



**zef**

Center for  
Development Research  
University of Bonn

# Working Paper 190

ELI WORTMANN-KOLUNDŽIJA

**Empowering Smallholder Farmers through Farmer Organizations:  
Insights from Kenya and Burkina Faso**



ZEF Working Paper Series, ISSN 1864-6638  
Center for Development Research, University of Bonn  
Editors: Christian Borgemeister, Joachim von Braun, Manfred Denich, Till Stellmacher  
and Eva Youkhana

Author's address

Dr. Eli Wortmann-Kolundžija  
Justus-Liebig-Universität Gießen  
Goethestr. 58, 35390 Gießen  
+49 0 641-99 12180  
Eli.Wortmann-Kolundzija@admin.uni-giessen.de

# **Empowering Smallholder Farmers through Farmer Organizations**

**Insights from Kenya and Burkina Faso**

Eli Wortmann-Kolundžija

## Acronyms

ADECOD	Association pour le Développement Communautaire Durable
CAK	Cooperative Alliance of Kenya
CARTPL	Collectif des Associations de Restauration et de Transformation des Produits Locaux
CBO	Community Based Organization
CGA	Cereal Growers Association
CP	Community Participation
EAFF	East Africa Farmers Federation
EC	Economic Capital
FAO	Food and Agriculture Organization
FCIDT	Fédération Citoyenne des Initiatives pour le Développement de l'ex-Canton de Toudou
FGD	Focus Group Discussions
FNJPAF	La Fédération Nationale des Jeunes Professionnels Agricoles du Faso
FO	Farmer Organizations
FUGCOMB	Fédération des Unions de Groupements et Cooperatives Maraichaires du Bam
GDP	Gross Domestic Product
IC	Information Capital
KAB	Kakamega Agribusiness Farmers' C.B.O.
KENAFF	Kenya National Farmers Federation
NGO	Non-Governmental Organisation
PE	Psychological Empowerment
ROPSA	Réseau des Organisations Paysannes Syndicales Agricoles
RPBHC	Réseau des Productrices de Beurre de Karité des Hauts Bassins et des Cascades
SC	Structural (social) Capital
SSDFA	Small Scale Dairy Farmers Association
UPPA-B	Union Provinciale des Professionnels Agricoles du Boulgou

## Acknowledgments

It is gratefully acknowledged that the research work presented in this paper received the main financial support from the Andreas Hermes Akademie (AHA), under the project “Farmer Empowerment Strengthening of FOs for Sustainable Socio-Economic Development in Africa and India”. I am very grateful for the valuable comments and suggestions on this paper by Prof. Joachim von Braun, Heike Baumüller, Detlef Virchow and my colleagues at ZEF and AHA, as well as Michael Brüntrup, Bernd Weber, Sabine Brüntrup-Seidemann, Manuel Riemer and Amanda Carrico. I would as well like to thank Eric Hirschbeck, who contributed to the drafting of the report, and Pina von Prondzinski for her assistance in drafting the report and the online data base. Last but not least, I am particularly grateful to Evelyn Baraké for her excellent editing of this paper.

I would like to express my special thanks to the representatives and member households of the sixteen Farmer Organisation in Burkina Faso and Kenya that kindly supported this research, namely ADECOD, CAK, CARTPL, CGA, EAFF, FCIDT, FNJPAF, FUGCOMB, KAB, Kikai, KAF CBO, KENAFF, ROPSA, RPBHC, SSDFA and UPPA-B.

## Abstract

The market-driven agricultural transformation of the global food system requires all, directly and indirectly, participating actors to compete efficiently and to adapt to changes in consumer demand and buyer requirements. Regarding product quantity and quality, smallholders, in particular, have to increase their reliability in order to be able to compete within the agricultural markets. Thus, innovative institutions are needed that integrate and strengthen the sustainability and linkage of and between each technological, economic, social, or political component of the value chain in order to (further) include smallholder farmers within the transforming food system. By adapting their approach and service portfolio both to changing market requirements and to scientific findings from empowerment research, farmer organizations (FO) could become one of the innovative key actors, increasing the competitiveness of their members SMEs' and reducing poverty, its impacts and its costs.

The aim of this study is, on the one hand, to empirically test the previously constructed theoretical concept of empowerment and the applicability of the developed measuring scale. On the other hand, the study compares the current empowerment approaches of the surveyed FOs, in order to show by means of best practices, but also weak points, how applied empowerment approaches can be transferred and improved in the future.

Theory-wise, the term "empowerment" is placed between the discussions of "repositioning" according to Bourdieu, the question of distribution and exercising economic, social, and political power according to Sen and recent findings from behavioral science on the changeability of mental models and thus behavior. By putting the theoretical findings into relation and into the context of agricultural development, the results are integrated into the broader discourse of reducing poverty and hunger. Thus, the overall objective of this study is to support the applied empowerment research and the interdisciplinary discourse on poverty and hunger reduction with some impulses for its further advancement.

**Keywords:** collective action; farmer organisation; poverty; empowerment; agriculture

JEL codes: Q13, O13, O17

# 1 Introduction

Much of Africa is economically dependent on agriculture, which represents 32 percent of the continent's GDP and employs over 60 percent of the total labour force (AGRA, 2018). The sector is an important source of livelihood for the very poorest members of society, many of which are smallholder farmers. Institutions specific to each country's agricultural sector exist to manage and direct production and deal with context-specific challenges. Among these institutions are farmer organizations (FOs), collectives of producers that coordinate their efforts to pursue goals such as efficiency and increased bargaining power. Given the importance of the agricultural sector to economic development and poverty-reduction, a better understanding of the dynamics of FOs and their members is needed.

The development and modernization of Africa's agricultural sector is often presented as a cornerstone of any strategy aimed at accelerating the continent's economic development. FOs, with their broad networks of producers, many of which are smallholder farmers, have the potential to be leveraged as partners in promoting the equitable and sustainable development of the agricultural sector. FOs are ideally placed to support their members in overcoming poverty, food insecurity and disempowerment by improving the distribution and access to resources, exercising and distributing power, and improving the way farmers deal with the consequences of poverty. As private actors, FOs can coordinate access to and the use of collective and external assets while helping farmers increase their individual production and productivity.

The structure and roles of FOs have been shaped by historical factors as well as the political and social contexts in which they operate. They can therefore differ widely from region to region. In the interest of advancing knowledge about farmer organizations in different contexts, this study focuses on two regions on opposite sides of the continent and with different colonial pasts, agricultural focus and environmental challenges, Kenya and Burkina Faso.

The questions guiding this research are the following: (1) Do FOs empower their members and if so, how; and (2) do their current approaches show at least partial similarities with theories of empowerment. To answer these questions, we first developed a list of criteria for empowerment in the context of African agriculture based on theories of empowerment. Through field studies, we observed whether each FO fulfilled these criteria by studying their structure and their members' perception of the benefits of membership. This study is mainly intended to add to the limited research on FOs and to formulate a better understanding of the ways in which FOs empower their members by identifying and systematically comparing their empowerment approaches. A secondary goal is to determine how empowerment approaches could be improved upon and shared with other FOs in order to increase farmer empowerment. Of particular interest is identifying the areas in which FOs can better mediate collective action and support individual members' development in improving equity, efficiency, sustainability and the achievement of social goals.

The first section of this paper presents the relevant background to this study, drawing upon literature from a variety of disciplines relating to poverty reduction, development, psychology, history and empowerment theory. In this section, we elaborate the working definition of FOs used in this paper, as well as a theory of empowerment to be applied to the research question. The second section presents our approach to the research question. We develop a theoretical framework, explain the methodology employed for the study and provide a description of the FOs that participated in the study in both Burkina Faso and Kenya. The third section presents our findings by stage of research, followed by a discussion that contextualizes the findings within the previous research on the subject. This is followed by a conclusion and recommendations aimed at guiding FOs themselves and development organizations who are interested in supporting and strengthening FOs.

## 1.1 Defining Farmer Organizations

Drawing upon collective action as defined in the literature by Marshall and the FAO (Marshall, 1998; FAO, 2014), this study employs the following working definition of farmer organization: a formally organized membership-based group with specific criteria for membership and a stated objective that focuses on one or more defined agricultural commodities and acts collectively to advance its members' shared interests related to its overall objective.

Farmers organizations advance the economic and social interests of members by addressing their specific needs relating to the production, marketing or distribution of the FOs key commodity or commodities and assisting in raising incomes. The potential benefits of membership in an FO include access to:

- Resources, which can be physical, such as inputs, machinery, and technology.
- Services, such as transportation, credit, and insurance.
- Economic opportunities, which can come in the form of better market access, overcoming market constraints, and marketing.
- Education and skill-building, including training, advice, and the provision of information.
- Increased bargaining power, which is often used for advocacy, to influence policy-making, and to develop partnerships with the public and private sector.

The institutional arrangement particular to any given FO can vary on a number of dimensions, including but not limited to:

- Legal status;
- Specific roles and functions;
- Scope of services;
- Regional scope of operation;
- Ownership, leadership, management and operational structure;
- Profit sharing; and
- Criteria for membership.

Table 1 presents common configurations of FOs. Other common categories for FOs include foundations, cooperatives, associations, or mutual benefit societies. These differ in terms of whether they are non- or for-profit, and how profit is distributed, how assets are owned, and in terms of capitalization.

Table 1: Features of Different Types of FOs

	<b>First-tier: Grassroots CBOs</b>	<b>Second-tier: Union</b>	<b>Third-tier: Federations</b>
<b>Structure</b>	Grassroots and community-based	Umbrella structure of first-tier FOs	Super umbrella body of second-tier FOs
<b>Membership</b>	10 to several hundred	Several hundred to several thousands	thousands
<b>Geography</b>	Locality	District	Regional, national
<b>Leadership</b>	Elected from membership base	Elected from representatives of first-tier FOs	Elected from representatives of second-tier FOs
<b>Management</b>	Executive committee leaders	A few paid employees	Highly trained professional and technical staff
<b>Function</b>	Basic collective action, primarily the joint purchase of inputs	Provide first-tier FOs with access to markets, credit, inputs, extension and other services	Advocated for farmers; connect second-tier FOs to markets, credit, and inputs
<b>Marketing</b>	Collective sales on spot markets	Collective sales through contracts and spot market transactions	Link second-tier FOs to national and international sales

(Source: Amani 2016:11)



Each FO's individual set of features will depend on the characteristics of the group involved, the existing institutional arrangements where it operates, and the degree to which external forces and authorities can affect its outcomes. These factors can also impact its effectiveness. For example, a distinction can be made between FOs that are developed, owned and directly controlled by the farmers or by a government authority (Vanni 2014). In the past, especially in the 1960s to 1980s, some state-led development policies have mandated that FOs assign a government representative onto their board. This led farmers to see FOs as government entities rather than member-owned institutions that make decisions and act independently. Examples of FOs being ineffective abound in cases where NGOs, donors, or governments take it upon themselves to define the needs of and preferences of the producers and "impose a certain organizational model as an instrument for their own development policies and values" (Herbel and Haddad, 2012; FAO and IFAD, 2012). Rather than setting agendas top-down, would-be benefactors such as NGOs, government agencies and donors should provide facilitation and mentorship to enable producers to become actively involved, especially in decision-making processes (FAO and IFAD, 2012). These should also encourage governments to create an enabling policy and legal environment in which small-scale producers and civil society can build their own institutions (FAO and IFAD, 2012).

### 1.1.1 Farmer Organizations in Kenya

According to the Cooperative Alliance of Kenya (CAK), there are over 20,000 different farmer cooperatives registered in Kenya, representing 10 million individual members (CAK, 2014). Among these, about 600,000 members are currently active, the majority of which are employed in the coffee or dairy sectors (CAK, 2014; FAO, 2017). The difference between cooperatives and FOs is fluent. A distinguishing feature, for example, is that agricultural cooperatives often seek to increase their members' production and income by linking them with agriculture inputs, information, financing, and agricultural marketing (Sifa, 2014).

In the 2012 edition of Kenya's Cooperative Societies Act, some of these different groups are defined including the following:<sup>1</sup>

- *Apex societies*, which are registered national-level societies formed by the cooperative movement. Their goal is to represent the interests of cooperative societies and promote their development both globally and locally (National Council for Law Reporting, 2012).
- *Cooperative societies*, which promote the welfare and economic wellbeing of their members. These are essentially businesses that are owned and operated by their members, for their members. They are value-driven and all members have an equal say in how the business is run and receive an equal share of the profits (ICO, 2017). They must incorporate the following seven conditions into their bylaws (National Council for Law Reporting, 2012):
  - i. Voluntary/open membership
  - ii. Democratic control
  - iii. Members' economic support
  - iv. Autonomy
  - v. Education and sharing knowledge and information
  - vi. Collaboration with other cooperatives
  - vii. Involvement and interest in the general community

---

<sup>1</sup> For these groups to be registered under the act, they must abide by certain requirements which include a minimum number of members (differs based on the type of society). Furthermore, a person can only be registered in one of these groups if they are at least 18 years of age, have an occupation that falls under the category of the cooperative society, and they reside or occupy land within the society's area of operation (National Council for Law Reporting, 2012).

The act also names '*primary societies*' – cooperatives that restrict their membership to individual persons, and '*cooperative unions*' – a cooperative society whose membership is restricted to primary societies (essentially, a grouping of primary societies) (National Council for Law Reporting, 2012).

In order for these groups to be registered under the act, there are also minimum requirements for the number of members. For primary societies, they must consist of at least ten persons, and for cooperative unions, they must comprise of at least two registered societies (National Council for Law Reporting, 2012). Moreover, a person can only be registered in one of these groups if they meet the conditions of Section 14: they must be at least 18 years old, have an occupation in-line with the category of the cooperative society, and reside or occupy land within the society's area of operation (National Council for Law Reporting, 2012).

### 1.1.2 Farmer Organizations in Burkina Faso

There are an estimated 40,000 farmer organization in Burkina Faso, one third of which are considered active (Arcand, 2003; Onate, 2012). Prior to colonization, villages had traditional organizations that promoted mutual assistance between village members and to organize collective work (Arcand, 2003). Upon independence from France in 1960, there were about 160 cooperatives that served the agricultural sector and acted as mutual credit groups (Arcand, 2003). A further 600 farmer groups were created after independence. Rural development continued to be guided by the French, most of which were mutual credit groups promoting cultivation agriculture (Arcand, 2003).

Farmer groups in Burkina Faso today mainly promote development and increase efficiency within the sectors of agriculture, livestock, handicrafts, business, and credit (Arcand, 2003). FOs are often structured in umbrella organizations, which are legally recognized and comprise unions, federations and confederations that share common socio-economic development goals (Afrique Verte, 2008). These umbrella organizations can exist on the regional, national and international scale, and their objectives centre on defending the general interests of their members (Afrique Verte, 2008). The work they do includes representing and advocating for their members; cooperating and negotiating with different levels of government and other parties with shared interests; and building the capacity of their members by helping them understand agricultural policies while improving their living and working conditions (Afrique Verte, 2008).

Another important category of farmer groups in Burkina Faso are *interprofessions*. An *interprofession* is a state-recognized, private, voluntary organized group made up of the different professional organizations from every segment of a value chain (Afrique Verte, 2008; l'Assemblée Nationale, 2012). Interprofessions are market-oriented and focus on vertical coordination between different links of an agricultural production value chain. They usually concern themselves with the processing, distribution, marketing, and consumption of one or more specific products (Afrique Verte, 2008). Their goals generally include:

- to improve product quality to meet consumer demand.
- to increase demand via product promotion.
- to encourage economic security and food security for their members and consumers.
- to analyze market data and statistics.
- to broaden product research and development.
- to improve the efficiency and organization of the value chain (Afrique Verte, 2008).

## 1.2 Farmer Organizations and Economic Development in Africa

To better understand how FOs empower their members, we must first determine what is considered an improved outcome in the context of African Agriculture. This question is approached by Gabre-Madhim and Haggeblade, who identify the most relevant criteria for agricultural improvement

according to African and Africanist stakeholders (2004).<sup>2</sup> Success is defined as “a measurable improvement in net welfare, with broad-based impact and achieved in an environmentally sustainable manner,” which includes but is not limited to income growth, increased assets, improved nutrition, reduced variability in consumption, and a greater sense of well-being (Gabre-Madhim and Haggeblade, 2004). They find that the most relevant indicators of success are efficiency, as measured by production, income and governmental support, and sustainability, both at the farm level (e.g. improved soil fertility) and at the systems level (trainings, improved market access, effective institutions) (ibid).

Evidence suggests that FOs can support agricultural development by developing income streams and increasing productivity in rural areas (Ma and Abdulai, 2016). Membership appears to be particularly beneficial to farmers with lower education levels, female-headed households, female-headed farms, farms with few workers, and poor farmers who live in remote areas (Verhofstadt and Miet Maertens, 2015). Beyond offering support with various aspects of production and/or marketing and the potential for higher productivity and prices, membership in an FO can have broader impacts on everyday life, for instance rendering the division of income between members of a household more gender balanced.

The fact that FOs are particularly beneficial to poor producers is highly promising, considering the difficulties associated with breaking the cycle of poverty. There is considerable evidence that poverty involves significant mental and psychological challenges in addition to more commonly reported material and social challenges. Poverty can reduce the ability of those it affects to have aspirations and to take advantage of present opportunities, and it can be interpreted as a cognitive burden on the poor. Having to cope with the daily consequences of poverty may also preclude individuals from taking more deliberative action and make the cognitively demanding task of planning for the future more difficult. The mental challenges of poverty, therefore, can themselves perpetuate poverty and income stagnation. Breaking the mental aspect of the poverty cycle, according to this research, involves changing or creating of new beliefs to help the poor look out for promising opportunities, adapt to changing circumstances, and improve their decision making.<sup>3</sup> The psychological costs of poverty, distinct from mental costs, relate to an individual’s overall psychological well-being (Hausofer and Fehr, 2014). These include negative impacts on a poor person’s stress levels, attention, patience, and mood (Hausofer and Fehr, 2014). Irrational decision making in conditions of temporal or financial scarcity are possible consequences.

Research on what makes an FO successful in combatting many of these challenges is scarce, as is determining the elements that make an FO effective. No “one-size-fits-all” approach is likely to exist for FOs to follow in order to be successful. Rather, the best approach will differ depending on the value chain in which the FO is involved, the type of collective action it engages in, the services it provides, and the didactical methods used.<sup>4</sup>

One point of agreement within the research on FOs and collective action in general is the importance of trust. As collective action institutions, interpersonal and institutional trust are considered key ingredients to strengthening the governance of an FO and fostering development (Barraud-Didier et al., 2012; Gouldner, 1960; Hansen et al. 2002; Hendriske and Bijman, 2002; Österberg and Jerker, 2009). In addition, incentives, norms and beliefs, all of which are tools that can be used to build trust, can be leveraged by FOs to reshape the policy environment.<sup>5</sup>

---

<sup>2</sup> African and Africanist stakeholders are people that are professionally and academically connected to Africa

<sup>3</sup> Hausofer and Fehr, 2014; Mullainathan and Shafir, 2013; Banerjee and Mullainathan, 2008; Ray, 2006; Duflo, 2012; Appadurai, 2004; Mekonnen, 2016; Drexler et al., 2014; Foster, Rosenzweig, and Munshi, 1995; Conley and Udry, 2010; Vasilaky and Leonard, 2013; BenYishay and Mobarak, 2014; Alesina et al., 2013; Algan et al., 2013; Beaman et al., 2009 and 2012; Jensen and Oster, 2009; La Ferrara et al., 2012; Pandey, 2010; Hoff et al., 2014

<sup>4</sup> Abebaw and Haile, 2013; Barham and Chitemi, 2009; Bernard and Spielman, 2009; Bernard et al., 2008; Bisung, 2014; Cook, 1995; Cook & Chaddad, 2004; Cook & Iliopoulos, 2000; Fischer and Qaim, 2011 & 2012; Hellin et al., 2009; Holleran et al. 1999; Ito et al., 2012; Jin and Zhou, 2011; Francesconi & Wouterse, 2014; Markelova et al., 2009; McInerey, 2014; Meinen-Dick et al., 2004; Vanni, 2014; Verhofstadt and Maertens, 2014 & 2015; Sykuta & Cook, 2001

<sup>5</sup> Fukuyama, 1995; Leana and Buren, 1999; Nahapiet and Ghosal, 1998; Arendt, 2000, 36-58; Spicker, 2007, 84; Fehr et al., 2002; Ostrom, 2000; Putnam, 1993; Newton, 1997; Baland and Platteau, 1996; Wade, 1988, 215-217; Markelova et al., 2009; Agrawal, 2001; Ackerman, 2004; Keys et al., 2017; Maton, 2008; Keys et al., 2017; Brune and Bossert, 2009; Hurtado

Trust is also important for governance within an FO. Trust can be understood as a prerequisite for commitment, and the level of commitment can in turn determine participatory behaviour. Trust, norms, and networks facilitate collective activities and can help members mobilize to tackle social issues. FOs thus have the potential to tackle social issues through collective action by developing shared social norms which create a rule-based trust. To foster this trust, FOs can enable access to resources and develop shared social norms to create the type of rule-based trust that appears to be a prerequisite enabling collective action. This complements research from the fields of community psychology and ecological behaviour on the positive impact of social norms that are imparted through educational and institutional means on behavioural change.<sup>6</sup>

A central way many FOs attempt to improve the economic prospects of members and by consequence, promote larger-scale agricultural development, is by offering trainings and educational sessions. These aim to teach members new and improved practices and to transfer knowledge. Past research indicates that the setting and the method of teaching is important and that classical educational models may not be effective in bringing about the desired change (Algan and Cahuc, 2013). The psychological and mental costs of poverty described above are plausible contributing factors. In this context, it has been suggested that farmers may be more open to change their behaviour and implement new knowledge if they first receive access to resources (Algan and Cahuc, 2013).

Synthesizing the relevant pre-existing research as relevant to the study at hand, we see that FOs have the potential to empower members and to foster socioeconomic change by improving the food security of members and alleviating their poverty. The mechanisms available to FOs through which this change can take place are the following:

1. Enabling access to resources and capital<sup>7</sup>, e.g. helping farmers increase the quality and quantity of their production; enabling access to local, national and international markets.
2. Organizing and facilitating large-scale mobilization<sup>8</sup>, e.g. through networking, lobbying and advocacy.
3. Maximizing outreach to others<sup>9</sup>, e.g. facilitating exchanges through networking and advocacy meetings.
4. Supporting the adoption of favourable social norms<sup>10</sup>, e.g. improving relevant market knowledge and behaviour.

Despite their potential, FOs often suffer from challenges that affect the wider agricultural system of the countries in which they operate. Some of these challenges are described below for both Kenya and Burkina Faso.

### *1.2.1 Major Challenge to Farmers and Farmer Organizations in Kenya*

Many of the challenges faced by Kenya's agricultural sector are tied to environmental conditions, such as declining agricultural performance, lack of high-potential agricultural land, land degradation, and a lack of diversity in agricultural production (ZEF, FARA and KALRO, 2015). There is an overreliance of

---

et al., 2011; Bisung, 2014; Mullainathan and Shafir, 2013; Banerjee and Mullainathan, 2008; Guiso, 2013; Kahneman, 2003; Evans, 2008; Sunstein, 1996; Paluck and Shepherd, 2012; World Bank, 2015, 49-81

<sup>6</sup> see for example Bennett, Anderson et al., 1966; Christens, 2012; Christens and Speer, 2011, 2014; Rapport, 1987; Bryant, 1989; MacMillan and Chavis, 1986; Quimby and Angelique, 2011; Zimmermann and Zahniser, 1991; Seidman and Tseng, 2011; Adler and Kwon, 2000; World Bank, 2017; Putnam, 1993, 1995, 2000; Fukuyama, 1999; Nahapiet and Ghoshal, 1998; Portes, 1998

<sup>7</sup> Algan and Cahuc 2014; Barham and Chitemi 2009; Bisung et al. 2014; Gabre-Madhin and Haggblade, 2004

<sup>8</sup> Putnam 1995, 2001; Putnam, Leonardi, and Nanetti 1994; Fukuyama 1999; Portes 1998; Nahapiet and Ghoshal 2000

<sup>9</sup> Arendt (2000)

<sup>10</sup> Abebaw and Haile, 2013; Barham and Chitemi, 2009; Bernard and Spielman, 2009; Bernard et al., 2008; Bisung, 2014; Cook, 1995; Cook & Chaddad, 2004; Cook & Illiopoulos, 2000; Fischer and Qaim, 2011 & 2012; Hellin et al., 2009; Holleran et al. 1999; Ito et al., 2012; Jin and Zhou, 2011; Francesconi & Wouterse, 2014; Markelova et al., 2009; McInerney, 2014; Meinzen-Dick et al., 2004; Vanni, 2014; Verhofstadt and Maertens, 2014 & 2015; Sykuta & Cook, 2001)

rain-fed agriculture among producers, who, as a consequence, have variable yields that depend on rainfall (ibid). FOs continue to struggle with the promotion and development of irrigation systems to target this issue. Some of these challenges can be attributed to the absence of a widespread land-use policy, as well as inadequate training and educational programs (ibids; Sifa, 2014). These issues are hard to rectify given that the agricultural sector in Kenya suffers from a lack of financing and research.

