (20%). National Directorates and Permanent Secretariats and NGOs recorded a 19% network density while it was 17% with regional/provincial administrations and economic planning services. Local nongovernmental organizations showed the lowest interactions (2%) with other organizations.

Table 1: Current partnership and networking among the stakeholders (% of interactions with other organizations)

Scales of interventions	Intra-scale density of interactions	Overall density of interactions
1. Rural Community-based organizations (CVD)	0.00	0.20
2. Local non governmental organizations	0.00	0.02
3. Regional/Provincial agricultural extension services (crop, livestock, and forestry)	0.67	0.23
4. Regional/provincial administrations and economic planning services (regional council, high-commissioner, regional economic and planning directorate)	0.33	0.17
5. National Directorates and Permanent Secretariats and NGOs (meteorology, disaster, environmental policy coordination, agricultural and social research and development)	0.35	0.19
6. International/regional organizations (world food programme, women empowerment, nature conservation, agricultural research)	0.33	0.13

Source: estimates from information gathered during the workshop (2012)

On the other hand, the intra-scale densities of interventions are much contrasted. Rural community-based organizations (CVD) and local nongovernmental organizations reported no interactions between their composite organizations. Organizations operating at the sub-national (provinces and regions), national and regional/international levels reported more interactions as compared to local organizations. However, their densities of interactions were below 50% indicating weak interactions at the time of the workshop. Exception is the regional/Provincial agricultural extension services (crop, livestock, and forestry), where interaction density was above average (67% of network density).

While rural communities' organizations and local nongovernmental organizations were not interacting among themselves at the time of the workshop, they reported improved interactions with other stakeholders belonging to other scales of interventions. On the other hand, while regional/Provincial agricultural extension services showed highest intra-scale network density, their interaction density decreased when taking into account other organizations at other scales of interventions.

The contents and quality of interactions between stakeholders were also assessed. The contents of the interactions were dependent on the stakeholders involved. However, they can be categorized into eight groups of contents as summarized below:

1. Participation in training workshops and information sharing activities;
2. Participation in study works and validation workshops;
3. Entering into technical and financial agreement;
4. Participation in data gathering (including climate related data, and economic statistics), reporting and dissemination;
5. Implementing, monitoring field trials and farmers trainings;
6. Issuing administrative papers;
7. Agricultural inputs supply and purchase;
8. Assessing damages (including crop damage from livestock);

In terms of the quality of the interactions, the participants rated the overall satisfaction as follows:

- In the women group, 29% of cases reported good satisfaction, 5% an average satisfaction and the remaining (66%) reported to have not experienced any interactions. The total possible interactions or connections were estimated at 42.
- In the men group, where 340 possible interactions had been estimated, 22% of cases reported good satisfaction from the interactions they have with other stakeholders, 14% reported an average satisfaction and the remaining (64%) reported to have not experienced any interactions.

Finally, it was also reported that most of the time, the interactions were based on participation in one stakeholder's activity which is often planned without prior involvement of the others. Consequently, interactions could be limited to passive participation without clear and common understanding of the implications for the desired impacts. In other words, there seems to be no vision in the current situation of partnership and networking that can bring changes towards the desired impacts of climate change, agriculture and food security.

This relatively low density of interaction between and among groups of stakeholders reflects the loosely definition given to partnership by organizations and individuals that make up them. If partnership driver of highly relevant for agricultural researchers concerns the links between research and action – between science on the one hand, and policy formation or enterprise decision-making on the other (Horton et al., 2009), then the density of interaction between and among the CCAFS stakeholders groups need to be increased in the Yatenga site of Burkina Faso. As networking is a parcel of the partnering continuum (Gajda, 2004), increasing the current density of interactions could lead to strong collaboration and then partnership and so forth.

4.3. Setting Vision, mission and action plan for networking and partnership

4.3.1. The situational analysis of the vision for partnership

Before visioning for partnership and networking and developing an action plan, it is worth investigating the existence of elements of vision in the stakeholders' interactions. In fact, a vision for partnership and networking is made of various components. This analysis was inspired from Taylor-Powel *et al*. (1998). The underlying assumptions of reaching the potentials of partnership vision are as follows:

- Partnerships and networking pool together expertise, talents, energy, and resources of members;
- Collaborations, partnerships and networking often develop because of an undeniable community problem and a crisis in scarce public resources;
- Not all community partnerships and networking will be successful;
- On-target problem identification and creative problem solving requires visionary and experienced people, particularly experience with the problem.

