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Willi Kampmann and Oliver K. Kirui

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Authors' addresses

Mr. Willi Kampmann
Friedrichallee 29 53173 Bonn, Germany
E-mail: willi-kampmann@t-online.de

Dr. Oliver K. Kirui
Center for Development Research (ZEF), University of Bonn,
Genscherallee 3 53113 Bonn, Germany
Tel. 0049 (0)228-73 4909, Fax 0228-731972
E-mail: okirui@uni-bonn.de
www.zef.de

Role of Farmers' Organizations in Agricultural Transformation in Africa

Overview of Continental, Regional, and Selected National Level Organizations

Willi Kampmann and Oliver K. Kirui

Abstract

This study analyzes the critical role played by farmers' organizations (FOs) in transforming agriculture in Africa. Specifically, it provides an overview of the state of continental and regional FOs in Africa. It also uses three-country (Senegal, Uganda and Zambia) case studies to discuss the structure, functioning, objectives, and financing of the FOs in these selected countries. Findings show that the FOs in the three case study countries are more or less well-structured. The national-level (umbrella) FOs are linked to the local-level substructures. However, membership in these FOs is voluntary and a sizeable majority of small-scale producers is yet to be part of the organized FOs. The umbrella organizations represent just about 2.5 million, 2 million, and 550,000 (equivalent to about 30%, 10.9% and 6.4%) small-scale farmers in Senegal, Uganda, and Zambia, respectively. Evidence from the continental, regional and the three country case studies suggests that many FOs face capacity and financial constraints. Nearly all FOs are dependent on external resources. The FOs generate meagre proportion of their finances from members – just about 5% of the annual budget. Programs and incentives to rally members to contribute towards the FOs would be timely. Some viable ways of raising revenue may include strengthening of farmer-driven cooperatives, transfer of knowledge, innovation and training of members, and creating value addition through processing of agricultural produce. The evolving agricultural policies have now seen FOs assuming the roles previously played by governments, such as agricultural education, marketing of produce, and provision and distribution of farm inputs. However, many of these FOs are not equipped to do so because of limited skills, weak organizational capacity, and severe resource restraints. In the end, FOs are undermined by attempts to take on too many roles and taking on over-ambitious objectives and providing public goods. In order to move agriculture to the next level, the existing FOs require energizing, first through building the capacity of the existing leaders, increasing the membership base and their financial contribution to support the operations of the organizations, and by creating opportunities for the FOs to engage policy makers on a regular basis. Governments should also give FOs the right to sit in all decision-making bodies examining agricultural, food and rural development issues. Financial support and funding from donors should be merited and channeled to accountable organizations, and should expand its focus to include institutional development that would strengthen the FOs rather than only supporting micro-projects. There is also need to improve linkages and coordination among the various projects and programs supported by donor funding.

Keywords: Farmers' organizations, smallholders, collective action, agricultural transformation, Africa

JEL codes: Q13; O13; O17; J51

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Table of contents

1 Introduction

The majority of the population (53%) in Sub-Saharan Africa (SSA) is employed in agriculture (ILO, 2020). Furthermore, agriculture remains an important contributor to the GDP for most countries (average of 15% for SSA) and smallholder farms constitute approximately 80% of all farms in SSA (AGRA, 2019; World Bank, 2019). Thus, farmers can potentially drive policy changes for a prosperous agricultural sector. To achieve this, they will have to create an effective and united voice through their respective farmers' organizations (FOs). FOs have a unique and important role to play in the agricultural transformation in Africa, especially by promoting collective action among farmers and by giving them a political voice. The basic mission of FOs is to represent farmers, in order to ensure their participation in the formulation and implementation of policies and agricultural development actions.

FOs can be defined as formal or informal (registered or unregistered) membership-based collective action groups serving members who receive part or their entire livelihood from agriculture (crops, livestock, fisheries and/or other rural activities) (MasterCard Foundation, 2020). More often than not, FOs refer to farmers' associations (unions) at the local, regional or national levels (Bonnal, 2017). They aim to improve their members' livelihoods by facilitating access to information, markets, inputs, and advocacy. There are various types of FOs such as general FOs, commodity-oriented organizations (such as farmer marketing organizations (FMOs)), organizations that focus on specific sub-groups of farmers (youth, women), umbrella organizations of cooperatives, and regional organizations (NEPAD, 2014).