Farmers in Kenya, particularly smallholders, face a number of constraints that impact their ability to increase their production and income. Remote and rural producers can have difficulties accessing markets when infrastructure is deficient, and they are limited by the perishability of their goods (Fischer & Qaim, 2012). This presents a system-wide challenge to the integration of smallholder farmers into value chains, as effective value chains require consistency in product quality and a regular, reliable flow of products (Fischer & Qaim, 2012). However, FOs have the potential to mitigate these challenges by helping farmers cut transaction costs, improve their production, and improve market coordination (Fischer & Qaim, 2012).

Nonetheless FOs in Kenya have a number of intrinsic challenges, as documented in the literature. These can include poor management, lack of capital, resources, and credit, low member participation and communication (Sifa, 2014). Furthermore, FOs often face political challenges, such as inequality of access to information and power. Some of these challenges can be exacerbated by societal factors, including the high degree of fragmentation of land holdings and the way labour is divided between the sexes (Sifa, 2014).

### *1.2.2 Major Challenge to Farmers and Farmer Organizations in Burkina Faso*

Like in Kenya, environmental challenges present a large risk to the agricultural sector. Many challenging conditions can be tied to climate change, namely low levels and the increasing irregularity of rainfall, the risk of insect-borne infestations, declining levels of nutrients in the soil, and insecure water supply (ZEF, FARA and INERA, 2015). Land issues are in part due to a lack of training and limited knowledge of sustainable agricultural techniques, and they are further exacerbated by land pressures due to demographic phenomena, namely the influx of labour migrants and rapid population increase (ibid).

Other issues relate to geography and governance. For instance, road conditions are often poor, and there is a lack of transportation infrastructure, which limits the efficiency of value chains. This is especially problematic for Burkina Faso, as the country is landlocked, complicating the distribution of agricultural goods (ZEF, FARA and INERA, 2015). Furthermore, the government only invests 0.4% of agricultural GDP into innovation, research and development, which is far below the 1.0% target set by the African Union (ibid). This lack of government funding renders Burkina Faso reliant on unstable donor funding for research and development. Other governance-related issues include insecure land tenure and the use of child labour in the sector (ibid).

FOs in Burkina Faso are regulated under Law 14, whose requirements include having to submit reports on their activities. Organizational and managerial challenges within FOs can therefore make it difficult to conform to regulations and consequently compromise their bargaining power (Afrique Verte, 2008; Arcan, 2003; Onate, 2012). Other problems that impact the ability of FOs to conform to the law, as identified by Onate include the lack of formal management training for legal, accounting, and auditing functions (2012).

## **1.3 Empowerment**

Considering the importance of FOs in developing countries and their potential role in alleviating poverty by enabling some of the most vulnerable populations, such as smallholder farmers, to become integral participants in agricultural value chains, we consider concepts of empowerment used in the fields of poverty and development research. The “capability approach” to poverty reduction focuses on facilitating conditions that enable individuals to live up to their human potential (2011). According to this theory, economic development equates to human development (Nussbaum, 2011).

Empowerment can therefore be understood as creating conditions in which individuals have the necessary opportunities to thrive. The FAO found that “countries that gave priority to the development of human capabilities, such as through better access to basic schooling, health, and nutrition, directly enhanced well-being and also improved income distribution and raised average income over the long term (2002).” A similar concept is presented by Amartya Sen, whose theory centres strongly on the distribution of power (1981). According to this theory, poverty is a consequence of a lack of entitlement, resulting from the distribution and ability to exercise economic, social and political power (Spicker, 2007, 86-87).

In our study, we use the theory of power presented by Bourdieu to further supplement the concept of empowerment in the context of poverty reduction and development present in the work of Nussbaum and Sen. According to Bourdieu, power is access to the profits from corresponding investments, as well as the volume of available and potential capital one has (1986). Capital is described as economically, socially or culturally accumulated work or effort (Bourdieu, 1983).

# 2 Approach

## 2.1 Theoretical Framework

As demonstrated in the literature presented in the first section, the extent to which FOs alleviate poverty and enable the socio-economic development of their members – i.e. empower their members – is not yet well understood. To understand whether empowerment takes place, a theory explaining the mechanisms through which a member becomes more empowered is needed. We identify the following impact pathways to empowerment based on our reading of the empowerment theories presented in the previous section:

1. **Collective empowerment** takes place through one’s capacity to act and to align with others, as well as the ability to build favourable frameworks for the use of capital and resources.
2. **Individual empowerment** is the individual’s ability to access and manage capital and resources and to broaden his or her range of choices and improve the quality of decision making

These pathways relate to an FO’s capacity to generate empowerment outcomes and have both procedural and structural components. The outcomes, on the other hand, are experienced at the member level. To define these outcomes, we draw upon Sen’s notion of poverty as the unjust distribution and handling of economic, social and political power (1981), as well as Bourdieu’s mechanisms of power (1983, 1986), and transfer these to the context of agricultural research. In general terms the outcomes are as follows:

1. Improved distribution and access to resources,
2. Improved ability to deal with the consequences of poverty,
3. Meaningful community participation, and
4. Increased self-confidence/agency.

These theory-based outcomes are further refined into criteria of empowerment, against which the FOs studied were assessed. These criteria are developed using the language of the accumulation of capital, namely economic, structural (social) capital, and information capital. We also include psychological empowerment and concept of community participation, both of which enable the behavioural change necessary to empowerment. These empowerment criteria are presented in Table 2.

Table 2: Criteria of Empowerment

<p><b>1. Access to Capital:</b></p>	<p><b>Structural (social) capital (SC):</b> the structure in which FOs operate. This includes considerations of memberships/networks, human sociality, time availability, representation of needs within FO, etc.</p> <p><b>Economic Capital (EC):</b> access to natural, physical and financial resources</p> <p><b>Information Capital (IC):</b> services, transfer of knowledge and skills</p>
<p><b>2. Behavioural Change:</b></p>	<p><b>Psychological Empowerment (PE):</b> individual agency, perceived ability to cope with the consequences of poverty</p> <p><b>Community Participation (CP):</b> conflict resolution mechanisms, rules and norms, shared perceptions, trust</p>

## 2.2 Methodology

### 2.2.1 Study Design

The subjects of study – the specific FOs – were selected from the network of a few international organizations operating in Burkina Faso and Kenya, including AHA, GIZ (Gesellschaft fuer Internationale Zusammenarbeit), TRIAS<sup>11</sup>, AGRITERRA<sup>12</sup>, and FERT<sup>13</sup>. Supporting organizations were asked to provide contacts for FOs that met the selection criteria. The questions that were posed to potential FOs and that guided the final selection were the following, and are based on the work of Amani, Berryman et al., and Fontaine (2016; 2016; 1997):

1. What type of organizations is this FO/ Does the FO have legal status as a registered FO? (e.g. grassroots/ community-based organization; union; federation)
2. Are you a public, private or participatory organization?
3. Which role and function do you pursue: Enabling, Delivery, User/Client Support?
4. What are the specific features of your FO?
  - a) **Structure** – e.g. grassroots and community based; umbrella structure of grassroots and CBOs; super umbrella body of unions
  - b) **Membership** – how many members do you have? e.g. up to several hundred; several hundreds to several thousands
  - c) **Geography** – do you act locally, within a district or on a regional/national level?
  - d) **Leadership** – e.g. elected by membership base; elected by representatives of grassroots/CBOs; elected by representatives of unions
  - e) **Management** – How do you manage the workload? E.g. with executive committee leaders; a few paid employees; highly trained professional and technical staff
  - f) **Function** – e.g. basic collective action, primarily the joint purchase of inputs; providing grassroots organizations and CBOs with access to market, credit, input, extension and other services; advocating for farmers and connect unions to markets, credit and inputs
  - g) **Marketing** – e.g. collective sales on spot markets; collective sales through contracts and spot market transactions; link unions to national and international sales
  - h) **Value Chain Focus** – one commodity or several value chains
  - i) **Service Scope** – Do services cover the whole value chain or only specific segments? e.g. production, processing, inputs, sales, transport
  - j) **Legal Status** – non-profit or for-profit? (economic, political or social orientation); what is the organization registered as? e.g. CBO, union, federation, Cooperative, apex

Based on the results of this pre-selection, FOs were selected so as to reflect a diversity of functions, marketing approaches, value chains, services and legal status. Figures 1 and 2 provide a visual representation of the size and scope of service of the FOs selected for the first stage in Kenya and Burkina Faso as well as the distance between each organizational level (represented by the length of the green arrow) and the estimated number of sub-organizations between FO management and farmers (represented by the houses). These FOs will be described in further detail in section 2.3.

---

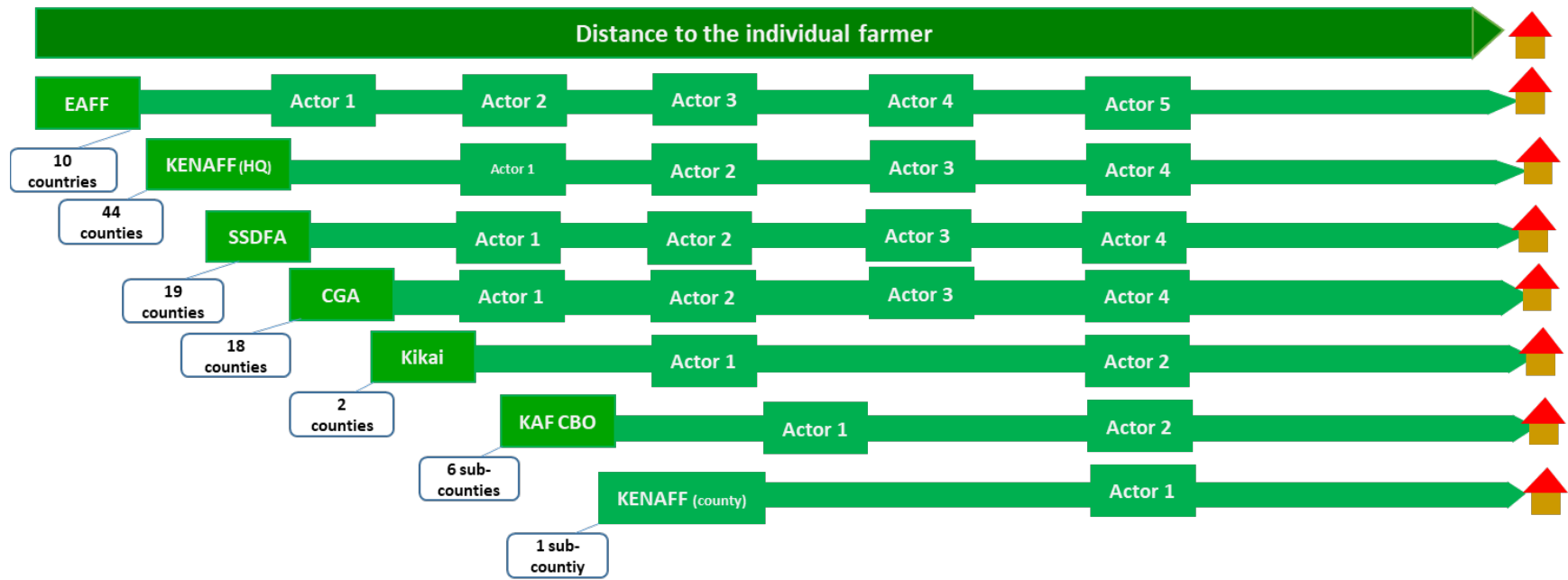
<sup>11</sup> Trias is an international development organization (<https://www.trias.ngo/en/about-trias>)

<sup>12</sup> Dutch Agri-Agency (<https://www.agriterra.org/founders/>)

<sup>13</sup> “Fert is a French association for international cooperation for agricultural development in developing and emerging countries.” (<https://www.fert.fr/en/developpement-agricole-international/>)

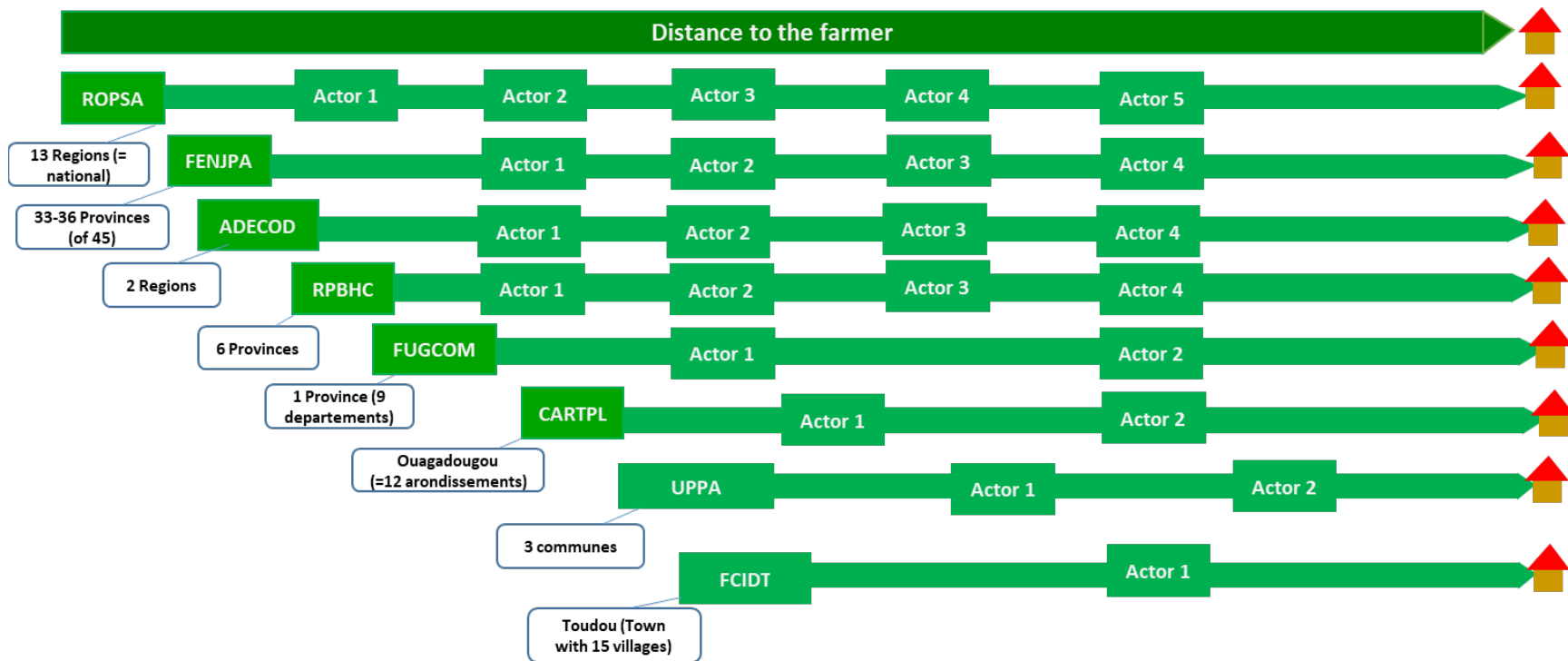


Figure 1: Farmer Organizations Interviewed in Stage 1 – Kenya



Note: Kenya is organized in 46 districts, 8 provinces, 290 sub-counties and 1.450 wards  
 Source: Author's compilation

Figure 2: Farmer Organizations Interviewed in Stage 1 – Burkina Faso



Note: Burkina Faso is mainly organized in 13 regions, 45 provinces, 351 departments  
 Source: Author's compilation

### *2.2.2 First Stage*

The goal of the first stage of the study was to determine each FO's potential to empower its members based on its structural and procedural set up. This stage included a field visit that took place from December 2016 to January 2017.<sup>14</sup> To assess each FO's structural components, we conducted an institutional analysis adapted from the institutional assessment development framework developed by Ostrom (1990) as well as a brief stakeholder analysis (see Appendix A). Of particular interest was determining whether each FO:

- Has a clear and efficient organizational structure,
- Harmonizes its activities with the organization's objectives,
- Measures success against objectives using appropriate output indicators, and
- Aligns its activities with relevant stakeholders.

Procedural components describe an FOs capability to establish a sense of community and create an environment of trust to increase member participation. As part of the procedural analysis, we asked FO management to describe how the organization interacts with members, implements innovations, mobilizes members and conducts large-scale outreach.

Interviews were held with eleven leaders from eight different FOs in Burkina Faso and with eight leaders from seven FOs in Kenya. For more details about the methodology and examples of questions that were asked during these interviews, see Appendix A and B.

### *2.2.3 Second Stage*

The second stage of the study was outcomes-focused. Of key interest was understanding how the organization interacts with members, implements innovations, mobilizes members, and conducts outreach. This stage involved focus group discussions, interviews with members, farmers, and various stakeholders, as well as in-depth household surveys of farmers. The aim was to generate insight on the farmers' perspective regarding how the objectives of each FO are implemented, how the organization reaches out to its members, if members experience increased empowerment by virtue of their membership in the FO, and the points of leverage particular to each FO.

At the start of this stage, three FOs from each country were shortlisted from the 15 FOs interviewed in the first stage based on the institutional analysis and based on our assessment of which farmer organisation might, due to its diversity, provide us with the most insight possible. We first held interviews with FO management to provide further detail on the activities conducted by the FO. Then, to gather the experiences of members at all levels of the organizations (most FOs consist of multiple sub-organizations, each branching out and more local in scope), two to three focus group discussions were held per FO, each with five participants. Each focus group was designed to accurately reflect the composition of the members they represented. In Kenya, a total of 35 farmers and six stakeholders were interviewed. In Burkina Faso, interviews were conducted with 85 farmers and nine stakeholders. For a detailed typology of each type of interview, survey and focus group discussion, see Appendix B.

In order to link the different approaches used by FOs with their members' perception of the changes in capital they experienced as a result of their membership, a pathway analysis was then conducted. An

---

<sup>14</sup> The field concept for this first visit to the region was elaborated with the help of the Centre for Development Research (ZEF), the German Institute for Evaluation (DEval), and the German Development Institute (DIE).

overview of the empirical field concept is presented in Table 3. The **criteria for empowerment** are assigned to the capital/resource types defined as measures of empowerment. Structural social capital (SC) is the memberships, networks etc.; information capital (IC) = skills, knowledge, innovation, etc.; economic capital (EC) = natural, physical, and financial resources; psychological empowerment (PE) = intrapersonal empowerment = perceived control and socio-political control; community participation (CP) = cognitive social capital (norms, values, beliefs) and relational social capital (= community settings).

Table 3: Empirical Field Concept

Criteria of Empowerment		Type of Analysis	Survey Level		
			Management	Focus Group Discussions	Individual Farmer
Structural Social Capital	Capability to act	Field Study: Institutional Analysis	- Analysis of the organizational structure - Force field analysis	/	/
	Building favorable structures		- Objectives (which challenges and approaches?) - Outcome measurements - Overall goal	/	/
	Gathering of many		- Number of members - Frequency of meetings	- Frequency of participation in meetings?	- Frequency of participation in meetings?
	Capability to align with group		- Stakeholders - Procedural Quality (trust, social norms, reciprocity, rewards)	/	/
Economic Capital, Intellectual Capital and Community Participation	Access to resources and increased entitlement	Field Study: Pathway Analysis	- What services are offered through whom? (content & didactics)	- Which content does the farmer recall? - Do confidants exist? (Human sociality?)	- What changed since becoming member? - What is the main source of information? - How do they implement taught content/ use new services/...?
	Aligning with members		- How do they approach their members?	- Do solidarity, rewards, commitment, rules exist in FO? - Level of trust, trusting in the FO-management and their capability to act? - Group feeling, commitment, & personal motivation	- Do solidarity, rewards, commitment, rules exist in FO? - Level of trust, trusting in the FO-management and their capability to act? - Group feeling, commitment, & personal motivation
Psychological Empowerment	Greater choice and broader perspectives and increased ability to cope with the consequences of poverty		/	- Perceived control - Process of decision-making - Deliberative time availability	- Perceived control - Process of decision-making - Deliberative time availability

(Source: Author's compilation)

## 2.3 Description of the FOs studied

The FOs selected for study are presented in Tables 4 and 5 below, along with some of their key features. FOs in the shaded rows were selected for further study in the second stage of the analysis. The FOs selected vary widely in terms of membership, structure, scope and focus. Some larger federations and associations count membership in the hundreds of thousands or even millions, as they represent collectives of smaller FOs, who in turn, may comprise sub-organizations themselves. These larger organizations are many levels removed from the farmers themselves. Other FOs in the study were locally-based and operated much more closely to the farmers, such as FCIDT, RPBHC, and UPPA-B in Burkina Faso. Furthermore, FOs also differ in terms of focus. Whereas some FOs are general in scope, others support producers of one or a few specific commodities, such as FUGCOMB and Kikai, or instead focus on a specific group such as youth (FNJPAF) or women (CARTPL), or do a combination of the above (RPBHC).

Of the FOs in Kenya, three are linked: EAFF, KENAFF and KENAFF Kakamega. EAFF is an umbrella organization working in ten countries within East Africa, KENAFF is a member organization of EAFF's, which works in most counties in Kenya. KENAFF Kakamega, a further level down, is a county office registered as an individual association in the county of Kakamega. Having these three levels in the study allowed us to understand how activities, processes, and interaction with farmers differs at every level of a same organization.

We chose to study many different types of FO to give an overview of the functioning of this type of organization, given the lack of research in this field. The large degree of variety and small sample size necessarily reduces the precision of the analysis, however considering the varied nature of these organizations, we chose that an overview was the fitting approach.

Additional descriptions of each FO are included in Appendix C.

Table 4: Farmer Organizations in Kenya interviewed in stage 1 (December 2016)

Name of the FO	Legal Status	Number of Members	Geography	Brief Description
EAFF: East Africa Farmers Federation	Regional federation/Apex organization	20,000,000 farmers	10 countries	EAFF is a non-political, non-profit, democratic apex organization. Its role is to voice legitimate concerns and interests of farmers of the region with the aim of enhancing regional cohesiveness and social-economic status of the farmers (eaffu.org).
KENAFF: Kenya National Farmers Federation	National federation	2,000,000 farmers	44 counties	KENAFF is a non-political, non-profit making and democratic member-based umbrella organization of all farmers in Kenya. Its objective is to articulate issues affecting farmers through focused lobby and advocacy, targeted capacity building and promotion of sector stakeholders' cohesiveness in dispensing progressive uptake of agricultural innovations for enhanced socio-economic status of farmers (kenaff.org).
SSDFA: Small Scale Dairy Farmers Association	Grassroots/ community-based association	60,000 farmers and 82 cooperatives	National-level organization present in 19 counties	SSDFA supports the unification of small-scale dairy farmers and lobbies and advocates to improve the farmers' livelihoods.
CGA: Cereal Growers Association	Community-based association <sup>15</sup>	30,000 farmers and 80 associated companies, banks, etc.	All 18 grain-growing counties	CGA is a national non-profit member-based farmer organization incorporated in 1996. Its main purpose is to bring together commercial cereal farmers to promote collective action for the sustained improvement of their farming enterprises and in addressing industry challenges in Kenya (cga.co.ke).
Kikai Coffee Farmers' Cooperative Society	Primary cooperative	2,500 farmers	Active in 2 sub-counties	Cooperative for coffee growers in Bungoma County (previously known as Western Province)

<sup>15</sup> In the process of being registered as a Limited Company.

Name of the FO	Legal Status	Number of Members	Geography	Brief Description
KENAFF county (Bomet & Kakamega)	Former KENAFF branch now association; KENAFF	875 farmers	Active in 6 sub-counties	County farmers' associations are the county-level office of KENAFF. These are in turn made up of smaller, ward-level organizations.
KAB: Kakamega Agribusiness Farmers' C.B.O.	Grassroots association	105 farmers (in 7 groups with 15 farmers per group)	Operates in Lurambi sub-county in Kakamega County.	

(Source: Author's own compilation)

Table 5: Farmer Organizations in Burkina Faso interviewed in Stage 1 (December 2016)

Name of the FO	Legal Status	Number of Members	Geography	Brief Description
ADECOD: <i>Association pour le Développement Communautaire Durable</i> (i.e. Sustainable Community Development Association)	Association	4,000 members	2 regions	ADECOD aims to improve the quality of products and to increase their members' production. It works with main value chain operators (farmers, farmer groups, service providers, processors and consumers) and a number of actors in the public, private and NGO sectors.
CARTPL: <i>Collectif des Associations de Restauration et de Transformation des Produits Locaux</i> (i.e. Collective of food Services and local product processing associations)	Collective of smaller organizations	4,500 members	12th arrondissement of Ouagadougou	CARTPL is a marketing collective focusing on the production of local products. It campaigns against the poverty of its members, mainly women by empowering farmers through health, sanitation services, and financial opportunities.
FCIDT: <i>Fédération Citoyenne des Initiatives pour le Développement de l'ex-Canton de Toudou</i>	Federation of citizens	300 members	Toudou (city with 15 villages)	FCIDT aims to promote development in the Toudou region and to empower community members by encouraging civic action. Their members are in large part smallholder farmers.