Table 2 shows the participants' assessment against the eleven attributes of partnership. The relative level of satisfaction with respect to the attributes of the current partnership and networking varies widely between the two gender-based groups. It can be seen that currently, there barely exist shared vision among stakeholders interacting among themselves. According to the men's group, this shared vision never exists between organizations currently interacting. On the other hand, the women's group reported that implicit shared vision can be found in 14% of interactions, but this is not explicit. For the women's group, all the attributes are below the average (50%), showing that there could be gender-bias in the current process of partnering and networking. Men seemed to be more involved in the relationships between organizations than women.

Table 2: Stakeholders' assessment of the partnership and networking attributes (% of participants) between the men and women's group during a workshop at…

Partnership and networking attributes	Men group	Women group
Existence of shared Vision	0.00	14.28
Existence of goals and objectives	93.75	28.57
Responsibilities and roles clearly defined	93.75	28.57
Existence of decision making procedures	81.25	14.28
Effectiveness of conflict management	12.50	14.28
Existence of effective and shared leadership	75.00	28.57
Action plans developed and implemented	18.75	28.57
Existence of relationships/Trust	100	28.57
Existence of internal communication	86.67	28.57
Existence of external communication	40.00	28.57
Existence of performance evaluation	46.67	14.28

Source: Calculated from information gathered at the workshop (2012)

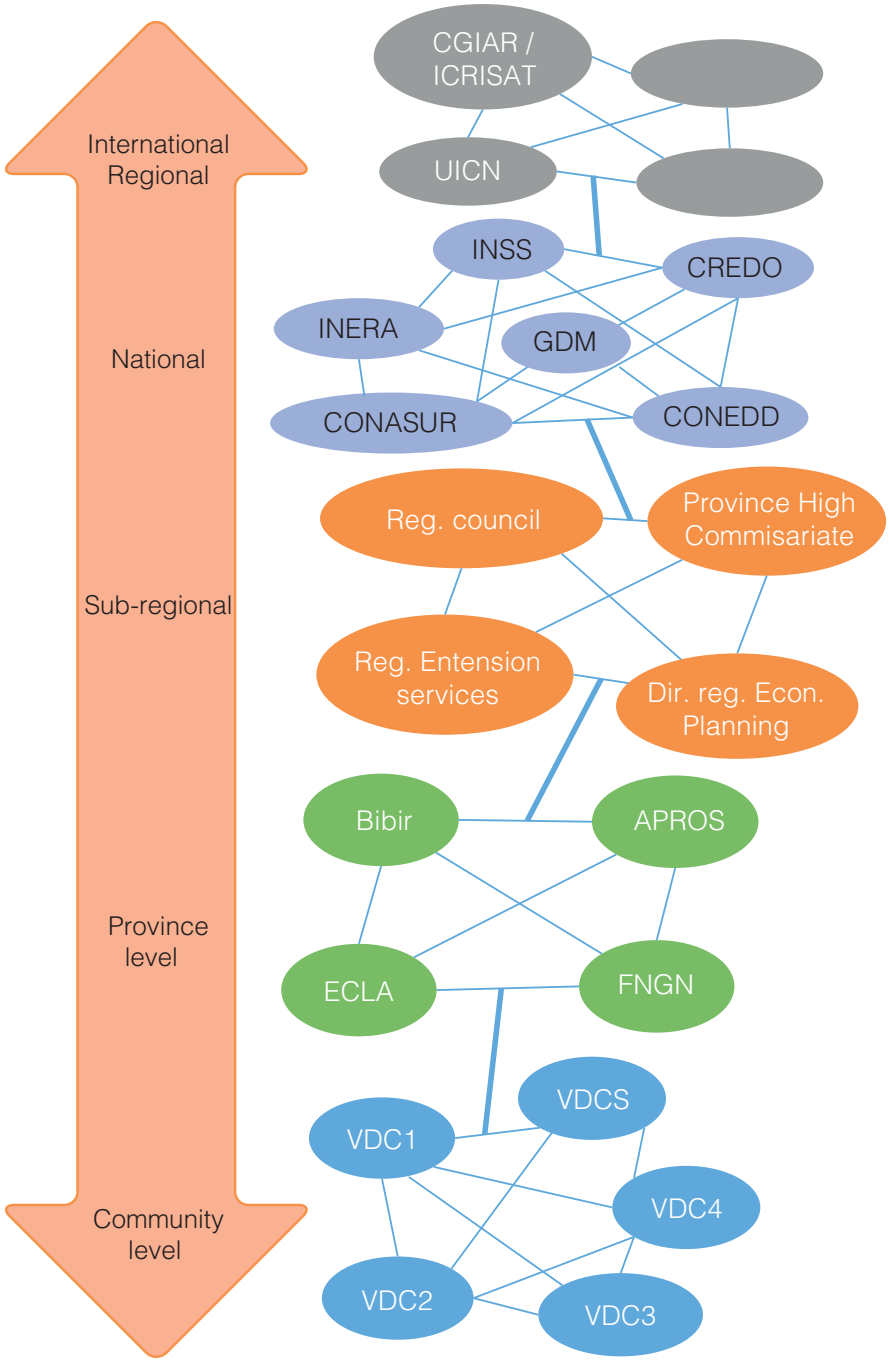
Irrespective of gender, some attributes are commonly and systematically below the average. These include the existence of shared vision, the effectiveness of conflict management between interacting organizations, the existence of action plans for the partnership/networking, the existence of external communication and of performance evaluation. This situation poses the issue of inclusiveness and effectiveness of the current partnership and networking to addressing climate change, agriculture and food security and working towards the CCAFS desired impacts. Despite these weaknesses of the partnership and networking attributes, participants highlighted the existence of relationship and trust, which could be a basis for building a true community partnership with a responsibility to be inclusive, working to ensure that all voices are heard and involved in the process (Taylor-Powel *et al*., 1998).