Conceptually, FOs are essential institutions that have potential to foster farmer empowerment, improve food security, and aid in poverty alleviation and advancement of farmers and the rural poor through several mechanisms (Penunia, 2011; Ma & Abdulai, 2016). FOs can enable access to resources and capital though increasing the quality and quantity of production as well as to local, national and international markets (FAO, 2017; Herbel et al., 2012; Arias et al., 2013). They can also facilitate the organization maximizing the outreach to others through exchange, networking and lobbying, advocacy and meetings (Wortmann-Kolundzija, 2019). By organizing, farmers can access information needed to improve production, add value, market their commodities and develop effective linkages with input agencies, such as financial service providers, as well as output markets (Arias et al., 2013, FAO, 2017; Borsellino et al., 2020). FOs can help farmers gain skills, access inputs, form enterprises, and process and market their products more effectively to generate higher incomes (Meemken & Bellemare, 2020; Kamara et al., 2019; Sinyolo & Mudhara, 2018a; 2018b; Ram et al., 2017; CRS & MEAS, 2015). Furthermore, FOs can achieve economies of scale, thereby lowering costs and facilitating the processing and marketing of commodities for individual farmers (Pingali et al., 2019; Poole & Frece, 2010; Pingali et al., 2005).

Despite the significant potential role that FOs can play in the agricultural transformation, there is a considerable knowledge gap regarding the extent to which FOs in Africa play this role. The main agricultural actors across Africa are poorly and weakly organized (FAO, 2017; Penunia, 2011). Available statistics show that the number of farmers enrolled in various FOs (in Kenya and Burkina Faso) that constitute the umbrella organizations is small (Wortmann-Kolundzija, 2019). The capacity of the existing organizations remains limited and weak (Zimmermann et al., 2009). Moreover, FOs in most countries in Africa have not effectively engaged in the design of agricultural policies – unlike elsewhere in Europe, North America and Asia where FOs are widely respected and recognized partners in the policy making process (Vorley et al., 2012; Davidova & Thomson, 2013; Wolfenson, 2013; FAO, 2017). The purpose of this study is to provide an overview about the state of FOs in Africa. The key issues highlighted include:

(i) An overview and the structural relationship of the continental and regional umbrella FOs in Africa.

(ii) Case studies of FOs in three countries (Senegal, Uganda and Zambia). The three-country (Senegal, Uganda and Zambia) case studies provide detailed answers to the following research

questions: (a) How are farmers organized (that is, the typology, memberships and structure of the FOs from local to national level)? (b) What are the objectives and functions of the FOs (that is, how effective are FOs in representation, service provision and political lobbying/policy influence)? (c) How are FOs financed (that is, role of membership fees versus donor contributions)?

(iii) Propose some areas of actions and strategies for empowering FOs in Africa.

The rest of this study is organized as follows: Chapter 2 provides a detailed conceptual framework that describes the different functions that FOs may fulfill as well as identify some of the factors that are conducive to their success. Chapter 3 gives an overview of the continental and regional umbrella FOs in Africa. Chapter 4 highlights the approach for selecting case study countries and for conducting expert interviews and Focused Group Discussions (FGDs) and elaborates the agricultural sector characteristics of the selected countries. Chapter 5 serves as an in-depth description of the structure, functioning, objectives, and the financing of FOs in the selected case studies (Senegal, Uganda and Zambia). Chapter 6 provides conclusions and implications of the study findings and proposes some areas of actions and strategies for empowering FOs in Africa.

2 Conceptual Framework

This section provides a conceptual framework that describes the different functions that FOs may fulfill as well as identify some of the factors that are conducive to the success of the various FOs. It begins by providing a general description of the role of lobbying in policy- and decision-making. It then identifies and describes the typology of FOs in Africa and discusses the role of FOs for rural development.