Name of the FO	Legal Status	Number of Members	Geography	Brief Description
(i.e. Citizens' Federation of development initiatives in the ex-canton of Toudou)				
FNJPAF: <i>La Fédération Nationale des Jeunes Professionnels Agricoles du Faso</i> (i.e. National Federation of the young agricultural professionals of Faso)	Federation of groups	11,000 members	33–36 provinces	The main objective of FNJPAF is to promote agricultural work through the modernization and professionalization of family agriculture and to provide basic agricultural inputs and training opportunities to member groups. By training young farmers in new agricultural techniques, they want to contribute to reducing the rural exodus of youth from the villages and to increase women's entrepreneurial skills and knowledge.
FUGCOMB: <i>Fédération des Unions de Groupements et Cooperatives Maraichères du Bam</i> (i.e. Federation of the vegetable cultivation unions, groups, and cooperatives of Bam)	Federation of citizens	1,200 members	1 province (Bam)	FUGCOMB supports fruits and vegetable producers with production and sales.
ROPSA: <i>Réseau des Organisations Paysannes Syndicales Agricoles</i> (i.e. Network of unionized agricultural farmer organisations)	Network of FOs	29 FOs and 13 regional agricultural chambers	National	ROPSA advocates for its member organizations by working to influence agricultural policies in favour of family agriculture. It also works to build the capacity of its member FOs.
RPBHC: <i>Réseau des Productrices de Beurre de Karité des Hauts Bassins et des Cascades</i> (i.e. Shea	Collection of rural associations	255 members	106 villages in 6 provinces within 2 regions	RPBHC's mission is to promote the socioeconomic and cultural development of women and youth through the sustainable production and marketing of Shea Butter. The organization also supports the development of value chains for other local products such as honey and sesame.



Name of the FO	Legal Status	Number of Members	Geography	Brief Description
Butter Producers Network of Houet and Cascades)				
UPPA-B : <i>Union Provinciale des Professionnels Agricoles du Boulgou</i> (Provincial union of agricultural professionals of Boulgou)	Federation of citizens	495 members	3 communities	UPPA-B's objective is to professionalize value chain actors in order to increase revenues. They aim to increase members' productivity by increasing their members' knowledge of production and processing techniques, facilitating access to agricultural inputs, and providing support services.

(Source: Author's own compilation)

## 3 Findings

### 3.1 Stage 1 Findings: Institutional, Stakeholder and Procedural Analyses

This section summarizes findings from the first stage of research. The institutional analysis enabled us to determine the objective of each FO and conduct a preliminary assessment of whether its activities align with its stated objectives. Through the stakeholder analyses, we attempt to understand how an FO chooses its partners and collaborators, as well as the points of leverage the FO has chosen to pursue its strategy. We adopt breadth of network as a criterion, as this demonstrates how each FOs attempt to build a broad consensus by engaging with a diversity of actors. As part of our stakeholder analysis, we constructed maps of participants for each FO to develop an understanding of how FOs build up structural social capital. In order to discover patterns in the choice of relevant partners, these were classified along the value chain. These illustrations, which can be found in Appendix D, visualize the points of leverage that FOs have chosen in order to pursue their strategy and show their chosen collaborators that enable better access to resources

The procedural analysis enabled us to gain an understanding of the procedures that FOs follow and intentionally put in place to actively foster member participation. Figures 3-5 present a summary of the institutional analysis of stage 1 for FOs in Kenya, and Figures 6-8 present the findings for FOs in Burkina Faso. These figures serve as a checklist, illustrating which of the structural components of empowerment identified in the theoretical framework are present within each FO, based on interviews with the management. Below are key observations relating to specific FOs that came out of the analysis, first comparing the FOs in Kenya with one another, and second those in Burkina Faso.

#### 3.1.1 Kenya

##### Objective and Approaches

In Kenya, all first-stage FOs besides two grassroots associations, KAB and SSDFA, reported approaching the goal of empowering their members by improving their productivity and the quality of their products, as well as increasing their access to resources. EAFF, KENAFF (Headquarter and County offices), and CGA also aim to increase access to local and international markets; improve the availability of food locally; improve members' market knowledge and behaviour; increase networking, lobbying, and advocacy; and to offer other services in related fields of action. On the other hand, KAB, Kikai and SSDFA have a narrower focus. KAB mainly aims to improve members' knowledge and behaviour and to conduct advocacy, Kikai targets productivity and product quality as well as access to resources, and SSDFA focuses on increasing access to local and international markets and food availability.

All interviewed FOs other than Kikai invest their revenue in developing the organization rather than redistributing it to members. KENAFF county, CGA and Kikai were the organizations deemed to possess the greatest common resources.

Figure 3: Categorization of Farmer Organizations in Kenya according to reach and breadth

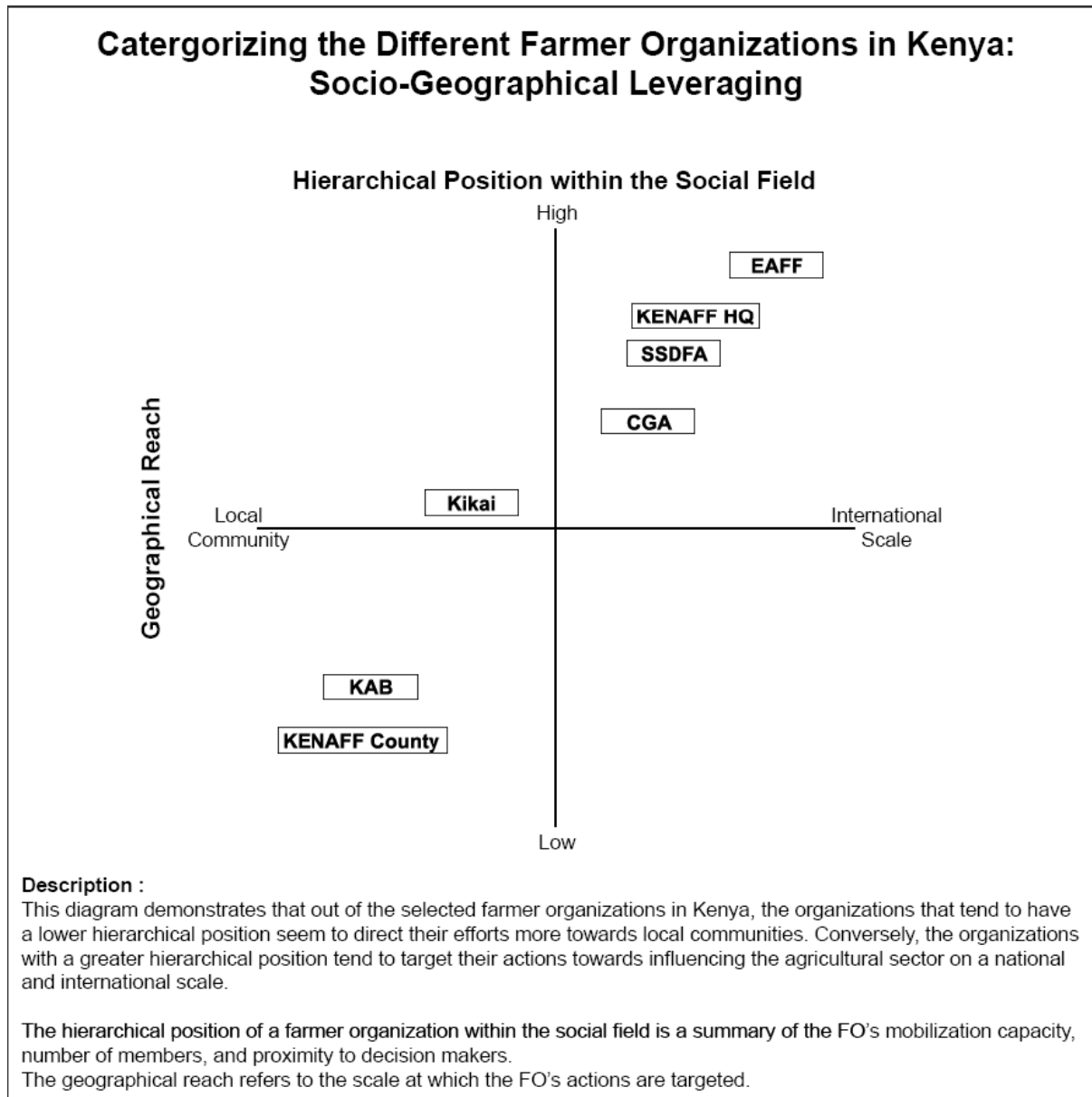


Figure 4: Structural Components of Empowerment Checklist – Kenya

A. FO's Institutional Components to Members' Empowerment:							
I. STRUCTURAL COMPONENTS:	INTERVIEWED FARMER ORGANISATIONS:						
	EAFF	KENAFF HQ	KENAFF C	Kikai	CGA	SSDFA	KAB
1. Process Flow:							
• Type of Organization							
• Field of Action							
• Labor Arrangement							
• Resources		Insufficient / not in place	Unclear / under development			Insufficient / not in place	
• Revenue Distribution & Remuneration	Insufficient / not in place	Insufficient / not in place	Insufficient / not in place		Insufficient / not in place	Insufficient / not in place	Unclear / under development
2. Objectives							
3. Activities							
4. Output Indicators		Unclear / under development					Unclear / under development
5. Interactions within the Agricultural Force Field							
<b>Legend:</b> Clear/ well in place    Insufficient / not in place    Unclear / under development							
FO's Structural <b>Capability</b> to Act and <b>Align with Others</b> to build favorable structures to exercise and (re-) distribute Capital/Resources							

Figure 5: Procedural Components of Empowerment Checklist – Kenya

A. <u>FO's Institutional Components to Members' Empowerment:</u>							
INTERVIEWED FARMER ORGANISATIONS:							
II. PROCEDURAL COMPONENTS:	EAFF	KENAFF HQ	KENAFF C	Kikai	CGA	SSDFA	KAB
<b>Increasing the Participation of Members</b> (e.g. sense of community, trust and member's voice being heard)	e.g. increasing language accessibility	Not well connected to the county office	Specific trainings for women and youth; appreciating traditional knowledge	Visible benefit: Surplus is shared among members; higher rates paid at the end of the season	Educational field visits		Supporting the networking with other farmers
<b>Increasing the Ability to Implement Innovations</b>	e.g. e-grainery /ICT-usage	e.g. road water runoffs as water efficient technology	Farm planning; info dissemination; discussin on improving refrigeration	Tree nursery started in 2007; field days	Compost manure; field days and trainings on techniques to transfer new technologies		Locally sourced animal feed; designing & constructing of biogas systems; soil sampling
<b>Increasing the Ability to Gather Many People</b>	20 Mil. members	2 Mil. members	875 members	2.500 members	30.000 members	60.000 members & 82 cooperatives	105 members
<b>Increasing the Ability to Mobilize Members' Assets</b>	Linking to multiple sources of funding an 10 partnering countries	Linking to financial institutions, input suppliers, etc.	Cereal Banking for maize	Venture into milk processing	own SACCO; post-harvest handling equipment; digital weighting; Mechanization of ploughing technology	Considering to construct biogas plants and pit latrines for members.	2 pulverisers kept by one FG members.
<b>Other Empowering Components</b>	Project Paid Vocal People; Physical and online resource & data centers; Proposal Writing; staggered membership fees	TV and Radio Station and frequent publications; Farmer Conference Center	Entrepreneurship trainings for women and youth; integrating indigenous traditional knowledge with scientific weather info;	Direct sales to contracted companies and central auction in Nairobi	Implem. Tracking and Trasing (unique farmer's reference ID); soil testing, diversif. Of planted crops;	Consultancy & technical services are offered when required; both NP and FP	Providing with credible weather information; supporting farmers with their documentation; collective sales at farm gate level

**Legend:** Clear/well in place    Insufficient / not in place    Unclear / under development    FO's Procedural Capability to build favorable structures to access and (re-) distribute Capital/Resources

## **Partners and Collaborators**

All FOs seem to work with farmers and some kind of service provider (e.g. input suppliers, financial services). All except Kikai also cooperate with development partners or NGOs. In terms of breadth of network, Kikai covers the whole value chain, from service providers, farmers, farmer groups and processors through to marketers, retailers, local vendors, and consumers. CGA is similarly broadly positioned but is less focused on the consumer. SSDFA's strategy is to be well connected on every functional level with public and private entities while supporting farmers, service providers and processors. EAFF, which negotiates with representatives from the national ministry of Agriculture, Livestock and Fisheries, national FOs, development partners, service providers, farmers and the media, engages with stakeholders across sectors rather than along the value chain. KENAFF operates similarly to EAFF, but on a more local scale and incorporates research institutions. Only SSDFA and Kikai appear to work with local authorities such as chiefs, village leaders, local opinion leaders and ward administrators. Kikai and KAB are the only FOs to interact with local schools.

## **Empowerment Potential**

All of the interviewed FOs have also implemented certain empowering components. However, Kikai is the only FO that has defined and implemented all the procedural and structural components of an empowering organization. Only KENAFF county and Kikai actively try to increase member participation, increase members' ability to implement innovations, and facilitate the circulation of assets among members.

## **Structural Issues**

KENAFF headquarters does not seem to be very well connected to the interviewed county offices, despite appearing to have a transparent and participatory organizational structure. The KENAFF office in Bomet has reportedly been vacant for two years.<sup>16</sup> Therefore, a distinction must be made between the period in which there was direct contact with KENAFF and the period with no contact. During the contact period, KENAFF county seemed to be actively trying to increase the participation of members and encourage them to implement innovations. During this time, KENAFF was also working to increase its ability to gather many people and to mobilize a certain circulation of assets between the members (similarly to Kikai but in contrast to SSDFA).

KENAFF HQ, the second largest in membership size and geographical area, as well as KENAFF county and SSDFA face funding challenges. Additionally, KENAFF HQ, KENAFF Bomet county, and KAB have unclear output indicators to track their activities.

We also noted that even though SSDFA offers external consultancies and technical services, it does not appear to actively promote the transmission of innovations between members.

### ***3.1.2 Burkina Faso***

#### **Objectives and Approaches**

Most FOs in Burkina Faso shared the following primary functions: improving the productivity and quality of products, lobbying and advocating for their members, and increasing access to resources.

---

<sup>16</sup> Since then, the KENAFF Kakamega county office has been responsible for activities in Bomet.

CARTPL has set a clear objective (to campaign against the poverty of women and other FO members) and conducts activities, such as improving productivity and quality through project planning and training programs and increasing members' access to credit and technologies. Nevertheless, it lacks specific and differentiated progress indicators. Like CARTPL, FUGCOMB's management appears to have a very broad understanding of the FO's mandate. Besides trying to improve productivity and quality and enabling access to resources and local markets, FUGCOMB aims to improve the relevant market knowledge and behavior of members and to advocate and lobby for their rights.

FCIDT, which is a smaller FO both in terms of membership and geographical coverage, primarily pursues social goals and has few to no production-related objectives. It organizes several events to promote social interaction, sense of community and group cohesion.

Both FNJPAF's and ROPSA place a stronger focus on networking, whereas ADECOD and CARTPL seem to be more focused on production of goods and the functioning of the value chain. ADECOD and CARTPL appear to have more resources available to share with their members, which may explain this distinction. Out of all FOs interviewed in Burkina Faso, only CARTPL and FUGCOMB appeared to have remuneration systems in place.

### **Partners and Collaborators**

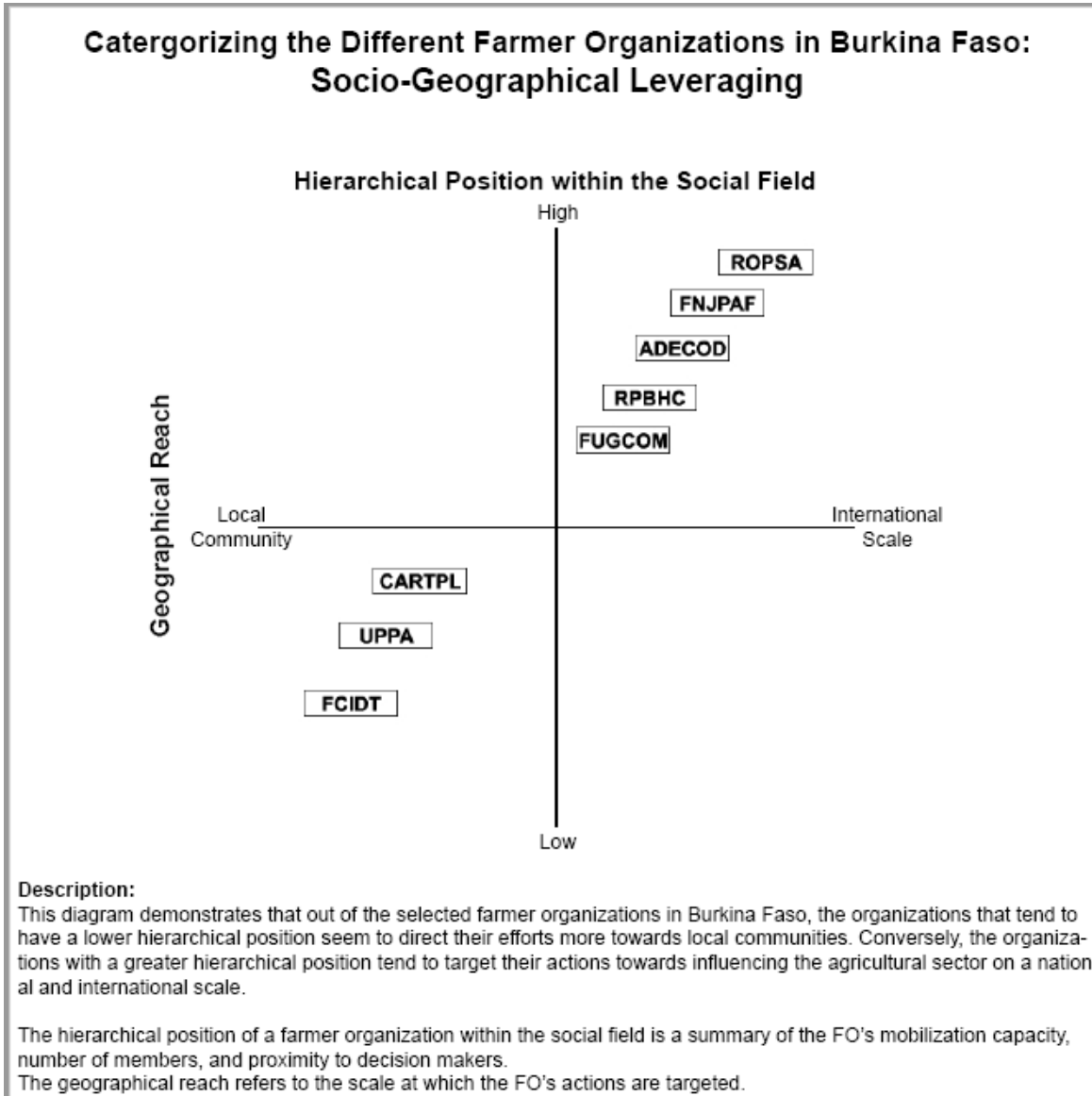
All FOs interviewed besides UPPA-B seem to have a precise understanding of the agricultural force field in which they are active and therefore appear to strategically select their partners. FUGCOMB, ROPSA, and UPPA-B have spread their influence broadly across the value chain and have covered all relevant operators. In contrast, ROPSA and UPPA-B tend to be in closer contact with the official representatives of the government than with private stakeholders to further their objectives of influencing agricultural policy to favour family agriculture and to professionalize value chain actors. Out of all FOs, CARTPL has set up its network most broadly within the value chain. It is well connected both with the private sector and nationally.

### **Empowerment Potential**

CARTPL and UPPA-B were the only FOs to exhibit all the components to empowerment identified in the theoretical framework. CARTPL was also the FO that scored the highest in our institutional analysis overall. This FO has a relatively large membership base but a smaller geographical reach.

Apart from FCIDT and ROPSA (interestingly, one of the smallest organizations and the largest in terms of membership, respectively), all FOs claimed to offer services specifically aimed at increasing member empowerment.

Figure 6 Categorization of Farmer Organizations in Burkina Faso according to reach and breadth



(Source: Authors' own compilation)



Figure 7: Structural Components of Empowerment Checklist – Burkina Faso

A. FO's Institutional Components to Members' Empowerment:								
I. STRUCTURAL COMPONENTS:	INTERVIEWED FARMER ORGANISATIONS:							
	ADECOD	CARTPL	FNJPAF	ROPSA	UPPA-B	RPBHC	FCIDT	FUGCOMB
1. Process Flow:								
• Type of Organization								
• Field of Action								
• Labor Arrangement								
• Resources								
• Revenue Distribution & Remuneration	Insufficient / not in place	Clear / well in place	Insufficient / not in place	Insufficient / not in place	Insufficient / not in place	Insufficient / not in place	Insufficient / not in place	Clear / well in place
2. Objectives								
3. Activities								
4. Output Indicators		Insufficient / not in place	Clear / well in place	Insufficient / not in place	Insufficient / not in place	Insufficient / not in place	Clear / well in place	Insufficient / not in place
5. Interactions within the Agricultural Force Field					Insufficient / not in place	Clear / well in place		
<b>Legend:</b> Clear / well in place    Insufficient / not in place    Unclear / under development								
FO's Structural Capability to Act and Align with Others to build favorable structures to exercise and (re-) distribute Capital/Resources								

Figure 8: Procedural Components of Empowerment Checklist – Burkina Faso

A. FO's Institutional Components to Members' Empowerment:								
II. PROCEDURAL COMPONENTS	INTERVIEWED FARMER ORGANISATIONS:							
	ADECOD	CARTPL	FNIJPAF	ROPSA	UPPA-B	RPBHC	FCIDT	FUGCOMB
Increasing the Participation of Members (e.g. sense of community, trust and member's voice being heard)	Needs are assest	Sanctions and Cost Coverage for Health Care		Meet once a week; encourage a spirit of networking	Study trips and trade fairs	Promoting mutual support; meeting once a month	Organize celebration (women's cycling race), football championship, cooperate with local schools	10% of surplus for high quality training; harmonizing ec., so. & cultural activities relating to the well-being of members
Increasing the Ability to Implement Innovations		Searching for recognizable and hygenic sales boths	Applied research projects; dissemination on inovations	Use best-practices examples; organize conferences & workshops	Meeting technical services of the state & Centre South regions	Exchange of experiences	Organizing discussions with NGOs; disseminating infos	Technological dissemination within VC
Increasing the Ability to Gather Many People	4.000 members	4.500 members	11.000 members	2.500 members	495 members	255 members	300 members	1.200 members
Increasing the Ability to Mobilize Members' Assets	Water resource and harvest management	Credit provision; trade fairs; sharing production technologies	Providing access to financial resrouces and improved seeds	e.g. providing access to credits	Provision of fertilizer & market information; facilitation of access to credits	e.g. direct payments to women; sales stores	e.g. land for HQ, borehole project, infrastructure	Actors of the whole VC are linked with each other
Other Empowering Components	Facilitate access to credit for women	Informing about personal legal rights and encouraging civic engagement; social security benefits; envrionmental issues; Health Care	Female entrepreneurship; female decision-making; youth and female revenue distribution within family agriculture	Service & organizational development WS for members; Female Farmer Networks	Female entrepreneurship trainings; family planning information; Radio programmes	e.g. Female entrepreneurship trainings; family planning information; guaranteed quality; financial traceability of products	e.g. money raising, social inclusion, info on new markets (esp. female farmer)	Improved mgmnt. of natural resources in production areas; technical committees provide social and economic services

**Legend:** Clear/well in place Insufficient/not in place Unclear / under development FO's Procedural Capability to build favorable structures to access and (re-) distribute Capital/Resources

## Structural Issues

Another finding at this stage is that only ADECOD, FNJPAF, FUGCOMB and FCIDT have clearly defined output indicators, whereas the rest of the FOs, notably ROPSA, do not. This lack of clear output indicators for ROPSA, the largest organization in geographical and membership terms, could be due to the organization having been recently founded.

ADECOD and FNJPAF, both relatively large FOs, were notable in that they did not have mechanisms in place to actively foster the participation of members. Further, ADECOD, RPBHC, and FCIDT distinguished themselves in this analysis by being the only FOs that did not appear to actively encourage the implementation of innovations.

## 3.2 Stage 2 Findings: Summary

This section summarizes the findings relating to the FOs' effect on the psychological empowerment, community participation, economic, social and information capital development of individual members.

Among all FOs studied in the first stage, six were selected for further study (three in Kenya and three in Burkina Faso, listed in Table 6. These were selected based on the institutional evaluation which was carried out during the first field research. This first evaluation offered insights into the main structure of the FOs, their key fields of activities and their approaches to support their members.

Since we intended to understand the approaches of different types of member-based farmer organizations in supporting their members, we aimed to analyze which type seems to be the most effective and efficient in terms of goal-achieving and to question the potential interrelations between organizational type, empowerment and individual capacity. Thus, chose FOs that differ in their level of intervention (national level, district level, regional level), in their structure, their size of membership base, their function, their value chain focus, their service scope and how they market the products of their members. In addition, we further differentiate the FOs by using criteria such as socio-geographic leveraging potential, their mobilization capacity and impact functions, their proximity to decision makers, and their supply-chain focus distance (see figures 12, 13, 27 and Annexes 13–18).