4.3.2. Designing new partnership and networking in support of climate-smart agriculture promotion

The new partnership and networking designed by participants in support of climate-smart agriculture revealed the need for more intense and effective interrelationships among stakeholders in the Tougou site in Burkina Faso. All participants are expected to be connected to each other and develop effective partnership and networking in order to effectively contribute to climate-smart agriculture as promoted by the CCAFS Programme. This can be looked at in two directions: (i) future partnership/networking with respect to stakeholders' scale of intervention and/or geographical coverage; (ii) future partnership/networking with respect to the stakeholders' competences and their institutional mandate no matter their scale of intervention and/or geographical coverage.

Based on the fact that all stakeholders participating in the workshop are willing to partner and network with one another, Figure 2 shows what could be the future ideal partnership and networking with respect to the scale of intervention and geographic coverage of the stakeholders. It is clear that the desired situation of partnership and networking would be achieved if stakeholders at various scales of intervention are interacting among themselves.

At the international level, it is expected that the four organizations would partner with each other. This will be linked to the national level where the six organizations would have to develop effective partnership/networking. From national to sub-national level, there should be linkages with the four organizations which would be partnering and networking in support of the local level non-governmental organizations. Finally, the rural communities would have to develop partnership among themselves through the village development committees so that they effectively benefit from non-governmental organizations at the local level.



Linkages between organizations operating at same scale: ——
Linkages between organizations operating at different scale: ——

Figure 2: Multi-scale representation of future networking and partnership in Yatenga, Burkina Faso

Another analysis can be done on the way future ideal situation of partnership and networking could look like, based on the impacts pathways of the CCAFS programme. Figure 3 shows a representation of a competence-based partnership and networking.