2.1 The role of lobbying in policy- and decision-making

The engagement and participation of citizens in policy making and public service design is expected and guaranteed by law in many democratic societies. In principle, there are two forms of participation (Holmes, 2011). First, all citizens have the right to vote. This is the fundamental and basic activity of participation of every citizen. Free, fair, and independent elections aim to provide the citizens the right to influence the direction of policies for the election term. However, via the right to vote, citizens delegate the details of designing various policies to the elected officials and governments for a given legislative term. In this regard, the right to vote delegates the citizens' direct influence on policy design of specific issues to their elected representatives. Second, a principal instrument of participation is advocacy via associations or interest groups on specific subjects. Interest groups comply with the proper functioning of political systems.

Associations can be defined as schools of democracy that bundle and divide interests and offer citizens the opportunity of participation and enable self-governance of the society (Straßner, 2006). Organizing in groups enables members to better coordinate their opinions and concerns for specific interests and topics. Advocacy is an activity by an individual or group that aims to influence decisions within political, economic, and social systems.

According to the theory of pluralism, the importance of associations for a political system lies in the representation of social diversity (Straßner, 2006). Associations try to aggregate the individual and often divided interests of their members. By forming compromises, associations develop common political positions. In so doing, associations are filters which exclude extreme positions of individuals. Associations act as communicating pipes between the legislator, the administration and citizens affected by state decisions. It should be noted that the function of the associations is not an end in itself but has an important meaning for the democratic process (Straßner, 2006).

There exists also criticism against advocacy and interest groups. Often, they are blamed for having too much unbalanced power. However, it is still believed that modern nations are dependent on cooperation with social groups in the formulation and implementation of policies (Kleinfeld et al., 2007).

It is the task of policymakers to ensure procedural rules of fairness and transparency in advocacy as well as to balance competition between different interest groups. Mandatory registers for players in lobbying with detailed information about the organizations are a common instrument to guarantee transparency and openness. Advocacy and interest groups have to communicate facts and common positions of the individual groups and their members. This would inform the political class in making informed and balanced decisions in view of the whole society.

2.2 Typology and importance of FOs for rural development

As defined in the previous section, farmers' organization can be described as groups of farmers with special interests and concerns, organized according to a developed structure, formal membership status and functions for its members and a set of byelaws and rules (Bonnal, 2017). There are various types of FOs including: general FOs, commodity-oriented organizations, organizations that focus on specific sub-groups of farmers (such as youth, women), umbrella organizations of cooperatives and associations, and regional organizations (NEPAD, 2014). These FOs have rather different functions and roles but they, more generally, aim to improve the livelihoods of their members by facilitating access to information, markets, inputs, and advocacy.

FOs can also be categorized either as community-based resource-oriented FOs or as commodity-based market-oriented FOs (NEPAD, 2014). Community-based resource-oriented FOs are more often than not village-level cooperatives or associations dealing with inputs needed by members and resource owners to enhance the productivity of their farming activities (crops, livestock, and fisheries). These FOs are generally at a primary level of production, are small, have well-defined geographical areas, and are predominantly concerned with inputs. However, the client group is highly diversified in terms of crops and commodities. Commodity-based market-oriented FOs are designated as output-dominated organizations that specialize in a single commodity and opt for value-added products, which have expanded markets. This type of FOs is not confined to a specific community but can obtain members among regional growers of the commodity. They are generally not small and they occasionally invest with shared capital to acquire processing technology and professional work force, extension services, credit, collection of produce, processing, and marketing.

Occasionally, FOs (especially general-purpose FOs) have a decentralized structure. At the local (grassroots) level, FOs are composed of farmers from a village or collection of villages. These groups can be general-purpose groups or commodity-oriented (such as grain farming, livestock rearing, forestry, fishing, etc.). At the intermediate levels (such as district or region), the various grassroots groups congregate to form an assembly of farmers, referred to as district FOs. The various intermediate level organizations would ideally form regional/provincial level FOs. Ultimately, the provincial FOs would constitute the national-level FOs.