Table 6: Summary of Farmer Organizations selected for stage 2

Name and Type of FO	Objective	Size and Scope	Country
FNJPAF (Participatory non-profit federation)	Modernize and professionalize family agriculture with a focus on youth	Federation of FOs that operate in most provinces of the country	Burkina Faso
ADECOD (Association)	Improve quality and increase production through lobbying and advocacy	Active in two regions	Burkina Faso
CARTPL (For-profit cooperative)	Reduce poverty of female member farmers	Small collective operating within Ouagadougou	Burkina Faso
EAFF (Regional federation)	Represent, lobby and advocate for farmers' interests and build capacity	Umbrella organization working in 10 countries including Kenya	Kenya

Name and Type of FO	Objective	Size and Scope	Country
KENAFF (Participatory non-profit)	Improve livelihoods and promote agribusiness	Member of EAFF working in most counties in Kenya	Kenya
KENAFF Kakamega (Association)	Improve productivity of farmers and quality of their products and services	The Kakamega county office, registered as an individual association	Kenya

The potential empowerment effects of FOs on their members were evaluated qualitatively by investigating the impact pathways of each FO. Following theoretical definition of empowerment presented in section 2.1, a change in the level of empowerment is measured as a change in:

- **structural (social) capital**, which can be described as the structure surrounding an individual (e.g. membership/networks, human sociality, time availability, representation of needs within the FO, etc.);
- **economic capital**, which is the access to natural, physical and financial resources;
- **information capital**, which includes services received by the member, as well as the transfer of knowledge, skills, and innovation;
- **psychological empowerment**, which is an individual's perceived agency and ability to cope with the consequences of poverty; and
- **community participation**, which is described by the existence of conflict resolution mechanisms, shared perceptions and trust.

The impact pathway was approximated by interviewing all levels of the participating FOs' hierarchy. This meant hosting focus group discussions comprising representatives of the organizations that make up the FO (first level), sub-organization of the first level (second level), and farmers that are members of the second level sub-organization (third level). Details on the selected sub-organizations are presented in Appendix E. The surveys focused on the one or two main activities conducted by each FO that has been previously identified by its management.

Farmers were interviewed during focus group discussions and in household interviews. They were asked about the benefits, obstacles, and perceived changes that result from their membership, and about the nature and extent of their collaboration with other members and with the FO's management. Using an empirical pathway analysis, we tried carefully to carve out farmers' perceived change in empowerment since becoming member of the FO. Key findings from the interviews and focus group discussions conducted in the second phase are reported by FO and by type of capital/empowerment in table 7 below. These findings, along with the findings from the institutional, procedural and stakeholder analysis are discussed together in section 3.3.

Table 7: Summary of key findings from stage 2 by FO

	<b>ADECOD</b>	<b>CARTPL</b>	<b>FNJPAF</b>	<b>EAFF/KENAFF (HQ and Bomet)</b>
<b>Structural Social Capital</b>	<ul style="list-style-type: none"> <li>- Members appreciate the services provided.</li> <li>- Issues brought up included insufficient training, low trust, low frequency of meetings, difficulty of collaboration outside of the cooperative, low levels of lending and borrowing.</li> <li>- Although they chose ADECOD voluntarily, members pointed out that they must belong to an FO in order to work in agriculture.</li> <li>- Members feel in general that the benefit they obtain from being part of the FO is determined by their own personal commitment.</li> </ul>	<ul style="list-style-type: none"> <li>- Members are satisfied by the frequency and regularity of meetings and transparency</li> </ul>	<ul style="list-style-type: none"> <li>- Decision making around purchases is joint.</li> <li>- The services most frequently offered and used by members are the joint purchase of inputs and transmission of best practices.</li> <li>- Members feel that the meetings are too infrequent and irregular.</li> <li>- Other issues include feeling that trade is unorganized; members do not feel well represented; and female members feel that their needs are not being addressed.</li> </ul>	<ul style="list-style-type: none"> <li>- Farmers feel well represented and understood by the chairman of the cooperative but not by the national-level FO, KENAFF.</li> <li>- There was a marked change in 2015 at which time the KENAFF county office stopped providing a number of services.</li> <li>- Now, members feel that there is a missing link between themselves and KENAFF.</li> <li>- There is a lack of funds to pay for a county-level manager, resulting in fewer local activities or initiatives.</li> <li>- Interviewees pointed out the lack of staff present at the grassroots.</li> </ul>
<b>Economic Capital</b>	<ul style="list-style-type: none"> <li>- Membership provides access to financial services and inputs.</li> <li>- Members noticed decreased losses, more efficient use of inputs, and better market linkages.</li> <li>- Farmers are planning collaborative financial initiatives for the future.</li> </ul>	<ul style="list-style-type: none"> <li>- Members obtain better access to equipment.</li> <li>- Members perceive an increase in their product quality and the demand for products, enabling them to increase prices.</li> </ul>	<ul style="list-style-type: none"> <li>- Members have better access to inputs.</li> <li>- Issues include lack of access to skilled advocacy experts to further increase economic capital and feel that they lack necessary inputs.</li> </ul>	<ul style="list-style-type: none"> <li>- Members enjoy higher yields, higher sales prices and having less idle land.</li> </ul>

	<b>ADECOD</b>	<b>CARTPL</b>	<b>FNJPAF</b>	<b>EAFF/KENAFF (HQ and Bomet)</b>
<b>Information Capital</b>	<ul style="list-style-type: none"> <li>- Members receive trainings, but consider these overly superficial and not sufficiently tailored to their needs.</li> <li>- Members do not receive the timely market information required to better coordinate production – harvest losses remain high.</li> </ul>	<ul style="list-style-type: none"> <li>- Members obtain market information from peers.</li> <li>- They receive certified trainings.</li> <li>- Members perceive an improvement in their managerial skills and commercial competences.</li> <li>- Other training subjects include budgeting, hygiene, marketing, market research, publicity, negotiations and agricultural best practices.</li> <li>- Members appreciate the variety and frequency of training, as well as the effort to include illiterate farmers.</li> <li>- Members feel that the trainings correspond to their needs.</li> <li>- FO encourages members to think strategically about improving management and products.</li> </ul>	<ul style="list-style-type: none"> <li>- Members receive information from experts, representative from the FO and other members.</li> <li>- Trainings subjects include agricultural best practices, recycling, vegetable cultivation.</li> <li>- Members find trainings helpful although would like them to be more frequent.</li> <li>- Training remains insufficient for farmers to successfully implement best practices.</li> <li>- Farmers are not motivated to apply the knowledge received through trainings.</li> </ul>	<ul style="list-style-type: none"> <li>- Members receive trainings on certified seeds, demonstrations, and support with proposal writing through KENAFF Bomet.</li> <li>- Price fluctuations have been a challenge for members. This used to be better addressed when the county office was staffed but now members feel less informed about market developments.</li> <li>- Middlemen further restrict market information.</li> <li>- Due to the broken link between KENAFF and farmers, members do not feel that their technical knowledge is up to date.</li> </ul>
<b>Psychological Empowerment</b>	<ul style="list-style-type: none"> <li>- Members have fears about the future and feel vulnerable to the uncertainty caused by prices/costs, environmental changes, land access, degradation</li> </ul>	<ul style="list-style-type: none"> <li>- Members perceive an increase in their self-worth, entrepreneurial ability, and feel increasingly recognized by their family and communities.</li> </ul>	<ul style="list-style-type: none"> <li>- Members feel ignored and frustrated, especially farmers at the 3<sup>rd</sup> level.</li> <li>- First and second-level focus group participants feel more support from</li> </ul>	<ul style="list-style-type: none"> <li>- Members participate in the policy process at the regional and county level.</li> <li>- Members have many fears about the future due to uncertainty caused by the environment and the markets.</li> </ul>

	<b>ADECOD</b>	<b>CARTPL</b>	<b>FNJPAF</b>	<b>EAFF/KENAFF (HQ and Bomet)</b>
	of soils and demographic developments.	<ul style="list-style-type: none"> <li>- Members relate to their president and see her as a salient peer. They are willing to implement the knowledge she imparts.</li> <li>- Through trainings, members are taught independence and self-sufficiency.</li> <li>- Members are confident in the value and quality of their products.</li> </ul>	the FO and are generally more positive.	<ul style="list-style-type: none"> <li>- Farmers generally feel optimistic about the future and are investing in future production.</li> <li>- Members feel stronger by virtue of belonging to a group.</li> </ul>
<b>Community Participation</b>	<ul style="list-style-type: none"> <li>- Older members feel that the younger generation has lost the sense of community.</li> <li>- At the farmer level (3<sup>rd</sup> level participants), there is a low level of trust in the management of the cooperative.</li> <li>- There have been issues relating to collective governance of resources and to managing the budget.</li> <li>- Some members have started to question the value of membership.</li> </ul>	<ul style="list-style-type: none"> <li>- Members trust one-another and management.</li> <li>- Common resources are considered to be well governed.</li> <li>- Members think the system for borrowing equipment works well.</li> <li>- Members have a high level of commitment to the FO and are highly engaged.</li> <li>- Members receive healthcare from the FO and may feel a sense of reciprocity, which increases commitment.</li> <li>- Members feel high levels of solidarity with one another.</li> </ul>	<ul style="list-style-type: none"> <li>- The FO does not have the necessary capacity to encourage broader participation.</li> <li>- Members feel high levels of solidarity with one another.</li> <li>- The lack of confidence between members has caused a collective action problem, but some participants have developed a code of conduct.</li> <li>- Trust in management fluctuates and is generally neither high nor very low.</li> </ul>	<ul style="list-style-type: none"> <li>- Members lend and borrow from one another in good faith without signed agreements.</li> <li>- There has not been a need to put a conflict resolution mechanism in place.</li> <li>- Attendance varies, and the importance of attending meetings is not shared by all.</li> <li>- Although the cooperative is rules-based, there is a lack of clarity around the rules and lack of enforcement.</li> <li>- Confidence in the FO is average, as are the levels of member solidarity.</li> </ul>

## 4 Discussion

This section will discuss and contrast the different approaches and empowerment outcomes of the FOs (both in Kenya and Burkina Faso) for each component of empowerment. Our findings are related back to the previous studies discussed in the literature review, where relevant. One FO stands out for being ahead on all components of empowerment: CARTPL, which focuses on women farmers specifically. A diagram presenting the final ranking of all FOs based on their empowerment components can be found in Appendix F. Central elements to this FOs success appear to be a strong sense of community, trust, strong leadership that provides mentorship, and an organizational structure that enables it to respond to the needs of members effectively.

### 4.1 Structural social capital

An FO's ability to develop the structural social capital of members was not observed to be related to an organization's maturity, a theory posited in the literature (Barham & Chitemi, 2009). The most mature FO, EAFF/KENAFF HQ, was established in 1946 but was not shown to be effective in responding to the needs of members, especially since the closure of the KENAFF county-level office in Bomet in 2015. Rather, among the FOs we studied in Kenya and Burkina Faso, we found that effectiveness appears to be dependent on the efficiency of its internal structures, the well-functioning of group activities and whether its environment enables social connectedness.

Representation in the broader agricultural force field is a form of structural social capital. Whereas CARTPL, ADECOD, and FNJPAF have developed broad networks spanning the majority of the value chain, EAFF has lost contact to the many actors at the grassroots and local levels. This has resulted in farmers of EAFF/KENAFF feeling neither represented on a societal, communal, nor on an individual level by EAFF and its network.

The only FO to respond to the needs of women members specifically and therefore intentionally increase the structural social capital of this group is CARTPL. According to their members, the other FOs did not make specific efforts to involve women in commercialization and trainings. Female farmers in ADECOD and FNJPAF complained about this situation and reported feeling ignored. Beyond the social structural capital implications, this lack of consideration can also reduce women's ability to improve their economic capital.

### 4.2 Economic Capital

Although all four FOs in Burkina Faso increased their members' economic capital to a certain degree, CARTPL and ADECOD stood out, as their approaches have either reduced production costs, mitigated crop losses, created market access or increased sales prices. In Kenya, KENAFF had previously contributed to increasing members' incomes, but this ceased in 2015 at which point the link between the local KENAFF office and members of the FO was severed.

We also find that production cooperatives such as ADECOD tend to be less efficient at increasing members' incomes and FO revenue compared to marketing cooperatives such as CARTPL. This difference may also be linked to the types of goods produced – CARTPL produces higher-value goods than ADECOD and EAFF/KENAFF. Furthermore, CARTPL appears to be ahead in terms of adopting food safety and quality standards and registering products as brands, which could also influence its ability to set higher prices.



This in part supports past studies that have posited that cooperatives are the most effective organizational form for higher value crops (Coulter, 2007; Hellin et al. 2009).

### **4.3 Information Capital**

A way to help members accumulate information capital that is common to all FOs is through the provision of trainings. FNJPAF's trainings demonstrated impact on crop size and input savings, but few members were able to participate in this training or access the inputs offered. These findings corroborate past studies that claimed that FOs can have a positive effect on yields and therefore on members' income and productivity. It is possible that members of FOs whose trainings were not seen as sufficiently needs-based could have seen larger increases in income had they been offered services more relevant to them. FOs that were highlighted for insufficiently providing access to services such as trainings include ADECOD, FNJPAF, and EAFF.

An important element of information capital for farmers is market and price information. No FO appeared to be particularly effective at transmitting this type of information to its member farmers. Although in theory, FOs appear to be in the best place to reach out to members with relevant market information to help them improve their incomes, members of all FOs complained about a lack of access to relevant market information, which they perceive as depriving them of a competitive advantage.

### **4.4 Psychological Empowerment**

If successful, the accumulation of informational capital can lead to the transmission and application of best practices. This outcome can also contribute to psychological empowerment, as some of these best practices can help members deal with the consequences of poverty. Some FOs, namely FNJPAF and KENAFF, appeared to have difficulty finding the right incentives for their members to implement best practices. In these FOs, farmers reported that their colleagues were not implementing what they had learnt in trainings. One major explanation is a lack of staff or capacity on the part of the FO. For example, KENAFF has lacked county office training since 2015, and FNJPAF suffers from a lack of capacity due to insufficient staff.

The importance of continued support and guidance from FOs to the implementation of innovations and member participation suggests that the price incentive alone may not be enough to encourage market participation among the poorest farmers. Another plausible factor, suggested by the literature, may be that members find the organization too large and its structure too opaque, reducing their drive to participate in collective activities or democratic processes (Barraud-Didier et al., 2012).

CARTPL provides a positive example for how a strong role model can be a powerful tool for psychological empowerment. In the course of our interviews, we found that the president of the FO is seen as a strong role model and exerts a positive influence on members' decision to adopt best practices. Furthermore, the presence of an active and accessible role model appears to help foster an entrepreneurial spirit among members. Members of CARTPL reported being increasingly perceived as entrepreneurs within their communities and recognized by their families.

### **4.5 Community Participation**

A key finding from our observations is that FOs that have a strong sense of community, such as CARTPL and KENAFF county offices, tend to foster more collaboration among members. These FOs, along with

FNJPAF have implemented rules for collaboration that they describe as being helpful in reducing conflicts and facilitating collaboration.

CARTPL members reported the highest levels of trust in other members and overall satisfaction in their development as members. They specifically reported a feeling of belonging, having established a human connection, and of being able to influence matters within the FO, as well as feeling as though their needs are being met. This corresponds to the four pillars needed to establish a sense of community identified by McMillan and Chavis (1986). While ADECOD and EAFF/KENAFF appear to have fostered a feeling of belonging among members and are meeting some of their needs, they did not meet the criteria for the remaining two pillars. The remaining FO from the second stage, FNJPAF, appears only to partially fulfil the needs pillar.

In contrast to CARTPL, members of ADECOD and FNJPAF reported lower levels of trust and those in EAFF/KENAFF reported average levels of trust. These findings tentatively suggest that a link between trust and an FO's performance may exist. This supports the findings of previous research on the importance of trust for group cohesion (Hansen et al., 2002), especially considering that membership in FOs is mostly voluntary (Hendriske and Bijman, 2002). Furthermore, we find evidence in support of the thesis that trust in the competence and reliability of a cooperative's management positively relates to favourable behaviour towards the FO (Barraud-Didier et al. 2012). There is tentative evidence that this can be reinforced through frequent interaction, communication, and the sharing of information, equipment, and social norms, as demonstrated by CARTPL and EAFF/KENAFF county offices prior to 2015<sup>17</sup>.

---

<sup>17</sup> For further readings on these topics see Barraud-Didier et al., 2012; Gouldner, 1960; Putnam, 1993, 1995, 2000; Fukuyama, 1999; Nahapiet and Ghoshal, 1998; Portes, 1998.

## 5 Conclusion

### 5.1 Key Findings

By gathering in-depth information about a number of FOs in Burkina Faso and Kenya, this study aimed to create a deeper understanding of how FOs contribute to empowering farmers in Africa. This was done by comparing the approaches currently used by FOs in Kenya and Burkina Faso with a theoretical model of the components of empowerment. This theoretical foundation enabled a structured analysis of the factors that are relevant in including the degree of impact that an FO can have on its members and their socioeconomic development. Though our findings are limited to the specific context of the cases studied, the use of a theoretical framework to assess how the structure and the activities of an FO empower its members can help guide future work on the subject and provide some detailed evidence of the link between FO membership and smallholder farmer empowerment, specifically in Kenya and Burkina Faso. We report our general findings, noting however, that these provide observational evidence to supplement existing literature on FOs and collective organizations, but cannot establish direct causal links.

Some commonalities were found across all FOs. For instance, members of all FOs studied perceived that their economic capital increased by virtue of their membership. A negative shared by all FOs was that of a lack to access relevant market information, which members claimed deprived them of competitive advantages.

Concerning institutional conditions, our observations conformed to theory in that FOs whose activities align well with their goals were generally more effective. This correlation suggests that aligning an FO's activities with clearly defined overall objectives, as well as with the needs of the members and their socio-economic surrounding, may help increase its effectiveness. In most of the FOs involved in this study, we found that their objectives were clear but that many were missing precise metrics to measure outcomes and success against those objectives. We also found that members of the FOs studied appear to be best supported when FOs have efficient internal structures, well-functioning group activities, and a sufficient degree of social connectedness. The effect of these factors appears more important than the maturity of an FO.

Some patterns appeared to relate to organizational size and structure. There was a tendency for members from large FOs with an opaque structure to be less likely to participate in collective activities or internal democratic processes. We also noticed that membership in production cooperatives, such as ADECOD, tended not to have as large of a positive effect on members' incomes as in marketing cooperatives that produce and sell higher-value crops and products, such as CARTPL. Similarly, the production cooperatives in our study had lower revenues than the marketing cooperatives. Additionally, production cooperatives that offer undifferentiated commodities appear to face challenges in attracting members.

Furthermore, our findings cautiously indicate that social forces have an effect on the performance of FOs. Trust was found to be especially significant. Ensuring a high frequency of interaction and trainings that are adapted to the needs of members positively relates to the likelihood of members retaining knowledge and best practices and acting upon it. Additionally, FOs that were able to foster an entrepreneurial spirit among members had a dynamic and present role model as well as established routines to guide and support members in their activities. Some negative outcomes also appear to be shaped by social factors. For instance, frustration and the feeling of being ignored by one's FO reinforces a sense of helplessness among members and reduces their ability to take advantage of present opportunities.

Another area of interest was reporting best practices as identified through members' experiences with their FOs. This include facilitating collaboration and increasing member commitment (community

participation) through the use of codes of conduct, caring for and maintaining a sense of community. In terms of structural social capital, we found that FOs with broader links extending throughout the value chain had more collective power. FOs with a good reputation, salient peers, their own registered brands and cost-benefit-transparency seemed to be able to positively influence members' motivations and behaviour in order to achieve certain standards.

There is tentative evidence that FOs can support agricultural development. Based on our observations, we put forth recommendations to identify FOs that have high potential as development partners based on their use of best practices. These, as well as specific best practices that came out of our research, are presented in the following section.

## 5.2 Recommendations

This study revealed some approaches used by FO that were stronger and others that were weaker. In this section, we will briefly discuss recommendations for FOs to better support their member farmers.

We first identify features of FOs that were correlated with high performance. These can both be seen as general recommendations or more generally as a guide to identify FOs that have high potential, for instance, as partners in agricultural development. We also identify best practices to increase member engagement and organizational effectiveness. Where relevant, specific actionable recommendations are listed under the heading of practical tip.

These recommendations are based on observations of a small sample of FOs in Burkina Faso and Kenya and may therefore not apply to all contexts. They are included here to new ideas to FO management and potential development partners on how to approach the question of strengthening FOs and increasing their effectiveness. Testing and refining these recommendations is a potential area for further research.

### General features of effective FOs :

- Effective FOs **intentionally harmonize their activities with their objectives and have metrics in place to track their progress**. It is widely understood that in order to achieve a goal, it has to be clearly defined and progress must be measurable. These same principles of effective goal setting also apply to FOs.
- Effective FOs **adopt an organizational form that is best suited to their objectives and activities**. They have a strong understanding of the possibilities associated with this organizational forms as well as its disadvantages. There is no "one-size-fits-all" approach that FOs can follow in order to become successful. It is thus important for FOs to carefully choose its commodities, joint activities, service providers, etc. and to know the possibilities and risks of their chosen organizational forms. This include the financial structure best adapted to the organizational goals. An FO must consider how it will finance its activities and ensure its financial sustainability. Among the FOs we studied, those that were production cooperatives were less effective at generating income and increasing their members' incomes. This was in contrast to FOs that are structured as marketing cooperatives that produce and sell higher value crops and products. An FO with an organizational form less conducive to generating income directly must therefore find other streams of revenue or adapt its structure to minimize costs, depending on its goals.
- Effective FOs **have a clear organizational structure and are of a manageable size**. Organizations whose processes are too opaque as a result of size and complex structure tend to have lower member participation in collective activities and democratic processes. The efficiency of the FO's

internal structures and the well-functioning of group activities, as well as the level of social connectedness enjoyed by members are factors that are linked to better market performance and better support for members.

- **Effective FOs understand and adapt to the local settings in which members live and operate.** Since, as umbrella organizations, FOs can be geographically or organizationally separated from their members by a few layers, it is important for them to keep contact with the members at every level and understand the context in which they operate. Local cultural norms, politics and structures can impact how members will interact with the FO, and having a grasp of these factors will put an FO ahead and enable it to fit its services and activities within that context.

### **Best Practices**

- **Identify the incentives relevant to different member segments:** FOs can encourage member participation in collective activities and encourage the implementation of best practices through incentives. To do so effectively, an FO must understand what types incentives work for its members and member subsets.

Practical tips to put in place a system of incentives:

- Keep detailed records of members and their relevant characteristics.
  - Keep records of members' use of services to identify patterns and understand how needs these change over time, geography and population.
  - Engage with members at all levels of the organization to understand their motivations for being part of the FO and their main constraints to participation.
  - Pilot various types of incentives for achieving a desired goal (increase participation, increase rate of implementation uptake, increase attendance to trainings, etc.)
- **Adapt trainings and services to members' needs:** An FO's trainings must be sufficiently frequent, and its contents and delivery must be tailored for relevance. Among the FOs that we interviewed, members often felt as through the trainings offered were insufficient. A main reason was a lack of capacity on the part of the FO, but some FOs with capacity also appeared not to tailor their trainings to the needs of members.

**Practical tips to adapt training and services to members' needs:**

- Identify the needs of members and considering the size and dynamics of the group that will participate in training. A useful question to consider is how the training will have to be adapted to best be delivered to different types of participants.
  - Keep it simple and applicable.
  - Ensure a high frequency of interaction.
  - Leverage available resources to find creative, low-cost ways to increase the effectiveness and frequency of trainings, e.g. integrating mobile phones as a learning tool and implementing peer-to-peer training.
- **Actively foster trust within the organization:** Trust can help improve collaboration and increase member commitment.

### **Practical tips for building trust:**

- Implement a set of rules and codes of conducts.
  - Enforce these rules with sanctions and rewards.
  - Strive for fairness and transparency in all dealings with members.
- **Alleviate food insecurity:** Many FOs have members who face varying degrees of food insecurity. By helping members overcome some of these challenges, an FO can not only aid members in overcoming the psychological and mental costs associated with food insecurity but also reduce members' constraints to participation. FOs, depending on their structure and available resources, may be in a position to facilitate:
    - Access to food.
    - Production, distribution and exchange of food.
    - Supply information regarding nutrition and food safety.
    - Put in place processes to facilitate long-term food security.
  - **Ensure stable access to resources:** FOs can help their members by ensuring that members are aware of the resources that are available and can reliably depend on them. This includes tangible resources, such as certified inputs, equipment and machinery, and soft resources such as education, educated staff, and access to a network of partners and supporters.
  - **Implement peer leadership:** Role models can help develop a culture of leadership and mutual support in an organization, which helps foster entrepreneurship. Learning from peers can also be an easier way to change one's routines.
  - **Provide relevant market information and market access:** The provision of market information is a service that members of all the FOs that we studied felt was lacking. Given their broad and far reaching networks, FOs are theoretically in a position to provide even the most remote farmers with information that can help them optimize their decision making. Key information identified as being of value includes:
    - Information on input and output markets.
    - Information on climate change adaptation and mitigation.

This information should furthermore be accessible to all members, especially those for whom accessing information is especially challenging, such as those who are illiterate or those living in very remote areas.