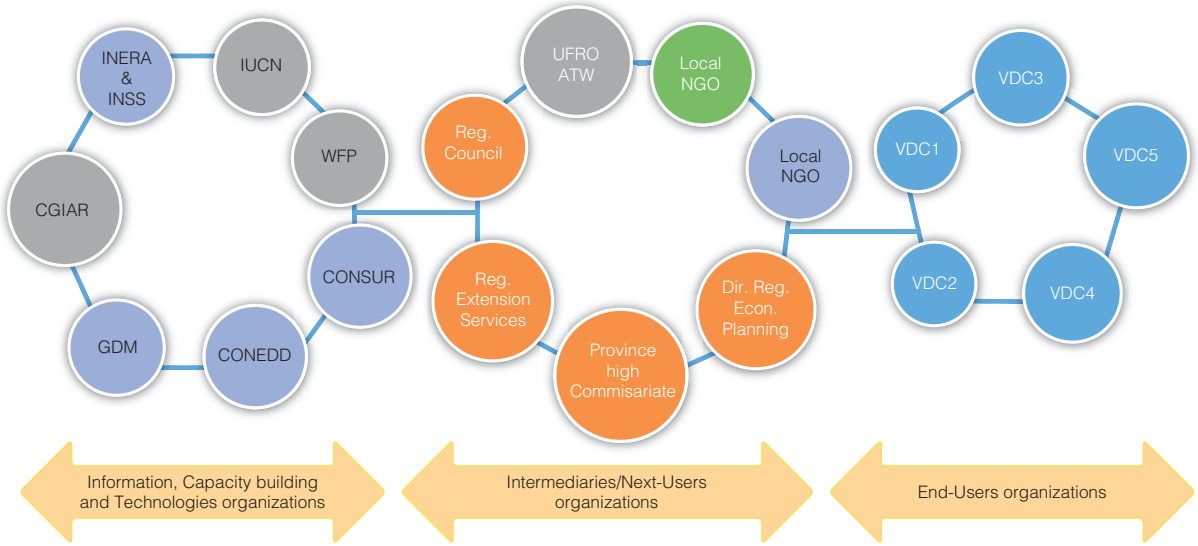


Figure 3: Competence-based representation of future networking and partnership in Yatenga, Burkina Faso

The partnership and networking would be effective if competences are put together within each of the three nodes. The first node "information, capacity building and technologies" can be seen as institutions whose competences are oriented to conducting research and development activities, developing technologies and capacities. They are also organizations in charge of developing and promoting the implementation of national policies and therefore generating related information to ensure their effectiveness. Their geographical coverage encompasses the national and international levels. They can play an important role in scaling up the outcomes of the program. Because of their geographical coverage, they have easy access to policy makers and donors to influence current policy and financial instruments.

The second node "intermediary users" are those organizations that make use of the information, technologies and skills developed by the first node to accomplish their mandate. As such, they have developed appropriate skills to work with local communities on their respective domains of intervention. Partnering and networking with such organizations will add value to the work done by the first node in terms of using appropriate communication tools to reach out the message to local communities and feeding back new information. The third node "end users organizations", are those community-based organizations which facilitate the involvement of community members in rural development activities. They can play an important role in scaling out the program outcomes to other villages. By doing this, the CCAFS Program can reach larger impacts if the Village development committees are well integrated as partners in the process. They can also exercise their right to influence policy makers on climate-smart agricultural development options, and contribute to scaling up the program outcomes.

4.3.3. Visioning future partnership and networking in Tougou block, Burkina Faso

Box 1 summarizes the vision identified by the climate change adaptation stakeholders at the workshop. This is based on the information gathered from the gender-based focus group discussion. This is the vision that the stakeholders felt the CCAFS program could support. It is clear that this vision is related to the Intermediary development outcomes of the CCAFS program, but goes probably beyond that. The reason is that CCAFS is seen by all stakeholders as an instrument that can help them achieve deeper transformation in the way they currently interact. Therefore, CCAFS activities should contribute to and facilitate that vision in order to ensure greater impacts.

Box 1: Vision statement for ten years

In Yatenga, Burkina Faso, all stakeholders share consensus view on climate change adaptation and show satisfaction of it. They pay more attention to the concerns of other actors. They organize consultation and series of consultations between actors. Responsibilities and tasks are well distributed and knowledge and results shared. Local communities show active participation and the village development committees are autonomous. Stakeholders are monitoring shared impacts of the Programme. Actors work together to make decisions in the partnership with a clear decision-making process defined and enforced. A dynamic leadership emerges with an action plan owned by all stakeholders. Stakeholders develop and implement formal plan for internal and external communication aiming at rapid and convincing sharing of results. They develop and implement an evaluation plan with indicators, a timeline and responsibilities in order to develop partners' capacities. In essence, stakeholders in the Tougou block in Burkina Faso have consensus view of climate change adaptation, pay more attention to all actors, share responsibilities in generating knowledge and results and have capacities to monitor, evaluate and communicate internally and externally on the programme impacts.

The vision statement highlighted the CCAFS program's contribution through its boundary partners. This was further defined by the participants at the workshop as CCAFS's mission (Box 2). Different types of capacity development activities are expected from the CCAFS programme by the stakeholders in the Tougou block in Burkina Faso.