Politically, FOs are also considered powerful avenues for demanding and lobbying for farmers' interests (Straßner, 2006; Alley & Marangos, 2006; Scott, 2015). Indeed, one aim of FOs is to represent farmers' interests, in order to ensure their participation in the formulation and implementation of policies and agricultural development actions. Strong and vibrant FOs can play a vital role in informing and influencing agricultural policy and practice (Fulton & Sanderson, 2003). Properly organized FOs are effective rural institutions that can ensure the voices of farmers are heard and their demands met. They can also help reduce the adverse consequences of political and economic disenfranchisement. FOs strengthen the political power of farmers, by increasing the likelihood that policy makers and the public hear their needs and opinions (Penunia, 2011). This, in essences, implies that the government should give farmers' associations the right to sit in all decision-making bodies examining agricultural questions, from the local to the national level. It should also consult them before making crucial decisions (such as on equipment, programs, land development, and industry location) in order to protect farming land and natural resources.

Through FOs, farmers are able to perform economic activities (such as supporting production and marketing of goods). This role is usually performed in a cooperative setting or by a business wing of individual FOs. The activities carried out are varied based on the type of the FOs and may include: purchase inputs, marketing of produce and processing of produce (Bosc et al., 2001). Marketing-oriented FOs can assist their members in purchasing inputs and equipment, meeting quality standards and managing the drying, storage, grading, cleaning, processing, packing, branding, collection and transportation of produce (Tolno et al., 2015). In this way, FOs provide a more reliable supply to buyers and sell larger quantities at higher prices. Organized farmers have greater bargaining power than

individual farmers (ibid). They are also able to negotiate better with other more powerful market players and thereby increase profits that accrue to farmers rather than intermediaries and buyers (Ruttan, 1968; Levins, 2001; Abate, 2018; Shokoohi et al., 2019; Cseres, 2020). FOs can also support the provision of favorable social norms (such as through the mechanism of improved relevant market knowledge and behavior) (FAO & IFAD, 2019; FAO et al., 2019; Borsellino et al., 2020).

Besides economic activities, through FOs members are able to obtain services and share information. The services may be technical in nature – such as agricultural advice and training related to the economic activities performed by the members of the FOs. Through FOs, farmers may get better access to the latest market information and production technology (such as mechanization). FOs can analyze farmers' problems and, by building interactions between research and extension, they can better serve its members. Indeed, more services can be made available through a single point (in the form of FOs) than directly to many individual farmers.

FOs are also important for social functions and the delivery of public goods and services (such as capacity building, literacy, extension, health, water, and natural resources management). FOs could act as pressure groups and demand these public goods and services or respond to external solicitations for their delivery. FOs are an additional source of social capital; thus, they contribute to influencing social norms and beliefs by shaping the network people work in, and by enabling trust between them (Fukuyama, 1999; Ostrom, 2000; Ackerman, 2004). Consequently, FOs have the potential to target social dilemmas by enabling access to resources and by developing incentives and shared social norms which create rule-based trust (Keys et al., 2017; Brune & Bossert, 2009). Incentives, norms, and beliefs can be seen as important levers of change that can support the reshaping of the policy (Ostrom, 2000; Ackerman, 2004; World Bank, 2015).

Empirical evidence shows that membership in farmer cooperatives in China increased productivity on average by about 5.4%, increased net returns by 6.1%, and improved income by 4.7% (Ma & Abdulai, 2016). These effects tend to be larger for small-scale farmers than for medium- and large-scale farmers. In Nepal, commodity-specific (tomato) FOs increased productivity by about 27% (Mishra et al., 2018). Other similar studies find an increase in yield of tomatoes (in India) by about 64% (Eaton & Shepard, 2001) and almost double productivity of maize farmers in Ghana (Ragasa et al., 2018). Another study in Ethiopia shows that farmers enrolled in collective action groups (for about 5 years) reported an average of 10% increase in crop and livestock productivity. These farmers received extension messages in the group and their participation in the association enhanced their adoption and use of agricultural technologies. In Nigeria, belonging to a producer organization increased the probability and intensity of adopting improved dual-purpose cowpea varieties by 14% (Kristjanson et al., 2015; Shiferaw & Muricho, 2011). Similarly, membership in FOs doubled the probability of adopting fodder bank technology for improving livestock production in Zimbabwe (Jera & Ajayi, 2008) while cooperative membership significantly increased the adoption of improved cassava varieties by about 22% in Nigeria (Wossen et al., 2017). A national survey in Mozambique showed that membership in FOs enhanced the welfare of smallholders – it increased the marketed surplus (by 25%), the value of agricultural production (by 18%) and the total income (by 15%) (Bachke, 2019). A study in Ethiopia shows that farmer cooperatives facilitate the technical trainings regarding productivity and quality improvement, and organize farm management trainings, which have a positive impact on yield as well as on quality of malt barley (Windsperger et al., 2019). The improvement in quality also led to an increase in price premiums received by cooperative members by up to 20% (Windsperger et al., 2019).