## References

- Abebaw, D.; Haile, M.G. (2013). The impact of cooperatives on agricultural technology adoption: Empirical evidence from Ethiopia *Food Policy* 38 (2013) 82-91.
- Ackerman, J. (2004). Co-Governance for Accountability: Beyond „Exit“ and „Voice“ in *World Development* Vol. 32, No.3, pp. 447-463, 2004.
- Adler, P.; Kwon, S. (2000). Social capital: The good, the bad and the ugly In E. Lesser (Ed.). *Knowledge and Social Capital: Foundations and Applications*. Butterworth-Heinemann.
- Afrique Verte (2008). Organisations faïtières et interprofessions: Quelles alternatives pour une bonne communication interne et externe, Retrieved September 19, 2017. ([http://www.afriqueverte.org/r2\\_public/media/fck/File/Documentation/Formation\\_operaters/livret-communication-structuration-bf-2008.pdf](http://www.afriqueverte.org/r2_public/media/fck/File/Documentation/Formation_operaters/livret-communication-structuration-bf-2008.pdf))
- AGRA. 2018. Africa's growth lies with smallholder farmers. Alliance for a Green Revolution in Africa. <http://agra.org/africas-growth-lies-with-smallholder-farmers/> accessed on 24 September 2019.
- Agrawal, A. (2001) Common Property Institutions and Sustainable Governance of Resources in *World Development* Vol.29, Np. 10, pp. 1649-1672.
- Alesina, A. (2013). On the Origins of Gender Roles: Women and the Plough. *American Economic Review* 101.3, p.499-503 in *World Development Report 2015*, p. 49-81, World Bank, Washington.
- Algan, Y.; Cahuc, P. (2013). Trust, Institutions and Economic Development *Handbook of Economic Growth in Annual Review of Economics* Vol.5:1-549.
- Algan, Y.; Cahuc, P.; Shleifer, A. (2013) Teaching Practices and Social Capital. *American Economic Journal: Applied Economics* 5.3, p. 189-210 in *World Development Report 2015*, p. 49-81, World Bank, Washington.
- Amani, S. (2016). Building and Assessing the Capacity of Farmers' Organizations: The Case of the United Nations World Food Programme's Purchase for Progress. [https://repository.asu.edu/attachments/170674/content/Amani\\_asu\\_0010E\\_16029.pdf](https://repository.asu.edu/attachments/170674/content/Amani_asu_0010E_16029.pdf)
- Appadurai, A. (2004). The Capacity to Aspire: Culture and the Terms of Recognition. In *Culture and Public Action*, edited by Vijayendra Rao and Michael Walton In *World Bank (2015). World Development Report: Mind, Society, and Behavior*. Washington, DC: World Bank.
- Arcand, J. (2003). Organisations paysannes et. Retrieved September 5, 2017. ([http://graduateinstitute.ch/files/live/sites/iheid/files/sites/international\\_economics/shared/international\\_economics/prof\\_websites/arcand/media\\_coverage/rapportburkina.pdf](http://graduateinstitute.ch/files/live/sites/iheid/files/sites/international_economics/shared/international_economics/prof_websites/arcand/media_coverage/rapportburkina.pdf))
- Arendt, Hannah (2000). *Macht und Gewalt*, München, Zürich (14. edition).
- Baland, J.M., Platteau, J.P. (1996). *Halting degradation of natural resources: Is there a role for rural communities?* Oxford: Clarendon Press.
- Banerjee, A.; Mullainathan, S. (2008). Limited Attention and Income Distribution. *American Economic Review* 98.2, p.489-93 In *World Bank (2015). World Development Report: Mind, Society, and Behavior*. Washington, DC: World Bank.
- Barham, J.; Chitemi, C. (2009): Collective action initiatives to improve marketing performance: Lessons from farmer groups in Tanzania, *Food Policy* 34 p. 53-59.
- Barraud-Didier, V.; Henninger, M.C., El Akremi, A. (2012). The Relationship between Members' Trust and Participation in the Governance of Cooperatives: The Role of Organizational Commitment, *International Food and Agribusiness Management Review*, Vol.15, Issue 1.

- Beaman, L.; Chattopadhyay, R.; Duflo, E.; Pande, R.; Topalova, P. (2009). Powerful Women: Does Exposure Reduce Bias? *Quarterly Journal of Economics* 124.4, p.1497-1540 In World Bank (2015). *World Development Report: Mind, Society, and Behavior*. Washington, DC: World Bank.
- Beaman, L.; Duflo, E.; Pande, R.; Topalova, P. (2012). Female Leadership Raises Aspirations and Educational Attainment for Girls: A Policy Experiment in India *Science* 335.6068, p.582-86 In World Bank (2015). *World Development Report: Mind, Society, and Behavior*. Washington, DC: World Bank.
- Bennett, C., Anderson, L., Cooper, S., Hassol, L., Klein, D., & Rosenblum, G. (1966). *Community psychology: A report of the Boston Conference on the Education of Psychologists for Community Mental Health*. Boston: Boston University.
- BenYishay, A.; Mobarak, A.M. (2014). Social Learning and Communication. Working Paper 20139, National Bureau of Economic Research, Cambridge, MA. In World Bank (2015). *World Development Report: Mind, Society, and Behavior*. Washington, DC: World Bank.
- Bernard, T., Spielman, D.J. (2009). Reaching the rural poor through rural producer organizations? A study of agricultural marketing cooperatives in Ethiopia, *Food Policy* 34 (2009), pp. 60-69.
- Bernard, T.; Taffesse, A.S.; Gabre-Madhin, E. (2008). Impact of cooperatives on smallholders' commercialization behavior: evidence from Ethiopia, *Agricultural Economics* 39 (2008) 147-161.
- Berryman, S. et al. (1997): Guidelines for Assessing Institutional Capacity, WorldBank in DFID "Promoting Institutional & Organisational Development - a Source Book of Tools and Techniques".
- Bisung, E. et al. (2014). Social capital, collective action and access to water in rural Kenya, *Social Science & Medicine* 119 (2014) 147-154.
- Bourdieu, P. (1983) *Ökonomisches Kapital, kulturelles Kapital, soziales Kapital*, In: Reinhard Kreckel (Hg.), »Soziale Ungleichheiten« (Soziale Welt Sonderband 2), Göttingen 1983, S. 183-198.
- Bourdieu, P., 1986. The forms of capital. In: Richardson, J.E. (Ed.), *Handbook of Theory for Sociology of Education*. Greenwood Press, New York, pp. 241e258.
- Brune, N.E; Bossert, T. (2009). Building social capital in post-conflict communities: Evidence from Nicaragua in *Social Science & Medicine* 68 (2009) 885–893
- Bryant, F.B. (1989). *A Four-Factor Model of Perceived Control: Avoiding, Coping, Obtaining, and Savoring*, Loyola University of Chicago.  
([https://www.carolinemiller.com/info/Four\\_Factor\\_Model\\_Of\\_Control\\_Savoring\\_Coping\\_Avoiding\\_Ataining\\_Bryant.pdf](https://www.carolinemiller.com/info/Four_Factor_Model_Of_Control_Savoring_Coping_Avoiding_Ataining_Bryant.pdf))
- CAK. (2014). About Us. Retrieved September 14, 2017 (<http://www.cak.coop/about-us.html>).
- Chaddad, F.R.; Cook, M.L. (2004). Understanding New Cooperative Models: An Ownership–Control Rights Typology, *Review of Agricultural Economics*, 2004, vol. 26, issue 3, pp. 348-360.
- Christens, B.D.; Pererson, C.H., Speer, P.W. (2014). Psychological Empowerment in Adulthood in *Eyclopedia of Primary Prevention and Health Promotion*, Springer Science and Business Media, New York, 2014.
- Christens, B. D. (2012). Targeting empowerment in community development: a community psychology approach to enhancing local power and well-being Introduction: power and well-being. *Community Development Journal*, 47(4), 538–554. <http://doi.org/10.1093/cdj/bss031>.
- Christens, B.D.; Peterson, N.A.; Speer, P.W. (2011). Community Participation and Psychological Empowerment: Testing Reciprocal Causality Using a Cross-Lagged Panel Design and Leten Constructs, *Health Education and Behavior* Vol. 38 (4), pp. 339-347.



- Conley, T.G; Udry, C.R. (2010). Learning about a New Technology: Pineapple in Ghana. *American Economic Review* 100.1, p.36-69 In World Bank (2015). *World Development Report: Mind, Society, and Behavior*. Washington, DC: World Bank.
- Cook, M.L.; Iliopoulos, C. (2000). Ill-defined Property Rights in Collective Action: The Case of US Agricultural Cooperatives, In C. Menard (ed.) *Institutions, Contracts, and Organizations: Perspectives from New Institutional Economics*, pp. 335-348. London, UK: Edward Elgar Publishing.
- Cook, M. L. (1995). The Future of U.S. Agricultural Cooperatives: A Neo-Institutional Approach, *American Journal of Agricultural Economics*, 77, no. 5, pp. 1153-59.
- Coulter, J., 2007. Farmer Groups Enterprises and the Marketing of Staple food Commodities in Africa. CAPRI Working Paper 72. International Food Policy Research Institute (IFPRI), Washington, DC.
- Duflo, E. (2012). Human Values and the Design of the Fight against Poverty. Lecture given at Harvard University as part of the Tanner Lectures on Human Values. May In World Bank (2015). *World Development Report: Mind, Society, and Behavior*. Washington, DC: World Bank.
- Drexler, A.; Fischer, G.; Schoar, A. (2014). Keeping it Simple: Financial Literacy and Rules of Thumb. *American Economic Journal: Applied Economics*. 6.2, p.1-31 In World Bank (2015). *World Development Report: Mind, Society, and Behavior*. Washington, DC: World Bank.
- FAO. (2002): *Reducing Poverty and Hunger: The Critical Role of Financing for Food, Agriculture and Rural Development*, Paper Prepared for the International Conference on Financing for Development Monterrey, Mexico (<ftp://ftp.fao.org/docrep/fao/003/Y6265E/Y6265E.pdf>).
- FAO and IFAD. (2012): *Good Practices in Building Innovative Rural Institutions to increase Food Security*, Retrieved September 7, 2017 (<http://www.fao.org/3/a-i2258e.pdf>) ISBN 978-92-5-106898-4
- FAO. (2014): *The State of Food and Agriculture – Innovation in Family Farming*, Retrieved September 7, 2017 (<http://www.fao.org/3/a-i4040e.pdf>), E-ISBN 978-92-5-108537-0 (PDF)
- FAO. (2017). *The Current State of Agricultural Co-operatives in Kenya*. Retrieved September 7, 2017 (<http://www.fao.org/docrep/003/x3138e/x3138e05.htm#TopOfPage>).
- Fehr, E.; Fischbacher, U.; Gächter, S. (2002). Strong Reciprocity, Human Cooperation and the Enforcement of Social Norms, in *Human Nature* 13, p.1-25.
- Fehr, E.; Haushofer, J. (2014). On the psychology of poverty in *Science* 344, 862.
- Fischer, E.; Qaim, M. (2011). Linking Smallholders to Markets: Determinants and Impacts of Farmer Collective Action in Kenya. *World Development* Vol.40, No.6, pp. 1255-1268, 2012.
- Fischer, E.; Qaim, M. (2012). Linking Smallholders to Markets: Determinants and Impacts of Farmer Collective Action in Kenya. *World Development*, 40(6), 1255-1268. doi:10.1016/j.worlddev.2011.11.018.
- Fischer, E.; Qaim, M. (2012). Gender, agricultural commercialization, and collective action in Kenya, *Food Sec.* (2012) 4:441-453.
- Fontaine, D. (2016). FO selection and progression/ P4P Guidance (draft) by World Food Programme (2016); In: mentioned in Dissertation “Building and Assessing the Capacity of Farmers’ Organizations: The Case of the United Nations World Food Programme’s Purchase for Progress” by Sharon Mei Amani; Arizona State University.
- Foster, A.D.; Rosenzweig, M.R. (1995). Learning by Doing and Learning from Others: Human Capital and Technical Change in Agriculture. *Journal of Political Economy* 103.6, p.1176-1209 In World Bank (2015). *World Development Report: Mind, Society, and Behavior*. Washington, DC: World Bank.

- Francesconi, G.N.; Wouterse, F. (2015). The Health of Farmer-Based Organisations in Ghana: Organisational Diagnostics and Governance Implications. *The Journal of Development Studies*, Vol. 51, No. 3, 262-273.
- Fukuyama, F. (1995). *Trust: Social Virtues and the Creation of Prosperity*. NY: Free Press.
- Fukuyama, F. (1999). *Social Capital and Civil Society*, IMF Conference on Second Generation Reforms, 1999 Available: [www.imf.org/external/pubs/ft/seminar/1999/reforms/fukuyama.htm](http://www.imf.org/external/pubs/ft/seminar/1999/reforms/fukuyama.htm) Hamilton.
- Gabre-Madhin, E.Z.; Haggblade, S. (2004). Successes in African Agriculture: Results of an Expert Survey *World Development* Vol. 32, No.5, pp. 745-766.
- Gouldner, A. W. (1960). The norm of reciprocity: a preliminary statement. *Amer. Sociol. Rev.* 25, pp. 161-178.
- Guiso, L.; Sapienza, P.; Zingales, L. (2013). Long-Term Persistence. Working Paper 23/13, Einaudi Institute for Economics and Finance, Rome in *World Development Report 2015*, p. 49-81, World Bank, Washington.
- Hansen, M.H.; Morrow Jr., J.L.; Batista, J.C. (2002). The impact of trust on cooperative membership retention, performance, and satisfaction: an exploratory study, *International Food and Agribusiness Management Review*, p.41/59.
- Hellin, J.; Lundy, M.; Meijer, M. (2009) Farmer organization, collective action and market access in Meso-America in *Food Policy* 34 (2009) p. 16-22.
- Hendriske, G.W.J., Bijman, J.W.J. (2002). On the emergence of new growers' associations: Selfselection versus countervailing power. *European Review of Agricultural Economics* 29.2.
- Herbel, D.; Ourabah Haddad, N. (2012). Successful farmer collective action to integrate food production into value chains, *Food Chain* Vol. 2 No. 2.
- Hoff, K. (2014). Making Up People: The Effect of Identity on Performance in a Modernizing Society. *Journal of Development Economics* 106, p.118-31 in *World Development Report 2015*, p. 49-81, World Bank, Washington.
- Holleran, E., Bredahl, M. E. and Zaibet, L. (1999). Private incentives for adopting food safety and quality assurance, *Food Policy*, 24 (6), pp. 669-83.
- Hurtado, D.; Kawachi, I.; Sudarsky, J. (2011) Social capital and self-rated health in Colombia: The good, the bad and the ugly in *Social Science & Medicine* 72 (2011) 584-590.
- Ito, J.; Bao, Z.; Su, Q. (2012). Distributional effects of agricultural cooperatives in China: Exclusion of smallholders and potential gains on participation in *Food Policy* 37 (2012) p.700-709.
- Jensen, R.; Oster, E. (2009). The Power of TV: Cable Television and Women's Status in India- *Quarterly Journal of Economics* 124.3., p. 1057-94 In *World Bank (2015). World Development Report: Mind, Society, and Behavior*. Washington, DC: World Bank.
- Jin, S.; Zhou, J. (2011). Adoption of food safety and quality standards by China's agricultural cooperatives in *Food Control*, Volume 22, Issue 2, February 2011, p. 204-208.
- Keys, C. B., McConnell, E., Motley, D., Liao, C. L., & McAuliff, K. (2017). The what, the how, and the who of empowerment: Reflections on an intellectual history. In *APA handbook of community psychology: Theoretical foundations, core concepts, and emerging challenges*. (1st ed., pp. 213– 231). Washington, DC: American Psychological Association. <http://doi.org/10.1037/14953-010>.
- L'Assemblée Nationale (2012). LOI N° 050-2012/AN portant réglementation des organisations interprofessionnelles des filières agricoles, sylvicoles, pastorales, halieutiques et fauniques au Burkina Faso - JO N°13 du 28 mars 2013.  
 \_\_\_\_ ([http://www.legiburkina.bf/m/Sommaires\\_JO/Loi\\_2012\\_00050.htm](http://www.legiburkina.bf/m/Sommaires_JO/Loi_2012_00050.htm))

- La Ferrara, E.; Chong,A.; Duryea,S. (2012). Soap Operas and Fertility: Evidence from Brazil. *American Economic Journal: Applied Economics* 4.4. p. 1-31 in *World Development Report 2015*, p. 49-81, World Bank, Washington.
- Leana, C.R.; Buren, H.J. (1999). Organizational social capital and employment practices. *The Academy of Management Review*, 24.3.
- Ma, W.; Abdulai, A. (2016). Does cooperative membership improve household welfare? Evidence from apple farmers in China, *Food Policy* 58 (2016) 94-102.
- MacMillan, D.W.; Chavis, D.M. (1986). Sense of community: A definition and theory, Special Issue: Psychological Sense of Community, I: Theory and Concepts, Volume 14, Issue 1, pp. 6-23.
- Markelova, H.; Meinzen-Dick,R. (2009). Collective Action for Smallholder Market Access. Policy Brief Number 6 ~ April 2009, International Food Policy Research Institute.
- Markelova, H.; Meinzen-Dick, R. et al. (2009). Collective Action for Smallholder Market Access. *Food Policy* 34 (2009) 1-7.
- Marshall, G. 1998. *A dictionary of sociology*. New York, NY: Oxford University Press.
- Maton, K.I. (2008). Empowering Community Settings: Agents of Individual Development, Community Betterment, and Positive Social Change. *American Journal of Community Psychology*, 41(1), 4–21. <http://doi.org/10.1007/s10464-007-9148-6>.
- McInerney, E (2014). Cooperatives key to achieving sustainable agricultural Development, <http://www.un.org/esa/socdev/documents/2014/coopsegm/McInerney.pdf>, FAO, Rome.
- McMillan, D.W.; Chavis, D.M. (1986). Sense of Community: A Definition and Theory in *Journal of Community Psychology* Volume 14, January 1986.
- Meinzen-Dick, R; Di Gregorio, M.; McCarthy, N. (2004). Methods for Studying Collective Action in Rural Development CAPRI Working Paper No.33, International Food Policy Research Institute.
- Mekonnen, D.A.; Gerber, N. (2016) The effects of Aspirations on agricultural innovations in rural Ethiopia in *Food Secure Working Paper No.52*, May 2016.
- Mullainathan, S.; Shafir, E. (2013). *Scarcity: Why Having Too Little Means So Much*. New York: Times Books In World Bank (2015). *World Development Report: Mind, Society, and Behavior*. Washington, DC: World Bank.
- Nahapiet, J.; Ghoshal, S. (1998). Social capital, intellectual capital, and the organizational advantage. *The Academy of Management Review*, 23(2): 242-267.
- National Council for Law Reporting (2012). *Co-operative Societies Act: Chapter 490 (2012 ed., pp. C39-3 - C39-47)*, Kenya, National Council for Law Reporting, Authority of the Attorney-General, National Council for Law Reporting.
- Newton, K. (1997). Social Capital and Democracy. *American Behavioral Scientist*, 40.5.
- Nussbaum, M. (2011). *Creating Capabilities: The Human Development Approach*, Harvard University Press.
- Onate, S. (2012). Les organisations de producteurs en Afrique, Rapport Pays, FARM – Fondation pour l’agriculture et la ruralité dans le monde- Reconnue d’utilite publique ([http://www.fondation-farm.org/zoe/doc/etudfarm\\_201302\\_rblein\\_opburkinafaso\\_l.pdf](http://www.fondation-farm.org/zoe/doc/etudfarm_201302_rblein_opburkinafaso_l.pdf))
- Ostrom, E. (1990). *Governing the Commons: The Evolution of Institutions for Collective Actions*, Cambridge University Press.
- Ostrom, E. (2000). Collective Action and the Evolution of Social Norms, *The Journal of Economic Perspectives*, Vol. 14, No.3 (Summer, 2000).

<http://www.policy.hu/karimli/Ostrom%20collective%20action%20and%20evolution%20of%20social%20norms.pdf>

- Österberg, P.; Jerker, N. (2009). Members' perception of their participation in the governance of cooperatives: the key to trust and commitment in agricultural cooperatives, *Agri-business* 25(2).
- Paluck, E.L.; Sheperd, H. (2012) The Salience of Social Referents: A Field Experiment on Collective Norms and Harassment Behavior in School Social Network *Journal of Personality and Social Psychology* 103.6, p.899 in *World Development Report 2015*, p. 49-81, World Bank, Washington.
- Pandey, P. (2010). Service Delivery and Corruption in Public Services: How Does History Matter? *American Economic Journal: Applied Economics* 2.3.; p. 190-204 in *World Development Report 2015*, p. 49-81, World Bank, Washington.
- Portes, A. (1998). Social capital: Its origins and applications in modern sociology. *Annual Review of Sociology*, 24.
- Putnam, R. (1993). *Making Democracy Work: Civic Tradition in modern Italy*. Princeton: Princeton University Press.
- Putnam, R. (1995). Turning in, turning out: The strange disappearance of social capital in America. *Political Science and Politics*, 28.4.
- Putnam, R. (2000). *Bowling Alone: The Collapse and Revival of American Community*. New York: Simon and Schuster.
- Quimby, C. C., & Angelique, H. (2011). Identifying Barriers and Catalysts to Fostering ProEnvironmental Behavior: Opportunities and Challenges for Community Psychology. *American Journal of Community Psychology*, 47(3-4), 388-396. <http://doi.org/10.1007/s10464-010-9389-7>.
- Ray, D. (2006). *Aspiration, Poverty, and Economic Change in Understanding Poverty*, edited by A. Banerjee, R. Bénabou, and D. Mookherjee. Oxford, U.K.: Oxford University Press In *World Bank (2015). World Development Report: Mind, Society, and Behavior*. Washington, DC: World Bank.
- Seidman and Tseng (2011). *Changing Social Settings\_ A Framework for Action* (p.12-32) in Aber, M.S.; Maton, K.I.; Seidmann, E. (2011). *Empowering Settings and Voices for Social Change* Oxford University Press.
- Sifa, C. B. (2014). Role of cooperatives in agricultural development and food security in Africa ( <http://www.un.org/esa/socdev/documents/2014/coopsegm/Sifa--Coops%20and%20agric%20dev.pdf>).
- Spicker, P. (2007) *The Idea of Poverty*. The Policy Press, University of Bristol, UK.
- Sunstein, C.R. (1996). Social Norms and Social Roles. *Columbia Law Review* 96.4, p.903-68 in *World Development Report 2015*, p. 49-81, World Bank, Washington.
- Sykuta, M.; Cook, M.L. (2001). A New Institutional Economics Approach to Contracts and Cooperatives, *American Journal of Agricultural Economics*, 2001, vol. 83, issue 5, 1273-1279.
- Vanni, F. (2014). *Agriculture and Public Goods*, Springer Science+Business Media Dordrecht <http://www.springer.com/978-94-007-7456-8> (status as of May 2016).
- Vasilaky, K.; Leonard, K.L. (2013). *As Good as the Networks They Keep? Improving Farmers' Social Networks via Randomized Information Exchange in Rural Uganda*. Working Paper, University of Maryland, College Park In *World Bank (2015). World Development Report: Mind, Society, and Behavior*. Washington, DC: World Bank.
- Verhofstadt, E.; Maertens, M. (2014). Smallholder cooperatives and agricultural performance in Rwanda: do organizational differences matter? *Agricultural Economics* 45 (2014) supplement 39-52.

- Verhofstadt, E.; Maertens, M. (2015). Can Agricultural Cooperatives Reduce Poverty? Heterogeneous Impact of Cooperative Membership on Farmers' Welfare in Rwanda Agricultural, Economics 45 supplement 39–52.
- Wade, R. (1994). Village republics: Economic conditions for collective action in South India. Oakland: ICS Press.
- World Bank (2015). World Development Report: Mind, Society, and Behavior. Washington, DC: World Bank. Doi: 10.1596/978-1-4648-03420.
- World Bank. (2017). Kenya's Devolution, World Bank Homepage.  
(<http://www.worldbank.org/en/country/kenya/brief/kenyas-devolution>)
- ZEF, FARA, INERA (2015). Burkina Faso: Potentials and Possibilities for German Collaboration in Agriculture. Bonn, Accra and Ouagadougou: Center for Development Research, Forum for Agricultural Research in Africa and Institut de L'Environnement et de Recherches Agricoles de Burkina.
- ZEF, FARA, KALRO (2015). Kenya: Potentials and Possibilities for German Collaboration in Agriculture. Bonn, Accra and Nairobi: Center for Development Research, Forum for Agricultural Research in Africa and Kenya Agriculture and Livestock Research Organisation.
- Zimmermann, M.A.; Zahniser, J.H. (1991). Refinements of Sphere-Specific Measures of Perceived Control: Development of a Sociopolitical Control Scale.

## **Appendix A: Methodology of first stage interviews with FOs**

Four main guiding documents were used for the semi-structured interviews. These are listed along with their purposes below:

1. Selection criteria: to collect data on the approach (type of organization, field of action, labor arrangement, resources, revenue distribution, and remuneration system) of the FO
2. Identification of objectives: to compare the congruency of objectives with their activities
3. Institutional assessment: to collect data on indicators that according to the literature are significant for indicating the sustainability and maturity of an FO
4. Stakeholder analysis: To analyze the force field the FO is acting in. First the representatives were asked to identify their main stakeholders, then to classify them by primary direct (most involved in daily tasks), primary indirect (involved in some tasks), and secondary stakeholders (wants to be informed). Afterwards the interview partner was asked to reflect on the potential key interests these stakeholders have in working with the FO, their direct relevance for the project (importance), the influence they can have on the project development (influence), their group size, and the contribution the FO desires to experience in the future.