Box 2: Mission statement

In support of the vision, the CCAFS Programme will work towards the creation of a framework for cooperation between partners and the facilitation of establishment of an information network. It will help structure the Yatenga program in an open network that allows information dissemination and capacity building among stakeholders to ensure the process is regularly reviewed and the vision improved. It will contribute to capacity building of stakeholders on climate change and adaptation and innovative tools and approaches on gender, communication and women leadership. It will centralize the achievements to facilitate the sharing through support to pilot activities and the organization of stocktaking workshops. It will provide support to areas not addressed by current interventions.

Source: information gathered at the workshop (2012)

4.4. Impacts pathways and gender integration in the Tougou block in Burkina Faso

The impact pathways and the gender integration analysis are drawn from the current situation of partnership/networking analysis, the CCAFS intermediary objectives and the vision stated by stakeholders. It appears from the below impacts pathways (Figure 4), that CCAFS's goal in the Yatenga site should focus on three major strategies which reinforce each other:

(i) **Capacity development** for all stakeholders as shown in the new competency-based partnership/networking map is seen as essential to influence behavioral changes (applied tools and approaches to gender, M&E and communication). Activities for capacity development should be audience-oriented as stakeholders don't have the same level of educational background and consider balancing gender issues in the selected thematic area.

(ii) **On-field testing of gender-sensitive and climate-proof technologies** with the view of transferring to local community organizations (VDC), NGOs and extension services. In fact, while working with individual farmers to test and refine technologies, attention should be paid to ensuring effective technology transfer to local level stakeholders (village development committee, NGOs and extension services). These stakeholders will thus be ready for scaling-out in the latter stage of the impact pathways. Gender-related issues will be considered at this stage in ensuring effective mainstreaming at latter stages.

(iii) **Information gathering and communication** should be a permanent process as climate change generate information in various development sectors that need to be put together to get a sense of its implication and potentials. Activities for this strategy should consider disaggregating information into gender in order to better communicate to various audiences.