It should be noted, however, that enrolment in a farmers' group does not automatically increase productivity, income or prices received for produce. As Fischer and Qaim (2011) show, the objectives and the activities offered by FOs must be chosen wisely. Significant increase in productivity and income is possible when the relevant services (such as collective marketing, actions to improve quality and efficiency along the supply chain, efficient information flows, etc.) are offered (Fischer & Qaim, 2011; 2012). FOs should also carefully decide which activities might be most helpful to increase the

well-being of their members and the incentives considered most appealing to engage their membership in (Verhofstadt & Maertens, 2014; 2015).

Previous studies have also shown that the impact of FOs on their members could be influenced by different structural components (such as the type of organization, field of action, availability of resources, and revenue distribution and remuneration systems) (Francesconi & Wouterse, 2014; McInerney, 2014; Vanni, 2014). For example, production cooperatives seem to be less efficient in increasing the gains for their members as compared to land and marketing cooperatives, and maize cooperatives seem to perform more efficiently and with higher returns than horticulture cooperatives (Verhofstadt & Maertens, 2014; 2015). Linking the FOs to the market might only be meaningful if the individual members have access to natural and productive assets (Barham & Chitemi, 2009). Market access coupled with social capital can enable farmer groups to increase their participation within these markets. Barham and Chitemi (2009) further find that market-oriented trainings and interventions will fail if they target farmer groups whose members do not have access to resources. In the next section, we describe the state of FOs in Africa. We dedicate the section to continental and regional FOs.

3 FOs in Africa

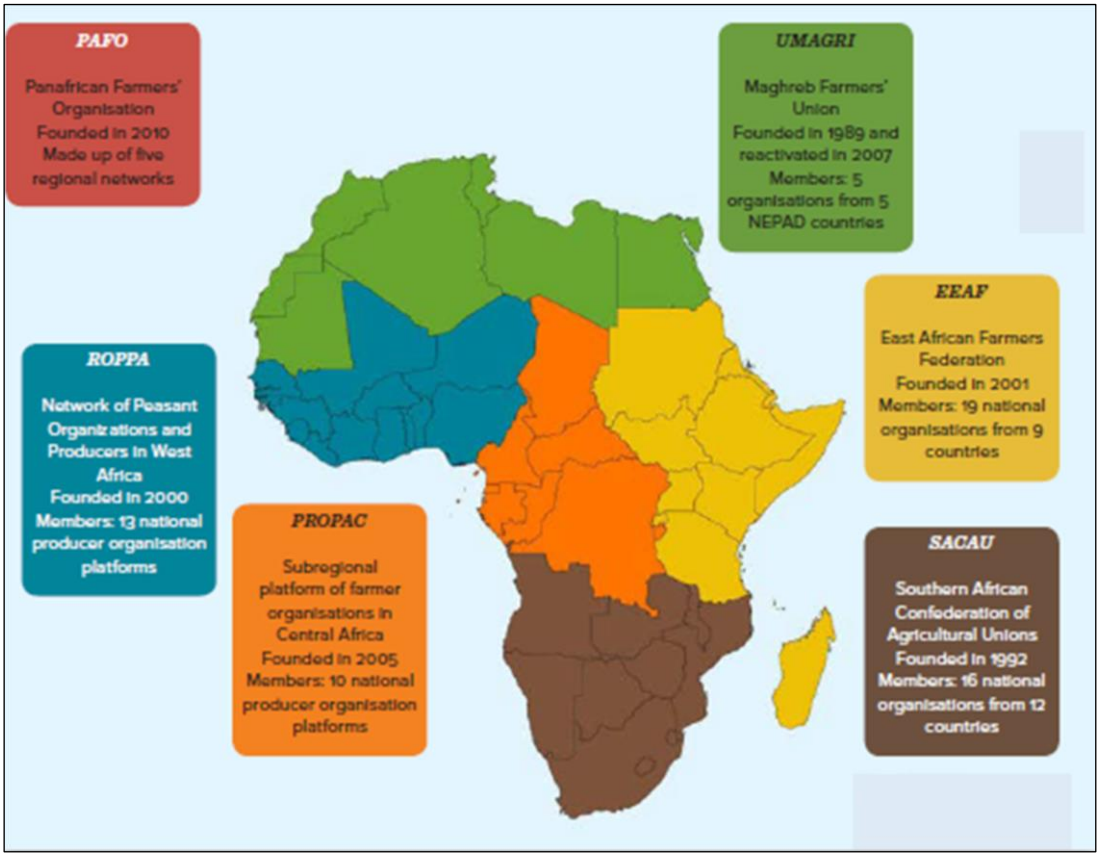
This section describes the continental and regional umbrella FOs in Africa. It thereby provides an overview of the objectives and the structural relationship between these two types of FOs.