Each assessment took two to five hours and was conducted in the offices of the FO. Each interview started with an introduction of the research (purpose of the interview, why the FO has been chosen, explanation of the interview process). The data was collected by taking notes and was supported by local assistants. The analysis of the data thus consisted mainly of the analysis of written and audio protocols. This structured analysis of the FOs' institutional capabilities and their interaction with the relevant stakeholders and their members enabled to understand and compare the FOs' current empowering approaches of the FOs and their area of empowerment.

## Guiding Document - Identification of Stakeholders

III. Identification of Stakeholders								
Stakeholders		Discriptive				Raking		
		Key Interests	Importance to Project	Influence on Project	Participation	Size of Group	Potential to contribute to the goals	Power to contribute to the goals
<b>A.</b>	<b>Primary direct</b>							
1	e.g. Minister	e.g. to ensure local government transformation process is completed	e.g. high. Will provide overall leadership and political support	e.g. high. Will have influence on all aspects of policy	e.g. responsible for overall project implementation			
2	e.g. Senior Management							
<b>B.</b>	<b>Primary indirect</b>							
1	local authorities							
2	association of local authorities							
3	local government change management programme							
4	provincial departments of local governments							
<b>C.</b>	<b>Secondary</b>							
1	other national and provincial government departments							
2	members of parliament and members of the provincial legislatures							
3	service providers							
4	organised labour							
5	NGOs, CBOs and other community structures							
6	staff of project executing organisations							
7	other forces supporting/opposing goals							
<p>interactions could e.g. happen on a macro/pan-african,international or national level, a meso/institutinal level or a micro/company or individal level; influences could come from e.g. input through knowledge (e.g. R&amp;D support, pubic awareness), economy (e.g. availability of finance, prices, ), values (e.g. social concerns), technology (e.g. public doubts, suitable application problems), institutions (e.g. current legislation and state support, existing standards, norms and customs); see Flow Chart 09052016; Sources: IIED (2005) and Mechanisms Tools "Visualize your Stakeholders" and <a href="http://www.policy-powertools.org/Tools/Understanding/docs/stakeholder_power_tool_english.pdf">http://www.policy-powertools.org/Tools/Understanding/docs/stakeholder_power_tool_english.pdf</a> and <a href="http://mechanisms.energychange.info/step/5">http://mechanisms.energychange.info/step/5</a></p>								

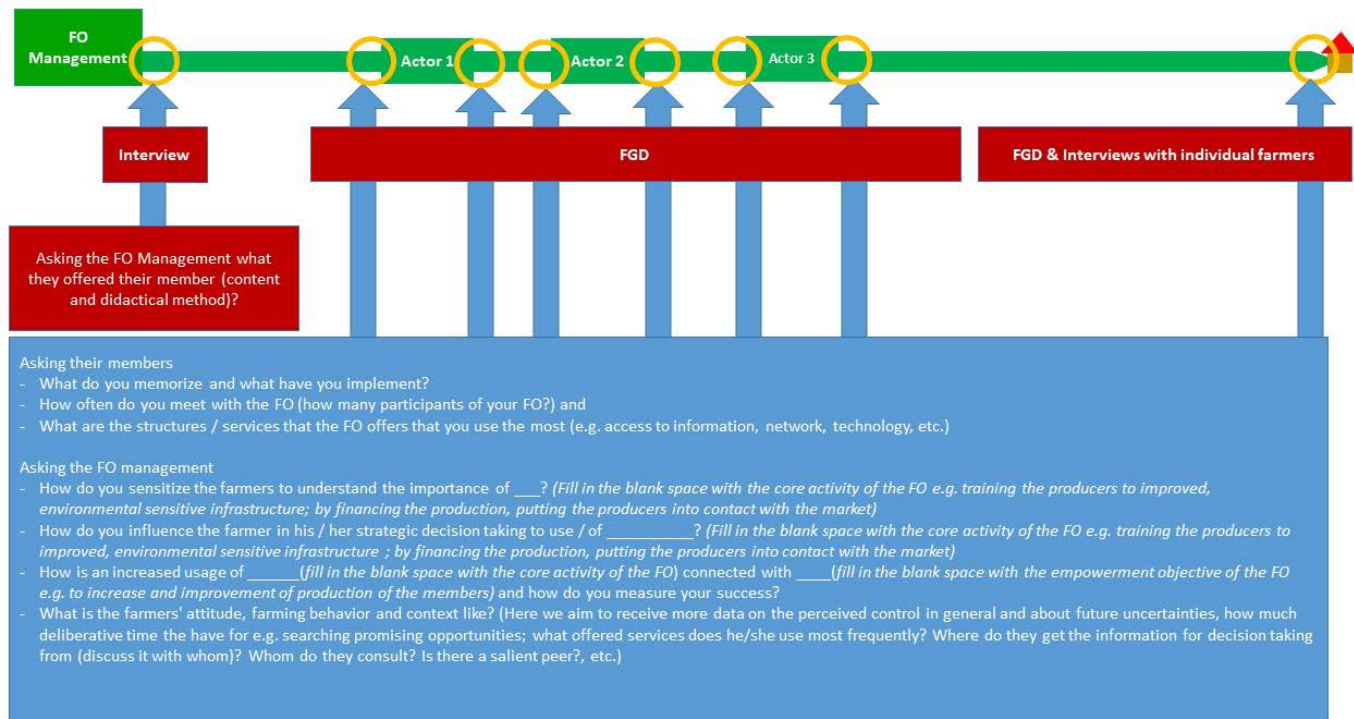
(Source: Author's own compilation)

I. Identification of Objectives							
	Objectives	Required Outcomes	Required Actions	Required Actors	Incentives for Actors to Take/Not to take required actions		"Critical to Success" Incentives
					Plus	Minus	
Objective 1		Outcome 1	Activity 1	Actor a	Positive Incentive for Actor x to do action 1	Negative Incentive for Actor x to do action 1	Crucial to Success Incentives for Actor x to do Action 1
				Actor b			
			Actor c				
		Outcome 2	Action 3	Actor d			
Objective 2		Outcome 1	Action 1	Actor e			
	Objectives could be e.g. improving productivity and quality; access to inputs, access to markets, enhancing exchange and networking, improving the policy environment & advocacy, other supporting services	Outcomes can e.g. be tangible or intangible. Examples are e.g. increase in factor productivity, equity, handling of production factors, lowering of production costs, transparency, knowledge and skills (see Flow Chart 09052016)	Activities could be e.g. Vocational Education and Training, Exchange of Experiences, Delivery of agricultural services, organizational development, ICT	detailed actors description will follow within the Stakeholder-Analysis			
Source: questions according to findings described within paper on "Farmer Empowerment". Additional source: Berryman (1997): Guidelines for Assessing Institutional Capacity"; WorldBank in DFID "Promoting Institutional & Organisational Development - a Source Book of Tools and Techniques"							

(Source: Author's own compilation)



## Appendix B: Methodology and design of second stage interviews



Four types of interviews were conducted:

1. Interviews with representatives of the FOs
2. Household interviews with the farmer: The questions raised within the household survey were mainly focused on how the farmer makes decisions, his/her level of trust, and his/her time preferences. Theoretically based on the cognitive response approach and the query theory, content that had previously been discussed within the FGDs was chosen to be discussed in greater depth. The farmer was then asked to think out loud what his/her thoughts would be if s/he needs to implement an innovation, for example. The idea is to develop a deeper understanding of factors that are relevant for his/her decision-making.
3. Interviews with the FO's stakeholders: The idea is to get an impression of the force field the FOs is surrounded by and the way these FOs are perceived.
4. Focus Group Discussions (FGDs) with the member farmer: The composition of participants of the FGD was intended to represent the actual composition of involved FO members. In the following two or three FGDs, representatives of every subsequent member level of the FO were questioned. Since the minimum size for carrying out an FGD is approximately five persons, five members of the relevant direct member organization were invited to participate. To enable a fluent discussion only a few key questions and topics were raised with regard to the relationship between indicated activity, context, and impact.

Examples of the types of questions asked in the interviews:

- “How do you sensitize the farmers to understanding the importance of \_\_\_\_? Could you please give us an example?”
- (Insert ACTIVITIES OF THE FO in the placeholder e.g. training the producers on new, environmentally sensitive infrastructure; by financing the production, putting the producers into contact with the market)

- “How do you influence the farmer in his/her strategic decision-making to use \_\_\_\_\_? Could you please give us an example?”
- (Insert ACTIVITIES OF THE FO in the placeholder e.g. training the producers on new, environmentally sensitive infrastructure; by financing the production, putting the producers into contact with the market)
- *“How is an increased usage of \_\_\_\_\_ (Insert ACTIVITIES OF THE FO in the placeholder e.g. training the producers on new, environmentally sensitive infrastructure; by financing the production, putting the producers into contact with the market) connected with \_\_\_\_\_ (Insert OBJECTIVE OF THE FO, e.g. increase and improvement of production of the members)? And how do you measure your success? Could you please give us an example?”*
- *“What is the farmers’ attitude, farming behavior, and context like? (Perceived control in general and about future uncertainties; having deliberative time, e.g. for searching for promising opportunities) What offered services does he/she use most frequently? Where do they get the information for decision-making from (discuss it with whom)? Whom do they consult? Is there a salient peer? Could you please give us an example?”*

Farmers were asked:

- What have they memorized and what did they implement
- How often they communicate with representatives of the intermediary organization
- What offered structure/service they use the most (e.g. access to information, network, technology, etc.)

## Appendix C: Description of all Farmer Organizations studied

(Reference under section 2.3, 4<sup>th</sup> paragraph)

### Kenya

#### 1. KENAFF HQ

KENAFF HQ aims to improve livelihoods by progressively influencing change in the agricultural sector and promoting agri-business through targeted interventions by providing training on agronomy practices and capacity-building on governance, facilitating collective action, developing lobbying strategies, and offering market surveys and intelligence. KENAFF HQ thus wants to contribute to an increased productivity of farmers, increased income for improved farmer livelihoods, and increased access to market, inputs, and the enabling environment. It was said by the interview partners that progress indicators do exist and that they are complete, but had not been provided to ZEF.

#### 2. KENAFF Bomet and Kakamega

KENAFF Bomet and Kakamega want to improve the productivity and quality of products and services by training on good agricultural practices, the uptake of new technology, fostering farmer exchange programs, and being a source of quality farm input. By doing so, they aim to increase market demand, improve food security, enable access to markets, improve farmer skills, and improve the quality of the marketed products. It was said that milestones have been established to track the organization's strategy, but the objectives have not yet been shared with ZEF.

#### 3. SSDFA

SSDFA brings dairy farmers together in order to give them a voice for lobbying, for the marketing of dairy products, for the purchasing of dairy inputs, for linkages to financial institutions, and for extension services. By facilitating quality extension services, supporting them in reaching better markets and achieving better prices, and by increasing the quality of supplementary feeds, SSDFA supports the unification of small-scale dairy farmers and lobbies and advocates to improve the farmers' livelihoods. It was said that their progress indicators are based on the annual plans that track the progress of projects like the construction of biogas plants and pit latrines for farmers.

#### 4. CGA

CGA's main objectives are to organize cereal farmers into fully functioning enterprises and to provide farmers with agribusiness solutions through advocacy, technology, innovations, and partnerships. By mobilizing farmers and offering extension services, post-harvest handling training, input procurement, and output market linkages, CGA wants to empower farmers to increase their factor productivity, their equity, their knowledge, and their skills. The objectives are firmly set in place and fit the statements made on their objectives and activities.<sup>18</sup>

#### 5. Kikai

Kikai's aims to increase the production of quality coffee and milk from their members by increasing their productivity and product quality and by increasing access to processing services. By organizing transport to the millers, for example, Kikai Coffee Farmers' Cooperative Society contributes to an increase in the quality of the products and thus the sales prices of milk products and coffee. It was said that indicators are in place to track the organization's strategy, but the objectives have not yet been shared with ZEF.

---

<sup>18</sup> Please also see the flow charts on the individual farmer organizations. All flow charts have been uploaded to the ZEF Data Portal.

## **6. KAB**

KAB targets the education of farmers in Kakamega that agriculture is an important business within the county. Through improving farmer capacities and product quality, process transparency and accountability as well as farmer access to processing technologies and to agricultural inputs, KAB wants to contribute to enhancing production and product quality. KAB states that the progress is tracked during their monthly meetings and documented within their annual reports, but no indicators have been shared with ZEF yet.

## **Burkina Faso**

### **1. ADECOD**

By conducting productivity and quality training, facilitating exchanges between buyers and sellers, and advocating for price controls and fair prices for agricultural products, ADECOD is aiming to improve the quality of products and increase their members' production. Their activities reflect those targets well and are congruent with the progress indicators. With their work ADECOD is contributing to placing the producer well within the agricultural networks, raising awareness of new agricultural techniques, increasing the usage of environmentally sensitive infrastructure, supporting the establishment of higher sales prices, and, thus, ensuring production finance.

ADECOD is involved with the main supply chain operators (farmers, farmer groups, service providers, processors, and consumers). In cooperating with the provincial authorities, development partners, professional organizations, interprofessional committees, and national and regional FOs, the organization aims to exchange and cooperate with relevant public and private supply chain supporters.

### **2. CARTPL**

CARTPL aims to campaign against the poverty of women and other FO members by improving the productivity and quality through project planning and training programs, increasing member access to credit and technologies, enhancing networking, obtaining a political platform to voice FO concerns, hiring an assistant to handle administrative tasks, and providing producers with a wide variety of supporting services. By empowering farmers through health, sanitation services, and financial opportunities, CARTPL contributes to combating female poverty among farmer organization members. In the interviews this FO did not show as many specific and differentiated progress indicators as other FOs, but it has a very dynamic leader who has in congruency with the FO's aims implemented a staggered and consistent training system and an ambitious landing system to encourage entrepreneurial behavior.

What distinguishes CARTPL's approach is that they choose to collaborate with actors that will help with the diversification of agricultural products. Collaborators include relevant public and private supply chain enablers (Chamber of Handicrafts, Ministry for the Promotion of Women, national government and governmental organizations, National Federation of Handicrafts, National Federation of Agricultural Manufacturing and Food Processing Industry) and supporters (development partners, national agricultural and artisan organizations, provincial authorities, chambers of agricultural and of artisanal crafts).

### **3. FCIDT**

FCIDT aims to promote development in the Toudou region and to empower community members by encouraging civic action. They provide training on increasing production quality and marketing, foster knowledge transfer between member organizations, and promote the realization of development projects within the region. Since FCIDT is aiming to contribute to the cultural, social, and economic development of the citizens, to elevate their societal consciousness, and to increase the financial abilities for positive development of the community of Toudou, FCIDT is mainly focused on increasing

the social cohesion of citizens, who are often smallholder farmers. These activities are reflected in their progress indicators.

FCIDT is focused on establishing a circle of actors which represent and support local social cohesion in Toudou. By moving between supply chain operators and supporters, they connect the different representatives which are relevant to sensitize and perform civic action like youth, farmers, and consumers, and local and official authorities.

#### **4. FNJPAF**

The main objective of FNJPAF is to promote agricultural work through the modernization and professionalization of family agriculture and provide basic agricultural inputs and training opportunities to member groups. By training young farmers in new agricultural techniques and innovations, they want to contribute to reducing the rural exodus of youth populations from the villages and to increasing women's entrepreneurial skills and knowledge. The objective indicators mainly refer to youths' and women's access to land.

Besides supporting private supply chain operators like service providers and processors, FNJPAF interacts with the ministry for economic development and youth promotion (public supply chain enablers) and with public and private supply chain supporters such as local official and customary authorities, national agricultural and regional unions, professional organizations, development partners, and research institutions to reduce the rural exodus of youth populations from the villages.

#### **5. FUGCOMB**

FUGCOMB promotes the progress of the fruit and vegetable sector by supporting their members in the domains of production and sales and by strengthening the producer capacities in producing quality fruits and vegetables. They ensure that their members are represented within the agricultural sector, undertake promotional activities, and reinforce producer knowledge. By providing farmers with agricultural credit and advocating for price policies, for example, FUGCOMB wants to contribute to a harmonization of prices with external product markets and improve the infrastructure and access in order to increase productivity and competitiveness, which is illustrated in their objectives.

To further its goal, FUGCOMB is in contact with public and private supply chain enablers (Ministries of Environment, Agriculture, etc. and National Producers Syndicate), with official and local authorities, the regional livestock management, and development partners who support the supply chain.

#### **6. ROPSA**

ROPSA targets the influencing of agricultural policies in favor of family agriculture and the reinforcing of the capacities of the members of the allied farmer organizations. By influencing the creation of the sylvo-agro-pastoral organization law in 2015, identifying the responsibilities of all actors, establishing networking contacts with other agricultural actors, and fostering the creation of an agricultural bank, ROPSA wants especially to influence politics in favor of agricultural families and the reinforcement of capacities of FOs. However, it does not have official status or an elected committee, which impedes the analysis of congruency between their activities, objectives, and the global goals.

#### **7. RPBHC**

RPBHC promotes the socioeconomic and cultural development of women through the promotion of shea butter products and cotton oil and derived products. RPBHC aims to facilitate farmers' sales and enable them to receive regular training for agricultural activities. By supporting their members in participating in expositions, negotiating their contracts, and improving their literacy, they want to ensure a minimum price contract which enables them to participate in the market. Since RPBHC

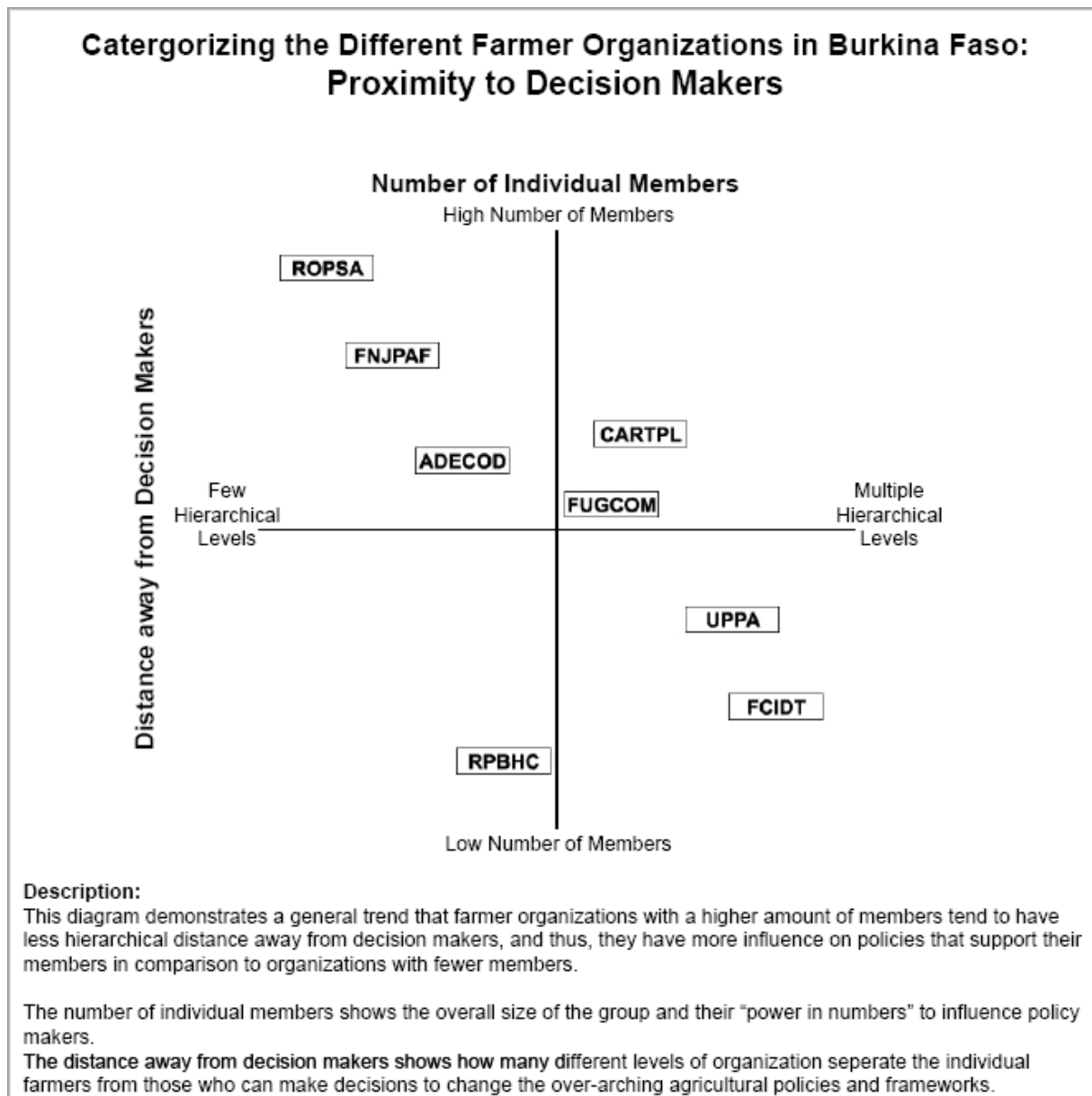
primarily focuses on increased market access, their progress indicators mainly reflect price and quantity aspects.

#### **8. UPPA-B**

UPPA-B's objective is to professionalize value chain actors in order to increase their revenues. Through increasing their members' knowledge of production and processing techniques, facilitating access to agricultural inputs, and providing support services, they want to increase their members' productivity and quantity and increase production from 35 tons (2015) to 40 tons (2016). Though their outcome indicators mainly describe training participation, they want to contribute to an overall increase in the revenues, productivity, and quantities of the value chain actors for example by performing market research and providing their members with fertilizers and training.

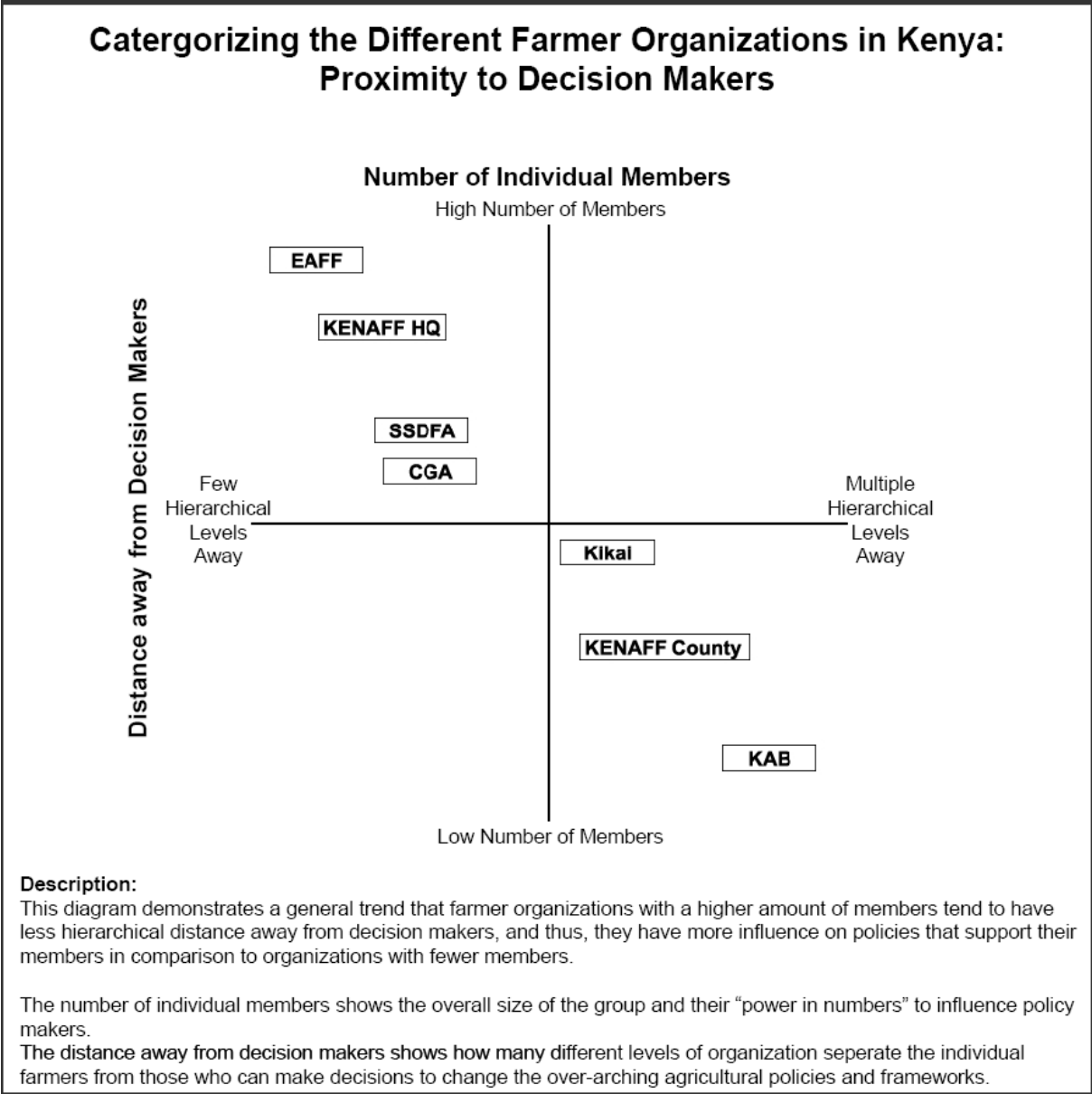
## Appendix D: Stakeholder analysis visualizations

Proximity to Decision Makers (Burkina Faso)