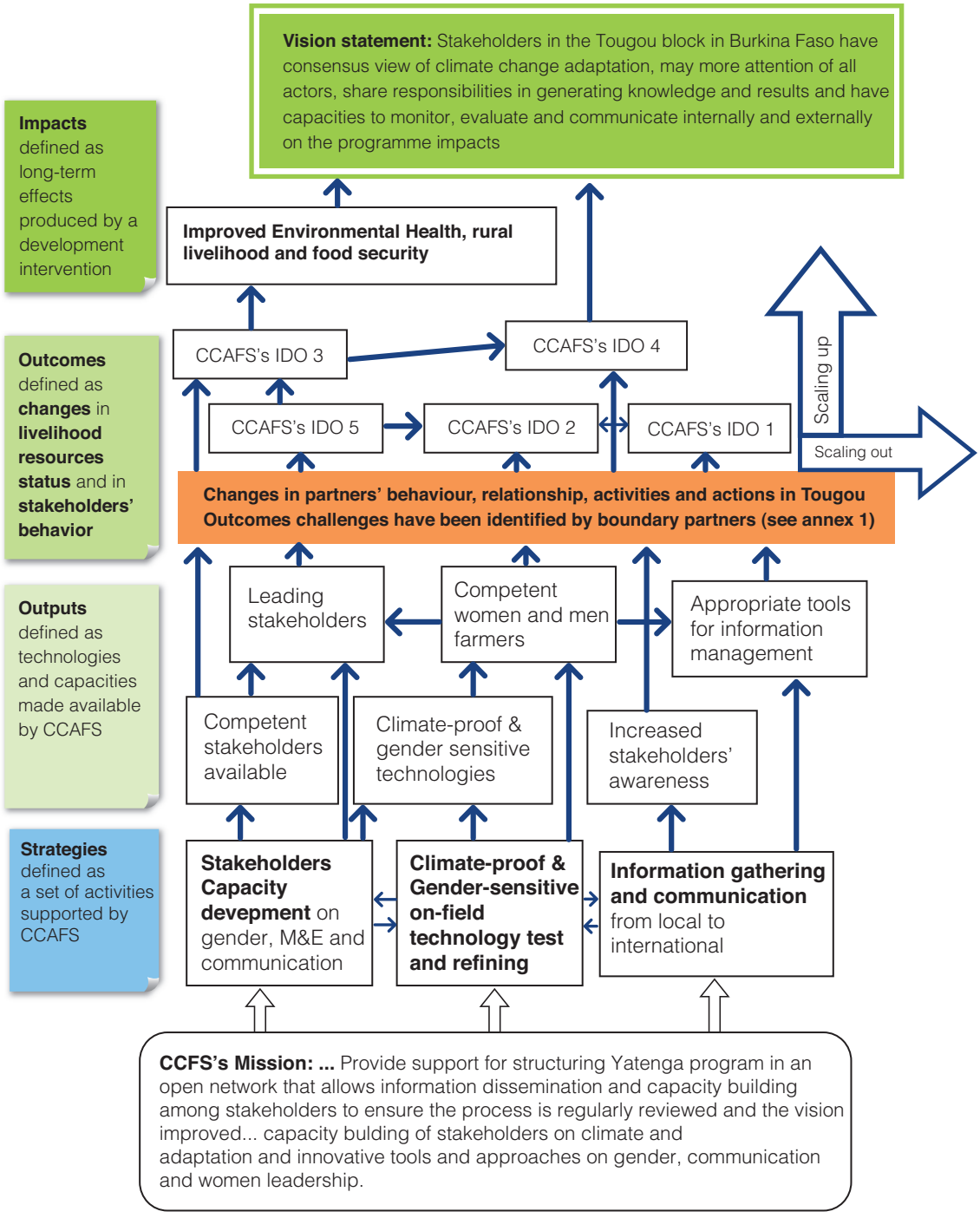


Figure 4 : Impact pathways and partnership development for CCAFS in Yatenga, Burkina Faso

From these strategies, it is expected that CCAFS will provide outputs in terms of knowledge, competencies, climate-proof and gender-sensitive technologies, appropriate tools and awareness to stakeholders. These stakeholders are considered as boundary partners to the CCAFS programme. Those experienced and convinced by these outputs will have to put in place changes in their behavior,

relationship, activities and actions leading to their adoption within the organizations they belong. Behavioral changes will be the cornerstones of the progress towards the intermediary development outcomes (IDO) stated in the CCAFS programme. In fact, behavioral changes of the CCAFS's stakeholders will be the foundation to build on the scaling out and up strategy of CCAFS's achievements. This is consistent with the behavioral changes theory developed by Rothman (2000). The theory differentiates between decision criteria that lead people to initiate changes in their behavior and the one leading people to maintain that behavior. The initiation of changes is based on favorable conditions regarding future outcomes, while the maintenance of behavior depends on perceived satisfaction with received outcomes (Rothman, 2000). It is therefore crucial to keep in mind the influence of stakeholders' behavior while implementing the three major strategies.

Once the five intermediary development outcomes are achieved, this will generate impacts on the environmental health, the rural livelihood and food security. It is worth noting that intermediary development objectives can interact with one another and that some may be reached before others. This will contribute to the ideal desired situation stated by the programme boundary partners.

4.5. Developing the needed partnership for the impact pathways and gender integration

The above described impact pathways and gender integration for climate change, agriculture and food security would be effective in well-thought implementation approach from the strategies to impacts.

A properly functioning network and partnership will produce results (outcomes, impacts, lessons learned, etc.) to be shared at different levels to the benefits of local communities at different administrative scales (individual, household, village, commune, district and regional). This is particularly relevant in the context of climate change where changes are rapid and unpredictable and need important adjustment. The scarcity of resources appears as a challenge in better fighting against the effects of climate change and reducing the vulnerability of communities.

Stakeholders were asked to discuss and identify strategies for scaling out and up and actions to implement the partners' organizations in the network. The synthesis of the two groups listed the following strategies for scaling out and up:

- ***Strategy 1: Developing the partnership and networking*** which can be implemented through
  - Establishment of a known focal point in the network that can be accessed at any time by any stakeholders;
  - Establishment of network focal points in partner organizations;
  - Development of the capacity of network members and partners on various themes in relation to climate change, agriculture and food security, and partnership development;
- ***Strategy 2: Operationalizing the partnership and networking*** to be implemented through:
  - Organizing regular outreach and awareness study tours to non-participating villages and/or areas and the organization of awareness campaigns (radio, forum theater, film);
  - Development and implementation of external communication strategy for the network, including the creation of a network website and the production and dissemination of articles through the media;

- Leveraging relationships of each partner to circulate information generated within the network, including the organization of internal and external network meetings to share experiences;
- Organization of a sub-national day for peasant farmers and climate change.
- Stimulating the leadership of rural women.