3.1 An Africa-wide Farmers' Organization: Pan-African Farmers' Organization (PAFO)

PAFO is the continental network of FOs across Africa. Founded in November 2010, PAFO seeks to improve communication, collaboration, information and knowledge sharing among various stakeholders. The membership of PAFO consist of five regional FOs (Figure 1):

- East African Farmers Federation (EAFF),
- Platform Regionale des Organizations Paysannes d´Afrique Central (PROPAC),
- Résau des Organizations Paysannes et de Producteur de l´Afrique de l´Quest (ROPPA)
- Southern African Confederation of Agricultural Unions (SACAU), and
- Union Maghrébine des Agriculteur (UMAGRI).

Figure 1: Members of the Continental and Regional FOs in Africa



Source: adapted from NEPAD (2014) & SFOAP (2019).

In essence, PAFO can be referred to as Africa's first continent-wide farmers' organization that lobbies for bringing the voices of farmers and their engagement into Africa's growth and development agenda. PAFO emphasizes the need to organize farmers and agricultural producers and to effectively engage members in advocacy, and to promote their participation in the formulation and

implementation of continental agricultural and rural development policies. As a continental organization, PAFO was engaged with the African Union in the development of the African economic development program known as the New Partnership for Africa´s Development (NEPAD).

In the latest strategic plan (2016-2020, but now revised to start 2021-2025)[1], PAFO defines the strategic vision of the organization as well as its main objectives, as follows:

i. To represent FOs and African producers at the the continental and the international level;
ii. To defend the rights and social and economic interests of African farmers and producers and their organizations at continental and international levels;
iii. To promote solidarity and partnership between FOs and African producers;
iv. To build common points of view on the main challenges concerning access to food for the population, the development of modern and competitive agriculture, and the preservation of natural resources;
v. To share information, experiences and knowledge in all fields of agriculture and rural development;
vi. To contribute to the promotion of trade of agricultural products and African regional economic integration;
vii. To influence agricultural policies and strategies at continental and international levels for a better consideration of the interests of African farmers.

PAFO faces the challenging task of finding compromises in advocating and lobbying on behalf of farmers because of the varying background and political conditions across African countries. This also poses a challenge to unify all the regional organizations. Naerstad (2018) concurs that PAFO's role as a link for agricultural transformation is greatly weakened and challenged because of the differences in history, culture, political institutions, policies and agricultural practices among member countries. PAFO has to, therefore, walk a tight rope to be an inclusive voice.