(Source: Author's own compilation)

Proximity to Decision Makers (Kenya)

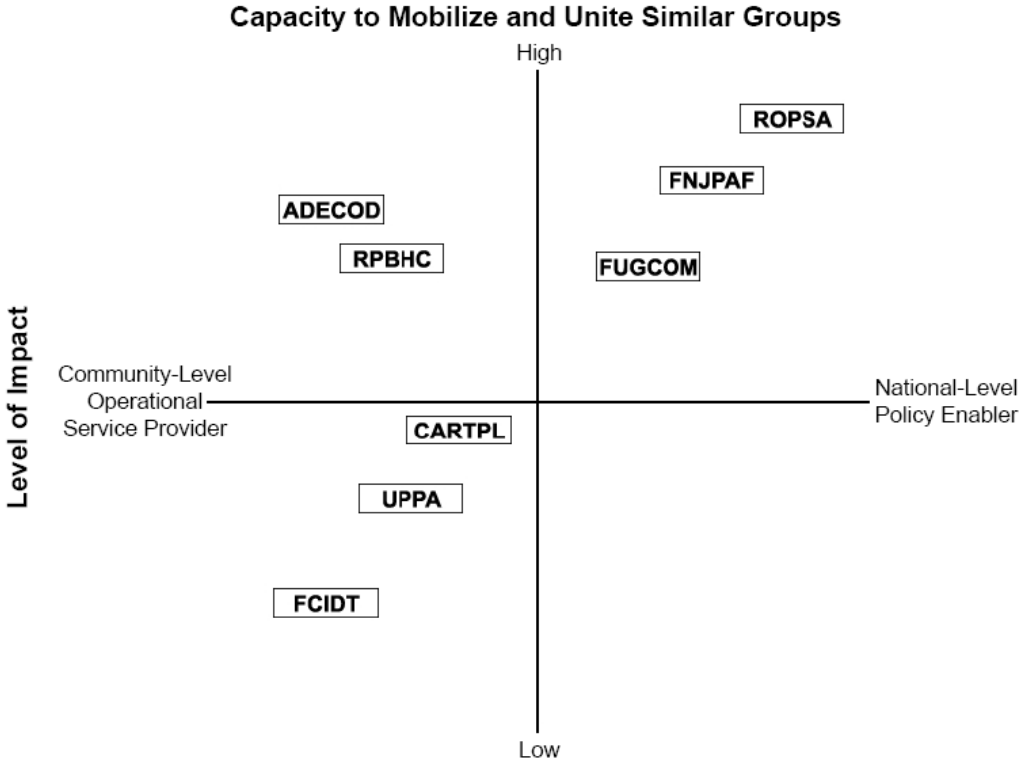


(Source: Author’s own compilation)



**Mobilization Capacity and Impact Functions (Burkina Faso)**

**Catergorizing the Different Farmer Organizations in Burkina Faso:  
Mobilization Capacity and Impact Functions**



**Description:**

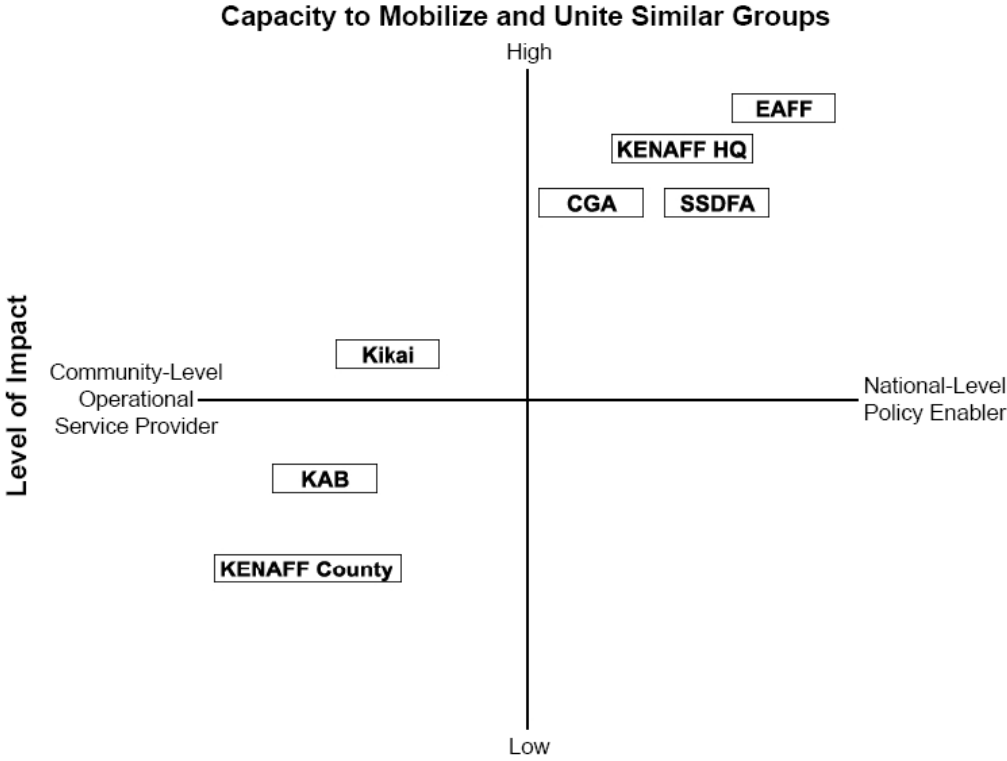
This diagram shows that the farmer organizations which have a greater capacity to mobilize and unite similar groups tend to have more impact on national-level policies. In contrast, the farmer organizations which have lower mobilization capacities tend to focus on their relationships and actions within local communities.

The capacity for a FO to mobilize and unite similar groups is seen here as the grouping's availability of funding for communications and to bring together different groups.

The level of impact is displayed in relation to the FO's contact with ministries and their influence on policies.

(Source: Author's own compilation)

### Catergorizing the Different Farmer Organizations in Kenya: Mobilization Capacity and Impact Functions



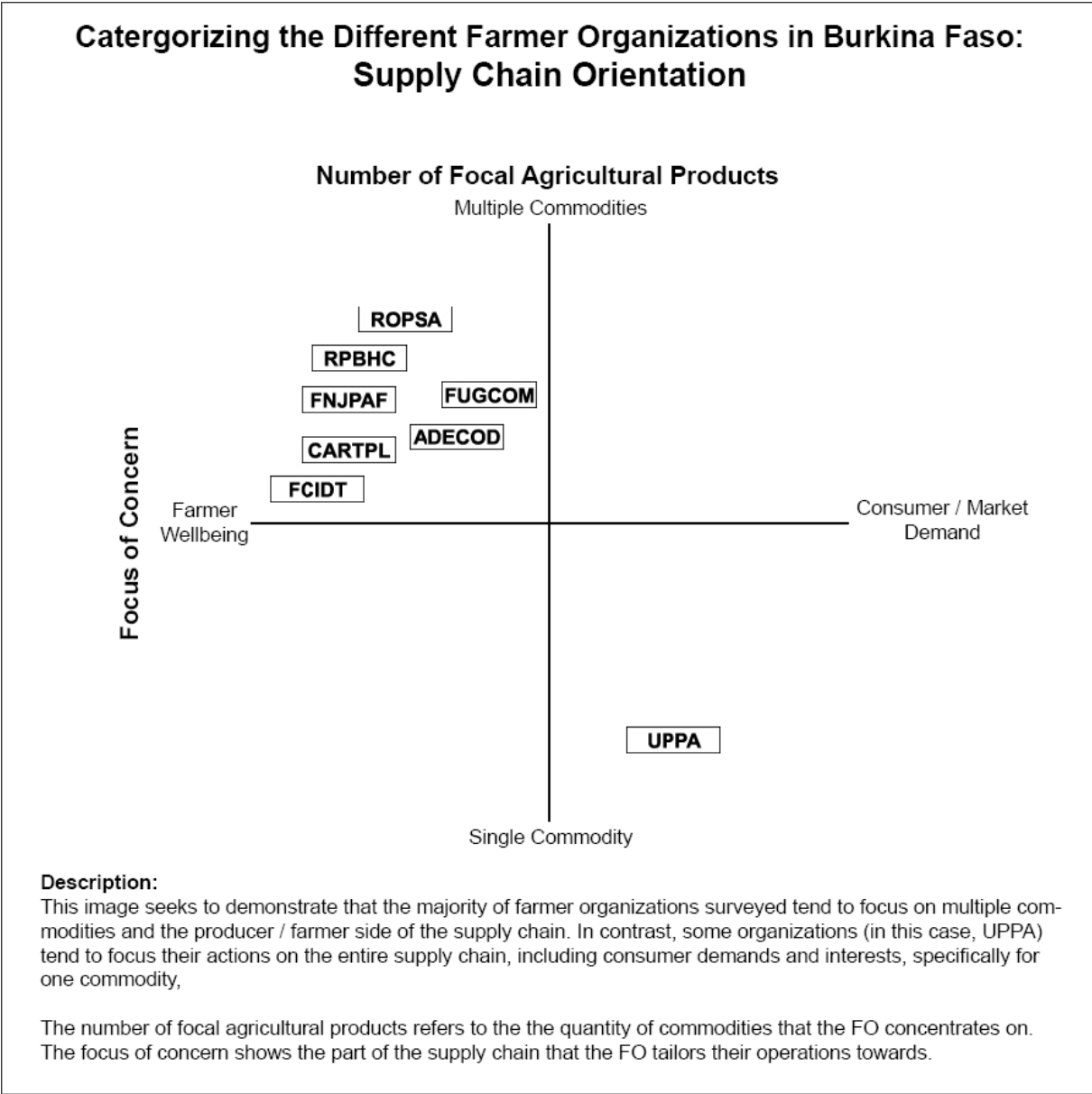
**Description of Indicator:**

This diagram shows that the farmer organizations which have a greater capacity to mobilize and unite similar groups tend to have more impact on national-level policies. In contrast, the farmer organizations which have lower mobilization capacities tend to focus on their relationships and actions within local communities.

The capacity for a FO to mobilize and unite similar groups is seen here as the grouping’s availability of funding for communications and to bring together different groups. The level of impact is displayed in relation to the FO’s contact with ministries and their influence on policies.

(Source: Author’s own compilation)

Supply Chain Orientation (Burkina Faso)



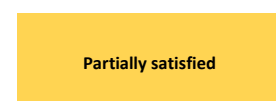
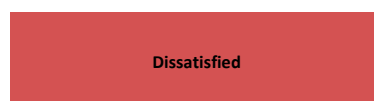
(Source: Author’s own compilation)

## Appendix E: Sub-organizations represented in second stage interviews

FOs	First Level	Second Level	Third Level
ADECOD	Representatives of URCB, the most active association out of the 5 that make up ADECOD	Cooperatives 1 and 4.1	Cooperatives 3, 4.2 and 7. All three cooperatives work within the rice sector, either management and commercialization or on rice processing.
FNJPAF	AJEA	Groups and Cooperatives	Member Farmers
CARTPL	Representatives of the 89 associations	Representatives of the eight sub-associations of Bao Beoneré	Member farmers of the sub-organization
EAFF	KENAFF	KENAFF County Offices	Member farmers

## Appendix F: Perceived Changes – Performance of the FO

Criteria of Empowerment		ADECOD	CARTPL	FNJPAF	EAFF - KENAFF HQ - KENAFF County
1. Access to Capital:	<b>Structural social capital (SC)</b> is the surrounding structure e.g. memberships/networks, human sociality, time availability, representation of needs within FO, etc;				
	<b>Economic Capital (EC):</b> access to natural, physical and financial resources				
	<b>Information Capital (IC):</b> Received Services, Transferring Knowledge like skills, innovation, etc.;				
2. Changing Mental Models:	<b>Psychological Empowerment (PE):</b> individually felt capability to act, perceived ability to cope with the consequences of poverty (unclenching perspectives)				
	<b>Community Participation (CP):</b> conflict resolution and shared perceptions, trust				



1. Evers, Hans-Dieter and Solvay Gerke (2005). Closing the Digital Divide: Southeast Asia's Path Towards a Knowledge Society.
2. Bhuiyan, Shajahan and Hans-Dieter Evers (2005). Social Capital and Sustainable Development: Theories and Concepts.
3. Schetter, Conrad (2005). Ethnicity and the Political Reconstruction of Afghanistan.
4. Kassahun, Samson (2005). Social Capital and Community Efficacy. In Poor Localities of Addis Ababa Ethiopia.
5. Fuest, Veronika (2005). Policies, Practices and Outcomes of Demand-oriented Community Water Supply in Ghana: The National Community Water and Sanitation Programme 1994 – 2004.
6. Menkhoff, Thomas and Hans-Dieter Evers (2005). Strategic Groups in a Knowledge Society: Knowledge Elites as Drivers of Biotechnology Development in Singapore.
7. Mollinga, Peter P. (2005). The Water Resources Policy Process in India: Centralisation, Polarisation and New Demands on Governance.
8. Evers, Hans-Dieter (2005). Wissen ist Macht: Experten als Strategische Gruppe.
- 8.a Evers, Hans-Dieter and Solvay Gerke (2005). Knowledge is Power: Experts as Strategic Group.
9. Fuest, Veronika (2005). Partnerschaft, Patronage oder Paternalismus? Eine empirische Analyse der Praxis universitärer Forschungs Kooperation mit Entwicklungsländern.
10. Laube, Wolfram (2005). Promise and Perils of Water Reform: Perspectives from Northern Ghana.
11. Mollinga, Peter P. (2004). Sleeping with the Enemy: Dichotomies and Polarisation in Indian Policy Debates on the Environmental and Social Effects of Irrigation.
12. Wall, Caleb (2006). Knowledge for Development: Local and External Knowledge in Development Research.
13. Laube, Wolfram and Eva Youkhana (2006). Cultural, Socio-Economic and Political Constraints for Virtual Water Trade: Perspectives from the Volta Basin, West Africa.
14. Hornidge, Anna-Katharina (2006). Singapore: The Knowledge-Hub in the Straits of Malacca.
15. Evers, Hans-Dieter and Caleb Wall (2006). Knowledge Loss: Managing Local Knowledge in Rural Uzbekistan.
16. Youkhana, Eva; Lautze, J. and B. Barry (2006). Changing Interfaces in Volta Basin Water Management: Customary, National and Transboundary.
17. Evers, Hans-Dieter and Solvay Gerke (2006). The Strategic Importance of the Straits of Malacca for World Trade and Regional Development.
18. Hornidge, Anna-Katharina (2006). Defining Knowledge in Germany and Singapore: Do the Country-Specific Definitions of Knowledge Converge?
19. Mollinga, Peter M. (2007). Water Policy – Water Politics: Social Engineering and Strategic Action in Water Sector Reform.
20. Evers, Hans-Dieter and Anna-Katharina Hornidge (2007). Knowledge Hubs Along the Straits of Malacca.
21. Sultana, Nayeem (2007). Trans-National Identities, Modes of Networking and Integration in a Multi-Cultural Society. A Study of Migrant Bangladeshis in Peninsular Malaysia.
22. Yalcin, Resul and Peter M. Mollinga (2007). Institutional Transformation in Uzbekistan's Agricultural and Water Resources Administration: The Creation of a New Bureaucracy.
23. Menkhoff, T.; Loh, P. H. M.; Chua, S. B.; Evers, H.-D. and Chay Yue Wah (2007). Riau Vegetables for Singapore Consumers: A Collaborative Knowledge-Transfer Project Across the Straits of Malacca.
24. Evers, Hans-Dieter and Solvay Gerke (2007). Social and Cultural Dimensions of Market Expansion.
25. Obeng, G. Y.; Evers, H.-D.; Akuffo, F. O., Braimah, I. and A. Brew-Hammond (2007). Solar PV Rural Electrification and Energy-Poverty Assessment in Ghana: A Principal Component Analysis.

26. Eguavoen, Irit; E. Youkhana (2008). Small Towns Face Big Challenge. The Management of Piped Systems after the Water Sector Reform in Ghana.
27. Evers, Hans-Dieter (2008). Knowledge Hubs and Knowledge Clusters: Designing a Knowledge Architecture for Development
28. Ampomah, Ben Y.; Adjei, B. and E. Youkhana (2008). The Transboundary Water Resources Management Regime of the Volta Basin.
29. Saravanan.V.S.; McDonald, Geoffrey T. and Peter P. Mollinga (2008). Critical Review of Integrated Water Resources Management: Moving Beyond Polarised Discourse.
30. Laube, Wolfram; Awo, Martha and Benjamin Schraven (2008). Erratic Rains and Erratic Markets: Environmental change, economic globalisation and the expansion of shallow groundwater irrigation in West Africa.
31. Mollinga, Peter P. (2008). For a Political Sociology of Water Resources Management.
32. Hauck, Jennifer; Youkhana, Eva (2008). Histories of water and fisheries management in Northern Ghana.
33. Mollinga, Peter P. (2008). The Rational Organisation of Dissent. Boundary concepts, boundary objects and boundary settings in the interdisciplinary study of natural resources management.
34. Evers, Hans-Dieter; Gerke, Solvay (2009). Strategic Group Analysis.
35. Evers, Hans-Dieter; Benedikter, Simon (2009). Strategic Group Formation in the Mekong Delta - The Development of a Modern Hydraulic Society.
36. Obeng, George Yaw; Evers, Hans-Dieter (2009). Solar PV Rural Electrification and Energy-Poverty: A Review and Conceptual Framework With Reference to Ghana.
37. Scholtes, Fabian (2009). Analysing and explaining power in a capability perspective.
38. Eguavoen, Irit (2009). The Acquisition of Water Storage Facilities in the Abay River Basin, Ethiopia.
39. Hornidge, Anna-Katharina; Mehmood Ul Hassan; Mollinga, Peter P. (2009). 'Follow the Innovation' – A joint experimentation and learning approach to transdisciplinary innovation research.
40. Scholtes, Fabian (2009). How does moral knowledge matter in development practice, and how can it be researched?
41. Laube, Wolfram (2009). Creative Bureaucracy: Balancing power in irrigation administration in northern Ghana.
42. Laube, Wolfram (2009). Changing the Course of History? Implementing water reforms in Ghana and South Africa.
43. Scholtes, Fabian (2009). Status quo and prospects of smallholders in the Brazilian sugarcane and ethanol sector: Lessons for development and poverty reduction.
44. Evers, Hans-Dieter; Genschick, Sven; Schraven, Benjamin (2009). Constructing Epistemic Landscapes: Methods of GIS-Based Mapping.
45. Saravanan V.S. (2009). Integration of Policies in Framing Water Management Problem: Analysing Policy Processes using a Bayesian Network.
46. Saravanan V.S. (2009). Dancing to the Tune of Democracy: Agents Negotiating Power to Decentralise Water Management.
47. Huu, Pham Cong; Rhlers, Eckart; Saravanan, V. Subramanian (2009). Dyke System Planing: Theory and Practice in Can Tho City, Vietnam.
48. Evers, Hans-Dieter; Bauer, Tatjana (2009). Emerging Epistemic Landscapes: Knowledge Clusters in Ho Chi Minh City and the Mekong Delta.
49. Reis, Nadine; Mollinga, Peter P. (2009). Microcredit for Rural Water Supply and Sanitation in the Mekong Delta. Policy implementation between the needs for clean water and 'beautiful latrines'.
50. Gerke, Solvay; Ehlert, Judith (2009). Local Knowledge as Strategic Resource: Fishery in the Seasonal Floodplains of the Mekong Delta, Vietnam

51. Schraven, Benjamin; Eguavoen, Irit; Manske, Günther (2009). Doctoral degrees for capacity development: Results from a survey among African BiGS-DR alumni.
52. Nguyen, Loan (2010). Legal Framework of the Water Sector in Vietnam.
53. Nguyen, Loan (2010). Problems of Law Enforcement in Vietnam. The Case of Wastewater Management in Can Tho City.
54. Oberkircher, Lisa et al. (2010). Rethinking Water Management in Khorezm, Uzbekistan. Concepts and Recommendations.
55. Waibel, Gabi (2010). State Management in Transition: Understanding Water Resources Management in Vietnam.
56. Saravanan V.S.; Mollinga, Peter P. (2010). Water Pollution and Human Health. Transdisciplinary Research on Risk Governance in a Complex Society.
57. Vormoor, Klaus (2010). Water Engineering, Agricultural Development and Socio-Economic Trends in the Mekong Delta, Vietnam.
58. Hornidge, Anna-Katharina; Kurfürst, Sandra (2010). Envisioning the Future, Conceptualising Public Space. Hanoi and Singapore Negotiating Spaces for Negotiation.
59. Mollinga, Peter P. (2010). Transdisciplinary Method for Water Pollution and Human Health Research.
60. Youkhana, Eva (2010). Gender and the development of handicraft production in rural Yucatán/Mexico.
61. Naz, Farhat; Saravanan V. Subramanian (2010). Water Management across Space and Time in India.
62. Evers, Hans-Dieter; Nordin, Ramli, Nienkemoer, Pamela (2010). Knowledge Cluster Formation in Peninsular Malaysia: The Emergence of an Epistemic Landscape.
63. Mehmood Ul Hassan; Hornidge, Anna-Katharina (2010). 'Follow the Innovation' – The second year of a joint experimentation and learning approach to transdisciplinary research in Uzbekistan.
64. Mollinga, Peter P. (2010). Boundary concepts for interdisciplinary analysis of irrigation water management in South Asia.
65. Noelle-Karimi, Christine (2006). Village Institutions in the Perception of National and International Actors in Afghanistan. **(Amu Darya Project Working Paper No. 1)**
66. Kuzmits, Bernd (2006). Cross-bordering Water Management in Central Asia. **(Amu Darya Project Working Paper No. 2)**
67. Schetter, Conrad; Glassner, Rainer; Karokhail, Masood (2006). Understanding Local Violence. Security Arrangements in Kandahar, Kunduz and Paktia. **(Amu Darya Project Working Paper No. 3)**
68. Shah, Usman (2007). Livelihoods in the Asqalan and Sufi-Qarayateem Canal Irrigation Systems in the Kunduz River Basin. **(Amu Darya Project Working Paper No. 4)**
69. ter Steege, Bernie (2007). Infrastructure and Water Distribution in the Asqalan and Sufi-Qarayateem Canal Irrigation Systems in the Kunduz River Basin. **(Amu Darya Project Working Paper No. 5)**
70. Mielke, Katja (2007). On The Concept of 'Village' in Northeastern Afghanistan. Explorations from Kunduz Province. **(Amu Darya Project Working Paper No. 6)**
71. Mielke, Katja; Glassner, Rainer; Schetter, Conrad; Yarash, Nasratullah (2007). Local Governance in Warsaj and Farkhar Districts. **(Amu Darya Project Working Paper No. 7)**
72. Meininghaus, Esther (2007). Legal Pluralism in Afghanistan. **(Amu Darya Project Working Paper No. 8)**
73. Yarash, Nasratullah; Smith, Paul; Mielke, Katja (2010). The fuel economy of mountain villages in Ishkamish and Burka (Northeast Afghanistan). Rural subsistence and urban marketing patterns. **(Amu Darya Project Working Paper No. 9)**
74. Oberkircher, Lisa (2011). 'Stay – We Will Serve You Plov!'. Puzzles and pitfalls of water research in rural Uzbekistan.
75. Shtaltovna, Anastasiya; Hornidge, Anna-Katharina; Mollinga, Peter P. (2011). The Reinvention of Agricultural Service Organisations in Uzbekistan – a Machine-Tractor Park in the Khorezm Region.



76. Stellmacher, Till; Grote, Ulrike (2011). Forest Coffee Certification in Ethiopia: Economic Boon or Ecological Bane?
77. Gatzweiler, Franz W.; Baumüller, Heike; Ladenburger, Christine; von Braun, Joachim (2011). Marginality. Addressing the roots causes of extreme poverty.
78. Mielke, Katja; Schetter, Conrad; Wilde, Andreas (2011). Dimensions of Social Order: Empirical Fact, Analytical Framework and Boundary Concept.
79. Yarash, Nasratullah; Mielke, Katja (2011). The Social Order of the Bazaar: Socio-economic embedding of Retail and Trade in Kunduz and Imam Sahib
80. Baumüller, Heike; Ladenburger, Christine; von Braun, Joachim (2011). Innovative business approaches for the reduction of extreme poverty and marginality?
81. Ziai, Aram (2011). Some reflections on the concept of 'development'.
82. Saravanan V.S., Mollinga, Peter P. (2011). The Environment and Human Health - An Agenda for Research.
83. Eguavoen, Irit; Tesfai, Weyni (2011). Rebuilding livelihoods after dam-induced relocation in Koga, Blue Nile basin, Ethiopia.
84. Eguavoen, I., Sisay Demeku Derib et al. (2011). Digging, damming or diverting? Small-scale irrigation in the Blue Nile basin, Ethiopia.
85. Genschick, Sven (2011). Pangasius at risk - Governance in farming and processing, and the role of different capital.
86. Quy-Hanh Nguyen, Hans-Dieter Evers (2011). Farmers as knowledge brokers: Analysing three cases from Vietnam's Mekong Delta.
87. Poos, Wolf Henrik (2011). The local governance of social security in rural Surkhondarya, Uzbekistan. Post-Soviet community, state and social order.
88. Graw, Valerie; Ladenburger, Christine (2012). Mapping Marginality Hotspots. Geographical Targeting for Poverty Reduction.
89. Gerke, Solvay; Evers, Hans-Dieter (2012). Looking East, looking West: Penang as a Knowledge Hub.
90. Turaeva, Rano (2012). Innovation policies in Uzbekistan: Path taken by ZEFa project on innovations in the sphere of agriculture.
91. Gleisberg-Gerber, Katrin (2012). Livelihoods and land management in the Ioba Province in south-western Burkina Faso.
92. Hiemenz, Ulrich (2012). The Politics of the Fight Against Food Price Volatility – Where do we stand and where are we heading?
93. Baumüller, Heike (2012). Facilitating agricultural technology adoption among the poor: The role of service delivery through mobile phones.
94. Akpabio, Emmanuel M.; Saravanan V.S. (2012). Water Supply and Sanitation Practices in Nigeria: Applying Local Ecological Knowledge to Understand Complexity.
95. Evers, Hans-Dieter; Nordin, Ramli (2012). The Symbolic Universe of Cyberjaya, Malaysia.
96. Akpabio, Emmanuel M. (2012). Water Supply and Sanitation Services Sector in Nigeria: The Policy Trend and Practice Constraints.
97. Boboyorov, Hafiz (2012). Masters and Networks of Knowledge Production and Transfer in the Cotton Sector of Southern Tajikistan.
98. Van Assche, Kristof; Hornidge, Anna-Katharina (2012). Knowledge in rural transitions - formal and informal underpinnings of land governance in Khorezm.
99. Eguavoen, Irit (2012). Blessing and destruction. Climate change and trajectories of blame in Northern Ghana.
100. Callo-Concha, Daniel; Gaiser, Thomas and Ewert, Frank (2012). Farming and cropping systems in the West African Sudanian Savanna. WASCAL research area: Northern Ghana, Southwest Burkina Faso and Northern Benin.