Table 3 summarizes the identified activities to be implemented by the network and partnership. The implementation of this minimal set of activities will provide the partners' organizations the necessary inputs to actively contribute to the network and its achievements.

Table 3: Plan to strengthen the capacities of the network actors

Strategies	Activities	Targets
Strategy 1	Train members of the network on themes related to climate change, agriculture and food security	All members of the network
	Train stakeholders on gender, communication and rural women's leadership	All members of the network
	Develop tools for network management (action plan, decision-making procedure, conflict management protocol, communication plan)	All members of the network
	Strengthen the capacity of VDC in designing endogenous initiatives;	Village development committee (VDC)
	Implementation of climate change adaptation activities on the ground	Village communities in the project intervention areas
Strategy 2	Sensitize village communities on themes related to climate change, agriculture and food security	Village communities
	Organize a regional Day on "Climate Change and Peasant"	National community

Source: information gathered at the impact pathway workshop (2012)

Most of the identified activities are geared towards the improvement of the stakeholders' understanding of new concepts, approaches and tools introduced by the CCAFS programme. The second group of activities is oriented to operationalizing the network through support to outreach of the programme's achievements.

4.6. Monitoring and evaluation of partnership alongside the impact pathways

4.6.1. Important methodological considerations for monitoring and evaluation

A monitoring and evaluation plan that matches the impact pathways need to be anchored into two pillars with distinct principles, theories and tools: result-based management approach and behavioral-based approach. These pillars are interlinked and aim at sustaining the achievements of the CCAFS programme. The first pillar will be built around the result-based management in order to measure and manage the programme performances. Results-based management provides a coherent framework for strategic planning and management based on learning and accountability (Weaving and Thumm, 1997). As such, it is a management system and a performance reporting system for the CCAFS programme operators. It is therefore important in ensuring that the programme is effectively and efficiently performing. The result-based management, also referred to as performance management, typically involves several phases: (i) articulating and agreeing on objectives, (ii) selecting indicators and setting targets, (iii) monitoring performance (collecting data on results), and (iv) analyzing those results vis-à-vis targets. It is defined as a comprehensive cause-and-effect process in which one passes through stages of "Inputs >> Activities >> Outputs >> immediate outcome >> intermediate outcome >> Impacts".

The second pillar is borrowed from science of behavior changes, most applied in the health sector than in natural resources management. Behavioral changes will be the most needed changes in the context of climate change, which appears critical for the CCAFS programme to develop competencies in planning, monitoring and evaluating behavioral changes as one of its major outcomes. Several authors in natural resources management have emphasized the importance of behavioral changes, particularly in the area of extension (Clements, 1999; Guion, 2007). Behavior change is defined by FHI (2004) as a comprehensive process in which one passes through the stages of "Unaware >> Aware >> Concerned>> Knowledgeable >> Motivated to change >> Practicing trial behavior change >> Sustained behavior change".

4.6.2. Linking partnership to CCAFS' objectives and monitoring and evaluation plan

The ultimate goal of CCAFS is "to overcome the additional threats posed by a changing climate to achieving food security, enhancing livelihoods and improving environmental management" (CCAFS, 2009). Specific objectives are (i) to close critical gaps in knowledge on how to enhance –and manage the trade-offs between – food security, livelihood and environmental goals in the face of a changing climate; (ii) to develop and evaluate options for adapting to a changing climate to inform agricultural development, food security policy and donor investment strategies; and (iii) to enable and assist farmers, policy-makers, researchers and donors to continually monitor, assess and adjust their actions in response to observed and anticipated changes in climate.

If the ultimate goal is to overcome the additional threats changing climate poses on achieving food security, enhancing livelihood and improving environmental management, does change only occur when this happens? Does change occur only when the CCAFS proposed outputs have been completely adopted or will evidence of movement toward change count? In essence, do CCAFS's partners internalize the promoted practices in the ways of doing business? The answers to these questions are not straightforward and there is a need to develop people-centered approach to plan, monitor and evaluate CCAFS' achievements using the developed impact pathways.