Unlike bottom-up organizations established with a clear mandate from farmers, we find that PAFO was established top-down. The financial contribution from the member organizations (regional FOs) is severely inadequate and therefore, PAFO depends on donations from external sources (such as the FAO, IFAD, World Bank, European Commission) to run its operations (IFAD, 2019). Financial dependency on third party entities often implies following a specific agenda and priorities defined by the donors rather than by the farmers. This could further undermine the position of PAFO as a unique voice of farmers. By collaborating with the international partners and donors, PAFO also serves as a platform for project coordination and monitoring.

3.2 Regional African FOs

3.2.1 South African Confederation of Agricultural Unions (SACAU)

SACAU represents 17 national FOs from 12 countries in the southern African region with very diverse historical and political backgrounds. Members of SACAU include:

- Botswana Agricultural Union (BAU),
- Lesotho National Farmers' Union (LENAFU),
- Coalition Paysanne de Madagascar (CPM),
- Confederation des Agriculteurs Malagasy Madagascar (FEKRITAMA),
- National Farmers Union (UNAC) of Mozambique,
- Namibia Agricultural Union (NNFU),
- Seychelles Farmers' Association (SEYFA),

[1] http://pafo-africa.org. More details are also contained in the PAFO SFOAP Completion Report, 2019.

- Agri South Africa (AgriSA),
- African Farmers' Association of South Africa (AFASA),
- Swaziland National Agricultural Union (SNAU),
- Agricultural Council of Tanzania (ACT),
- Zambia National Farmers´ Union (ZNFU),
- Commercial Farmers´ Union of Zimbabwe (CFU) and Zimbabwe Farmers´ Union (ZFU).

Three pillars underpin SACAU's Strategic Framework – approved by its members in 2014 – namely: policy advocacy on matters of common interest to southern African farmers, strengthening of FOs, and provision of agriculture-related information to members and stakeholders (SACAU SFOAP Completion Report, 2019). The strategy is translated into actions through its operation plan that was approved by the board in 2015. These strategic pillars are operationalized through the following strategic goals:

1. To promote the creation of an enabling environment that allows farmers and other players in agricultural value chains to establish, maintain and maximize their productive potential;
2. To support the establishment and development of strong credible and sustainable FOs that provide effective and efficient support services to farmers and other stakeholders;
3. To support strategic decision making by FOs, and to provide general information to other stakeholders

SACAU works with partners and donors to implement its strategy. SACAU receives financial and technical support from numerous partners and donors, including: the Alliance for a Green Revolution in Africa (AGRA), the Bill and Melinda Gates Foundation (BMGF) and the Common Market for Eastern and Southern Africa (COMESA). Other donors are the European Commission, the International Fund for Agricultural Development (IFAD), the Norwegian Agency for Development Cooperation (NORAD), the Southern Africa Trust (SAT), the Technical Center for Agricultural and Rural Cooperation (CTA), and We Effect (Swedish Co-operatives).

Our discussions with the SACAU secretary general[2] pointed to the fact that, just like PAFO, SACAU does not have significant financial resources of its own besides small amounts collected from member organizations, thus, donor-funding remains the main source of their finances.

3.2.2 Eastern Africa Farmers Federation (EAFF)

The Eastern African Farmers Federation was founded in 2000 with the vision of ensuring a prosperous and cohesive farming community in Eastern Africa. It seeks to lobby and advocate for the interests of farmers and to build their capacities. The formation of EAFF was based on the conviction that the issues faced by farmers, though numerous, may be similar at various levels (national, regional, continental, and global). EAFF prides itself as an innovative platform to deliver economic services to farmers in East Africa with financial support from a variety of donors. EAFF lobbies for projects on behalf of its member organizations. The main goal of EAFF is to support smallholder farmers by increasing their access to markets, financial services and extension services. EAFF is also financially dependent on funding from international organizations and partners such as AGRA, CTA, AGRITERRA, IFAD, USAID, Swiss Development Cooperation (SDC), and The European Centre for Development Policy and Management (ECDPM). EAFF represents about 20 million farmers in the following countries:

- Burundi – Collectif Des Association Paysannes Pour L'auto Development (CAPAD)
- Djibouti – Agro-Pastoral Association Djibouti
- Democratic Republic of Congo – Federation Des Organization Des Producteurs Agricoles du Congo (FOPAC)

[2] Phone interview with Ismael Sunga, Secretary General of SACAU, on September 15, 2019.