101. Sow, Papa (2012). Uncertainties and conflicting environmental adaptation strategies in the region of the Pink Lake, Senegal.
102. Tan, Siwei (2012). Reconsidering the Vietnamese development vision of “industrialisation and modernisation by 2020”.
103. Ziai, Aram (2012). Postcolonial perspectives on ‘development’.
104. Kelboro, Girma; Stellmacher, Till (2012). Contesting the National Park theorem? Governance and land use in Nech Sar National Park, Ethiopia.
105. Kotsila, Panagiota (2012). “Health is gold”: Institutional structures and the realities of health access in the Mekong Delta, Vietnam.
106. Mandler, Andreas (2013). Knowledge and Governance Arrangements in Agricultural Production: Negotiating Access to Arable Land in Zarafshan Valley, Tajikistan.
107. Tsegai, Daniel; McBain, Florence; Tischbein, Bernhard (2013). Water, sanitation and hygiene: the missing link with agriculture.
108. Pangaribowo, Evita Hanie; Gerber, Nicolas; Torero, Maximo (2013). Food and Nutrition Security Indicators: A Review.
109. von Braun, Joachim; Gerber, Nicolas; Mirzabaev, Alisher; Nkonya Ephraim (2013). The Economics of Land Degradation.
110. Stellmacher, Till (2013). Local forest governance in Ethiopia: Between legal pluralism and livelihood realities.
111. Evers, Hans-Dieter; Purwaningrum, Farah (2013). Japanese Automobile Conglomerates in Indonesia: Knowledge Transfer within an Industrial Cluster in the Jakarta Metropolitan Area.
112. Waibel, Gabi; Benedikter, Simon (2013). The formation water user groups in a nexus of central directives and local administration in the Mekong Delta, Vietnam.
113. Ayaribilla Akudugu, Jonas; Laube, Wolfram (2013). Implementing Local Economic Development in Ghana: Multiple Actors and Rationalities.
114. Malek, Mohammad Abdul; Hossain, Md. Amzad; Saha, Ratnajit; Gatzweiler, Franz W. (2013). Mapping marginality hotspots and agricultural potentials in Bangladesh.
115. Siriwardane, Rapti; Winands, Sarah (2013). Between hope and hype: Traditional knowledge(s) held by marginal communities.
116. Nguyen, Thi Phuong Loan (2013). The Legal Framework of Vietnam’s Water Sector: Update 2013.
117. Shtaltovna, Anastasiya (2013). Knowledge gaps and rural development in Tajikistan. Agricultural advisory services as a panacea?
118. Van Assche, Kristof; Hornidge, Anna-Katharina; Shtaltovna, Anastasiya; Boboyorov, Hafiz (2013). Epistemic cultures, knowledge cultures and the transition of agricultural expertise. Rural development in Tajikistan, Uzbekistan and Georgia.
119. Schädler, Manuel; Gatzweiler, Franz W. (2013). Institutional Environments for Enabling Agricultural Technology Innovations: The role of Land Rights in Ethiopia, Ghana, India and Bangladesh.
120. Eguavo, Irit; Schulz, Karsten; de Wit, Sara; Weisser, Florian; Müller-Mahn, Detlef (2013). Political dimensions of climate change adaptation. Conceptual reflections and African examples.
121. Feuer, Hart Nadav; Hornidge, Anna-Katharina; Schetter, Conrad (2013). Rebuilding Knowledge. Opportunities and risks for higher education in post-conflict regions.
122. Dörendahl, Esther I. (2013). Boundary work and water resources. Towards improved management and research practice?
123. Baumüller, Heike (2013). Mobile Technology Trends and their Potential for Agricultural Development
124. Saravanan, V.S. (2013). “Blame it on the community, immunize the state and the international agencies.” An assessment of water supply and sanitation programs in India.

125. Ariff, Syamimi; Evers, Hans-Dieter; Ndah, Anthony Banyouko; Purwaningrum, Farah (2014). Governing Knowledge for Development: Knowledge Clusters in Brunei Darussalam and Malaysia.
126. Bao, Chao; Jia, Lili (2014). Residential fresh water demand in China. A panel data analysis.
127. Siriwardane, Rapti (2014). War, Migration and Modernity: The Micro-politics of the Hijab in Northeastern Sri Lanka.
128. Kirui, Oliver Kiptoo; Mirzabaev, Alisher (2014). Economics of Land Degradation in Eastern Africa.
129. Evers, Hans-Dieter (2014). Governing Maritime Space: The South China Sea as a Mediterranean Cultural Area.
130. Saravanan, V. S.; Mavalankar, D.; Kulkarni, S.; Nussbaum, S.; Weigelt, M. (2014). Metabolized-water breeding diseases in urban India: Socio-spatiality of water problems and health burden in Ahmedabad.
131. Zulfiqar, Ali; Mujeri, Mustafa K.; Badrun Nessa, Ahmed (2014). Extreme Poverty and Marginality in Bangladesh: Review of Extreme Poverty Focused Innovative Programmes.
132. Schwachula, Anna; Vila Seoane, Maximiliano; Hornidge, Anna-Katharina (2014). Science, technology and innovation in the context of development. An overview of concepts and corresponding policies recommended by international organizations.
133. Callo-Concha, Daniel (2014). Approaches to managing disturbance and change: Resilience, vulnerability and adaptability.
134. Mc Bain, Florence (2014). Health insurance and health environment: India's subsidized health insurance in a context of limited water and sanitation services.
135. Mirzabaev, Alisher; Guta, Dawit; Goedecke, Jann; Gaur, Varun; Börner, Jan; Virchow, Detlef; Denich, Manfred; von Braun, Joachim (2014). Bioenergy, Food Security and Poverty Reduction: Mitigating tradeoffs and promoting synergies along the Water-Energy-Food Security Nexus.
136. Iskandar, Deden Dinar; Gatzweiler, Franz (2014). An optimization model for technology adoption of marginalized smallholders: Theoretical support for matching technological and institutional innovations.
137. Bühler, Dorothee; Grote, Ulrike; Hartje, Rebecca; Ker, Bopha; Lam, Do Truong; Nguyen, Loc Duc; Nguyen, Trung Thanh; Tong, Kimsun (2015). Rural Livelihood Strategies in Cambodia: Evidence from a household survey in Stung Treng.
138. Amankwah, Kwadwo; Shtaltovna, Anastasiya; Kelboro, Girma; Hornidge, Anna-Katharina (2015). A Critical Review of the Follow-the-Innovation Approach: Stakeholder collaboration and agricultural innovation development.
139. Wiesmann, Doris; Biesalski, Hans Konrad; von Grebmer, Klaus; Bernstein, Jill (2015). Methodological review and revision of the Global Hunger Index.
140. Eguavo, Irit; Wahren, Julia (2015). Climate change adaptation in Burkina Faso: aid dependency and obstacles to political participation. Adaptation au changement climatique au Burkina Faso: la dépendance à l'aide et les obstacles à la participation politique.
141. Youkhana, Eva. Postponed to 2016 (147).
142. Von Braun, Joachim; Kalkuhl, Matthias (2015). International Science and Policy Interaction for Improved Food and Nutrition Security: toward an International Panel on Food and Nutrition (IPFN).
143. Mohr, Anna; Beuchelt, Tina; Schneider, Rafaël; Virchow, Detlef (2015). A rights-based food security principle for biomass sustainability standards and certification systems.
144. Husmann, Christine; von Braun, Joachim; Badiane, Ousmane; Akinbamijo, Yemi; Fatunbi, Oluwole Abiodun; Virchow, Detlef (2015). Tapping Potentials of Innovation for Food Security and Sustainable Agricultural Growth: An Africa-Wide Perspective.
145. Laube, Wolfram (2015). Changing Aspirations, Cultural Models of Success, and Social Mobility in Northern Ghana.
146. Narayanan, Sudha; Gerber, Nicolas (2016). Social Safety Nets for Food and Nutritional Security in India.

147. Youkhana, Eva (2016). Migrants' religious spaces and the power of Christian Saints – the Latin American Virgin of Cisne in Spain.
148. Grote, Ulrike; Neubacher, Frank (2016). Rural Crime in Developing Countries: Theoretical Framework, Empirical Findings, Research Needs.
149. Sharma, Rasadhika; Nguyen, Thanh Tung; Grote, Ulrike; Nguyen, Trung Thanh. Changing Livelihoods in Rural Cambodia: Evidence from panel household data in Stung Treng.
150. Kavegue, Afi; Eguavoen, Irit (2016). The experience and impact of urban floods and pollution in Ebo Town, Greater Banjul Area, in The Gambia.
151. Mbaye, Linguère Mously; Zimmermann, Klaus F. (2016). Natural Disasters and Human Mobility.
152. Gulati, Ashok; Manchanda, Stuti; Kacker, Rakesh (2016). Harvesting Solar Power in India.
153. Laube, Wolfram; Awo, Martha; Derbile, Emmanuel (2017). Smallholder Integration into the Global Shea Nut Commodity Chain in Northern Ghana. Promoting poverty reduction or continuing exploitation?
154. Attemene, Pauline; Eguavoen, Irit (2017). Effects of sustainability communication on environments and rural livelihoods.
155. Von Braun, Joachim; Kofol, Chiara (2017). Expanding Youth Employment in the Arab Region and Africa.
156. Beuchelt, Tina (2017). Buying green and social from abroad: Are biomass-focused voluntary sustainability standards useful for European public procurement?
157. Bekchanov, Maksud (2017). Potentials of Waste and Wastewater Resources Recovery and Re-use (RRR) Options for Improving Water, Energy and Nutrition Security.
158. Leta, Gerba; Kelboro, Girma; Stellmacher, Till; Hornidge, Anna-Katharina (2017). The agricultural extension system in Ethiopia: operational setup, challenges and opportunities.
159. Ganguly, Kavery; Gulati, Ashok; von Braun, Joachim (2017). Innovations spearheading the next transformations in India's agriculture.
160. Gebreselassie, Samuel; Haile Mekbib G.; Kalkuhl, Matthias (2017). The Wheat Sector in Ethiopia: Current Status and Key Challenges for Future Value Chain Development.
161. Jemal, Omarsherif Mohammed, Callo-Concha, Daniel (2017). Potential of Agroforestry for Food and Nutrition Security of Small-scale Farming Households.
162. Berga, Helen; Ringler, Claudia; Bryan, Elizabeth; El Didi, Hagar; Elnasikh Sara (2017). Addressing Transboundary Cooperation in the Eastern Nile through the Water-Energy-Food Nexus. Insights from an E-survey and Key Informant Interviews.
163. Bekchanov, Maksud (2017). Enabling Environment for Waste and Wastewater Recycling and Reuse Options in South Asia: the case of Sri Lanka.
164. Kirui, Oliver Kiptoo; Kozicka, Martha (2018). Vocational Education and Training for Farmers and Other Actors in the Agri-Food Value Chain in Africa.
165. Christinck, Anja; Rattunde, Fred; Kergna, Alpha; Mulinge, Wellington; Weltzien, Eva (2018). Identifying Options for the Development of Sustainable Seed Systems - Insights from Kenya and Mali.
166. Tambo, Justice A. (2018). Recognizing and rewarding farmers' creativity through contests: experiences and insights from four African countries.
167. von Braun, Joachim (2018). Innovations to Overcome the Increasingly Complex Problems of Hunger.
168. Bechanov, Maksud; Evia, Pablo (2018). Resources Recovery and Reuse in Sanitation and Wastewater Systems: Options and Investment Climate in South and Southeast Asian Countries.
169. Kirui, Oliver K.; von Braun, Joachim (2018). Mechanization in African Agriculture: A Continental Overview on Patterns and Dynamics.
170. Beuchelt, Tina; Sarah Nischalke (2018). Adding a gender lens in quantitative development research on food and non-food biomass production: A guide for sex-disaggregated data collection

171. Daum, Thomas (2018). Of Bulls and Bulbs: Aspirations and perceptions of rural youth in Zambia.
172. Salvatierra-Rojas, Ana; Torres-Toledo, Victor; Mrabet, Farah; Müller, Joachim (2018). Improving milk value chains through solar milk cooling.
173. Desalegn, Gashaw; Ali, Seid Nuru (2018). Review of the Impact of Productive Safety Net Program (PSNP) on Rural Welfare in Ethiopia.
174. Muli, Celestine; Gerber, Nicolas; Sakketa, Tekalign Gutu; Mirzabaev, Alisher (2018). Ecosystem tipping points due to variable water availability and cascading effects on food security in Sub-Saharan Africa.
175. Njiraini, Georgina; Ngigi, Marther; Baraké, Evelyn (2018). Women in African Agriculture: Integrating Women into Value Chains to Build a Stronger Sector.
176. Bekchanov, Maksud; Evia, Pablo; Hasan, Mohammad Monirul; Adhikari, Narayan; Gondhalekar, Daphne (2018). Institutional framework and financial arrangements for supporting the adoption of Resource Recovery Reuse technologies in South Asia.
177. Mirzabaev, Alisher; Njiraini, Georgina Wambui; Gebremariam, Gebrelibanos; Jourdain, Damien; Magaia, Emílio; Julio, Felita; Mosse, Gerivásia; Mutondo, João; Mungatana, Eric (2019). Transboundary Water Resources for People and Nature: Challenges and Opportunities in the Olifants River Basin.
178. Gupta, Anil; Shinde, Chintan; Dey, Anamika; Patel, Ramesh; Patel, Chetan; Kumar, Vipin; Patel, Mahesh (2019). Honey Bee Network in Africa: Co-creating a Grassroots Innovation Ecosystem in Africa.
179. Kabran, Estelle Gnankon; Eguavoén, Irit (2019). Ferry transportation in Abidjan: Establishment, operation and sustainability of a paratransit system.
180. Sakketa, Tekalign Gutu; von Braun, Joachim (2019). Labor-intensive public works programs in sub-Saharan Africa: Experiences and implications for employment policies.
181. Legesse, Ermias Engida; Srivastava, Amit; Kuhn, Arnim; Gaiser, Thomas (2019). Household income implications of improved fertilizer accessibility and lower use inefficiency: Long-term scenarios for Ethiopia.
182. Daum, Thomas; Capezzone, Filippo; Birner, Regina (2019). The forgotten agriculture-nutrition link: Estimating the energy requirements of different farming technologies in rural Zambia with time-use data.
183. Ganguly, Kavery; Gulati, Ashok; von Braun, Joachim (2019). Making Skill Development Aspirational: Indian Agriculture and Food Sector.
184. Gulati, Ashok; Juneja, Ritika (2019). Agricultural Credit System in India: Evolution, Effectiveness and Innovations.
185. Chaudhry, Rabia (2019). "An island of excellence?" How the Pakistan military reflects on its presence in the development sector.
186. Mai Le, Quyen; Kelboro, Girma (2019). When heritage goes ways apart: Heritagization and local involvement at the Complex of Monuments in Hue, Vietnam.
187. Eguavoén, Irit; Attemene, Pauline; Kouame, Fulgence; Konan, Eugène Kouadio; Madhy, Chérif Aidara; Gleisberg-Gerber, Katrin (2019). Dernier refuge ou presque d'opportunités? Démographie et conditions de vie à Adjahui-Coubé, une habitation spontanée à Abidjan.
188. Von Braun, Joachim (2019). AI and Robotics Implications for the Poor.
189. Daum, Thomas; Birner, Regina (2019). African agricultural mechanization Myths, realities and an emerging research agenda.
190. Wortmann-Kolundžija, Eli (2019). Empowering Smallholder Farmers through Farmer Organizations: Insights from Kenya and Burkina Faso.

## ZEF Development Studies

edited by  
Solvay Gerke and Hans-Dieter Evers

Center for Development Research (ZEF),  
University of Bonn

Shahjahan H. Bhuiyan  
*Benefits of Social Capital. Urban Solid Waste Management in Bangladesh*  
Vol. 1, 2005, 288 p., 19.90 EUR, br. ISBN 3-8258-8382-5

Veronika Fuest  
*Demand-oriented Community Water Supply in Ghana. Policies, Practices and Outcomes*  
Vol. 2, 2006, 160 p., 19.90 EUR, br. ISBN 3-8258-9669-2

Anna-Katharina Hornidge  
*Knowledge Society. Vision and Social Construction of Reality in Germany and Singapore*  
Vol. 3, 2007, 200 p., 19.90 EUR, br. ISBN 978-3-8258-0701-6

Wolfram Laube  
*Changing Natural Resource Regimes in Northern Ghana. Actors, Structures and Institutions*  
Vol. 4, 2007, 392 p., 34.90 EUR, br. ISBN 978-3-8258-0641-5

Lirong Liu  
*Wirtschaftliche Freiheit und Wachstum. Eine internationale vergleichende Studie*  
Vol. 5, 2007, 200 p., 19.90 EUR, br. ISBN 978-3-8258-0701-6

Phuc Xuan To  
*Forest Property in the Vietnamese Uplands. An Ethnography of Forest Relations in Three Dao Villages*  
Vol. 6, 2007, 296 p., 29.90 EUR, br. ISBN 978-3-8258-0773-3

Caleb R.L. Wall, Peter P. Mollinga (Eds.)  
*Fieldwork in Difficult Environments. Methodology as Boundary Work in Development Research*  
Vol. 7, 2008, 192 p., 19.90 EUR, br. ISBN 978-3-8258-1383-3

Solvay Gerke, Hans-Dieter Evers, Anna-K. Hornidge (Eds.)  
*The Straits of Malacca. Knowledge and Diversity*  
Vol. 8, 2008, 240 p., 29.90 EUR, br. ISBN 978-3-8258-1383-3

Caleb Wall  
*Argorods of Western Uzbekistan. Knowledge Control and Agriculture in Khorezm*  
Vol. 9, 2008, 384 p., 29.90 EUR, br. ISBN 978-3-8258-1426-7

Irit Eguavoen  
*The Political Ecology of Household Water in Northern Ghana*  
Vol. 10, 2008, 328 p., 34.90 EUR, br. ISBN 978-3-8258-1613-1

Charlotte van der Schaaf  
*Institutional Change and Irrigation Management in Burkina Faso. Flowing Structures and Concrete Struggles*  
Vol. 11, 2009, 344 p., 34.90 EUR, br. ISBN 978-3-8258-1624-7

Nayeem Sultana  
*The Bangladeshi Diaspora in Peninsular Malaysia. Organizational Structure, Survival Strategies and Networks*  
Vol. 12, 2009, 368 p., 34.90 EUR, br. ISBN 978-3-8258-1629-2

Peter P. Mollinga, Anjali Bhat, Saravanan V.S. (Eds.)  
*When Policy Meets Reality. Political Dynamics and the Practice of Integration in Water Resources Management Reform*  
Vol. 13, 2010, 216 p., 29.90 EUR, br., ISBN 978-3-643-10672-8

Irit Eguavoan, Wolfram Laube (Eds.)  
*Negotiating Local Governance. Natural Resources Management at the Interface of Communities and the State*  
Vol. 14, 2010, 248 p., 29.90 EUR, br., ISBN 978-3-643-10673-5

William Tsuma  
*Gold Mining in Ghana. Actors, Alliances and Power*  
Vol. 15, 2010, 256 p., 29.90 EUR, br., ISBN 978-3-643-10811-1

Thim Ly  
*Planning the Lower Mekong Basin: Social Intervention in the Se San River*  
Vol. 16, 2010, 240 p., 29.90 EUR, br., ISBN 978-3-643-10834-0

Tatjana Bauer  
*The Challenge of Knowledge Sharing - Practices of the Vietnamese Science Community in Ho Chi Minh City and the Mekong Delta*  
Vol. 17, 2011, 304 p., 29.90 EUR, br., ISBN 978-3-643-90121-7

Pham Cong Huu  
*Floods and Farmers - Politics, Economics and Environmental Impacts of Dyke Construction in the Mekong Delta / Vietnam*  
Vol. 18, 2012, 200 p., 29.90 EUR, br., ISBN 978-3-643-90167-5

Judith Ehlert  
*Beautiful Floods - Environmental Knowledge and Agrarian Change in the Mekong Delta, Vietnam*  
Vol. 19, 2012, 256 S., 29,90 EUR, br, ISBN 978-3-643-90195-8

Nadine Reis  
*Tracing and Making the State - Policy practices and domestic water supply in the Mekong Delta, Vietnam*  
Vol. 20, 2012, 272 S., 29.90 EUR, br., ISBN 978-3-643-90196-5

Martha A. Awo  
*Marketing and Market Queens - A study of tomato farmers in the Upper East region of Ghana*  
Vol. 21, 2012, 192 S., 29.90 EUR, br., ISBN 978-3-643-90234-4

Asghar Tahmasebi  
*Pastoral Vulnerability to Socio-political and Climate Stresses - The Shahsevan of North Iran*  
Vol. 22, 2013, 192 S., 29.90 EUR, br., ISBN 978-3-643-90357-0

Anastasiya Shtaltovna  
*Servicing Transformation - Agricultural Service Organisations and Agrarian Change in Post-Soviet Uzbekistan*  
Vol. 23, 2013, 216 S., 29.90 EUR, br., ISBN 978-3-643-90358-7

Hafiz Boboyorov  
*Collective Identities and Patronage Networks in Southern Tajikistan*  
Vol. 24, 2013, 304 S., 34.90 EUR, br., ISBN 978-3-643-90382-2

Simon Benedikter  
*The Vietnamese Hydrocracy and the Mekong Delta. Water Resources Development from State Socialism to Bureaucratic Capitalism*  
Vol. 25, 2014, 330 S., 39.90 EUR, br., ISBN 978-3-643-90437-9

Sven Genschick  
*Aqua-`culture`. Socio-cultural peculiarities, practical senses, and missing sustainability in Pangasius aquaculture in the Mekong Delta, Vietnam.*  
Vol. 26, 2014, 262 S., 29.90 EUR, br., ISBN 978-3-643-90485-0

Farah Purwaningrum  
*Knowledge Governance in an Industrial Cluster. The Collaboration between Academia-Industry-Government in Indonesia.*  
Vol. 27, 2014, 296 S., 39.90 EUR, br., ISBN 978-3-643-90508-6

Panagiota Kotsila  
*Socio-political and Cultural Determinants of  
Diarrheal Disease in the Mekong Delta.  
From Discourse to Incidence*  
Vol. 28, 2014, 376 S., 39.90 EUR, br., ISBN 978-  
3-643-90562-8

Huynh Thi Phuong Linh  
*State-Society Interaction in Vietnam.  
The Everyday Dialogue of Local Irrigation  
Management in the Mekong Delta*  
Vol. 29, 2016, 304 S., 39.90 EUR, br., ISBN 978-  
3-643-90719-6

Siwei Tan  
*Space and Environment in the Industrialising  
Mekong Delta.  
A socio-spatial analysis of wastewater  
management in Vietnam*  
Vol. 30, 2016, 240 S., 29.90 EUR, br., ISBN 978-  
3-643-90746-2

<http://www.lit-verlag.de/reihe/zef>





**zef**

Center for  
Development Research  
University of Bonn

# Working Paper Series

Authors: Eli Wortmann-Kolundžija  
Contacts: [Eli.Wortmann-Kolundzija@admin.uni-giessen.de](mailto:Eli.Wortmann-Kolundzija@admin.uni-giessen.de)  
Photo: Eli Wortmann-Kolundžija

Published by:  
Zentrum für Entwicklungsforschung (ZEF)  
Center for Development Research  
Genscherallee 3  
D – 53113 Bonn  
Germany  
Phone: +49-228-73-1861  
Fax: +49-228-73-1869  
E-Mail: [presse.zef@uni-bonn.de](mailto:presse.zef@uni-bonn.de)  
[www.zef.de](http://www.zef.de)