People-centered approach is unique in its emphasis on the need to foster human and social capital from diverse culture and backgrounds including scientists and local communities to partnering and networking. There is a believe that by connecting people from diverse backgrounds, and providing tools to communicate their needs and insights, will unleash the creativity and mobilize the diversity that is needed to tackle the challenges of climate change. Doing this is also challenging in terms of ensuring that connected people change their ways of doing business in climate change, agriculture and food security. Monitoring and evaluation is an important aspect that can provide insights on progress made towards changes in behavior, relationship, activities and actions in order to promote climate-smart agriculture.

The ultimate goal of the Monitoring and evaluation of CCAFS' impacts pathways is to provide evidence on the internalization of practices that it promotes and to learn from the processes of succeeding and/or failing in promoting the internalization of such practices. The following theory of change can be derived from the information gathered during the workshop and previous CCAFS related works in Yatenga: *"Overcoming the additional threats posed by a changing climate to achieving food security. Enhancing livelihoods and improving environmental management requires that individuals identify and be aware of the problem of climate change, consider its importance, evaluate their own behaviour, and then begin making changes in their lives. Behaviour is a result of experiences, attitudes, and beliefs, and deeply linked to the prevailing belief system in the rural community. The attitudes and actions of neighbours, friends, co-workers, extension workers, policy makers, etc. greatly influence an individual's behavioural choices and collectively create the ambiance in the community and among its partners. Although each individual is unique and will come to the issue of climate change differently, the process of how individuals change often follows a similar pattern. This pattern encompasses the cause-and-effects process, which is the demonstration of the existence of technologies, knowledge and policies that can help people to adapt to the effect of climate change and its mitigation. This demonstration is the starting point for changes in the status of a rural community's livelihood resources (natural, physical, financial, social and human) which are influenced by climate hazards. The occurrence of these status changes will create awareness, which is the starting point for behaviour changes". The combined physical and behaviour changes will then lead to the intermediate development outcomes and to CCAFS' impacts, as a contribution to the vision stated by CCAFS' stakeholders in Yatenga".*

Evidencing this theory of changes will require an appropriate M&E plan capable of capturing quantitative changes (such as changes in the status of livelihood resources) and qualitative ones (including changes in individual and organizational behaviors).

5 Conclusions and way forward

Climate change adaptation is a global issue requiring committed partnerships, where different stakeholders including governments, international organizations, research institutes and nongovernmental organizations must work together to support adaptation. Partnership involves collaboration, shared vision and responsibilities so as to provide a coherent framework for joint strategies and actions to the benefit of communities and ecosystems. Although CCAFS's stakeholders in Yatenga reported partnership as essential to addressing climate change effects on agriculture and food security, the extent and effectiveness remains unclear as to how partners interact at different scales and areas of intervention.

This paper therefore investigated the current situation of partnership and networking in Yatenga, Burkina Faso. There were three major findings: Firstly, the density of interactions between organisations working in the same areas to support local communities to adapt to climate change was flawed at all scales. For example, at the community level, the organisations expected in each village to facilitate collaboration with external development actors were not interacting. Likewise, extension services at provincial and regional level showed low interactions with other organisations.

Secondly, in the current working relationship, stakeholders rarely share vision and responsibilities in providing support for local communities to adapt to climate change. Current use of partnership concept seems leading to misunderstanding of its role as development approach. Most of the time, we observed that partnership is used to describe sporadic interactions between organisations rather than an ownership approach to development process. In this respect, the CCAFS program can play an important role to make partnership work for climate-smart agriculture and food security.

Thirdly, there is a potential to build purposive partnership between stakeholders working in the Yatenga region. Building such partnership will require re-structuring the existing relationships between stakeholders, developing the culture of partnership with clear definition of its content and in line with an intended impact pathway of the program. Based on these findings, the first climate change adaptation days was organised in 2014 by the High Commissioner of the Yatenga Province and chaired by the Governor of the Northen Region. The theme of these days was "*What partnership to better support the adaptation of rural communities to climate change?*" This provided opportunity to the partnership members to share information on adaptation lessons from various stakeholders and discuss ways to improve partnership in the region.

The CGIAR research program on climate change, agriculture and food security has an important role to play in building this purposive partnership and networking in Yatenga, Burkina Faso, as in other regions of implementation of this global program. The effectiveness of such partnership requires support to conduct activities related to its development, implementation, monitoring and evaluation. In supporting these activities, attention should be paid to the stimulation of leadership at all levels to ensure the mainstreaming of partnership as climate change adaptation strategy.

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