- Eritrea – National Confederation of Eritrea Workers (NCEW)
- Ethiopia – Oromia Coffee Farmers' Cooperative Union and Oromia pastoralists Association
- Kenya – Kenya National Federation of Agricultural producers (KENAFF) and Kenya Livestock Producers Association (KLPA)
- Rwanda – INGABO, IMBARAGA and National Cooperatives Confederation of Rwanda
- Tanzania – Mtandao Wa Vikundi vya Wakulima (MVIWATA)-National networks of farmers groups in Tanzania, Tanzania Federation of Cooperatives (TFC) and Agricultural Council of Tanzania (ACT)
- Uganda – Uganda National Farmers Federation Enterprise (UNFFE) and Uganda Cooperative Alliance (UCA)

3.2.3 Union Maghrébine des Agriculteurs (UMNAGRI)

The North African regional farmers' organization was founded in 1989. Initially, UMNAGRI was rather a passive organization. However, it started to actively engage farmers throughout the region in 2007 and later became a founding member of PAFO in 2010.[3] Members of UMNAGRI include:

- Union Nationale des Paysans Algériens (UNPA),
- Central Agricultural Cooperative Union Egypt (CACU),
- Syndicat Général des Agriculteurs et Eleveurs Libyens (SGAEL),
- Fédération Mauritanienne de l'Agriculture (FMA),
- Union Marocaine de l'Agriculture (UMA),
- Sudanese Farmers and Pastoralists Union (SFGU),
- Union Tunisienne de l'Agriculture et de la Pêche (UTAP).

The union sets and manages its tasks, objectives and regulations through the general assembly that convenes every three years. Besides representing its members in regional and international organizations, UMNAGRI is also at the forefront in many areas of engagement. These include facilitating the exchange of skills and human resources among members, encouraging scientific research and employment opportunities in agriculture, promoting investment between member countries, facilitating communication and exchange of successful experiences, and the sharing of skills, information and technology among members. UMNAGRI is partially financed via membership fees, but like the other regional FOs, most of its resources come from international organizations and donors.

3.2.4 Résau des Organizations Paysannes et de Producteurs de l´Afrique de l´Ouest (ROPPA)

ROPPA was founded in 2000 as a network of smallholder FOs among West African countries. The network promotes and defends sustainable and competitive farming practices for the advancement of agricultural production, builds solidarity between small producers in the region, and encourages the implementation of appropriate agriculture and rural development policies and programs. Members of ROPPA include:

- Plateforme des Organizations Paysannes of Benin,
- Conferation Paysannes (CPBF) of Burkina Faso
- Association Nationale des Organizations Professionelles Agricoles (ANOPACI) of Cote d´Ivoire;
- National Coordinating of Farmers Associations (NACOFAG) of the Gambia,
- Framers Organization Network (FONG) of Ghana,

[3] Key informant interview and UMNAGRI website (found at: http://umnagri.net/?page_id=2006&lang=en).

- Confederation Nationale des Organizations Paysannes (CNOP) of Guinea,
- Cadre National de Concertation des Organizations Paysannes et Producteurs Agricoles (QNCOCPA) of Guinea-Bissau,
- Farmers Union Network (FNN) of Liberia,
- Coordination Nationale des Organizations Paysannes (CNOP) of Mali,
- Platforme Paysannes (PFPN) of Niger,
- Council National de Concertation des Ruraux (CNCR) of Senegal,
- National Association of Farmers (NFAFSL) of Sierra Leone,
- Coordination Togolaise des Organizations Paysannes et de Producteurs Agricoles (CTOP) of Togo.

ROPPA seeks to build a West African farmers' movement representing all the components of rural work. ROPPA pays special attention to women and youth. For instance, since 2003, a special women committee has been in operation while the establishment of a youth committee is currently being considered. ROPPA's strategic plan is based on four priority areas (ROPPA, 2014).

1. Capacity-building of FOs to provide technical and economic services to members and promoting and supporting their economic initiatives;
2. Strengthening of learning and experience accumulated since 2000 in advocacy;
3. Lobbying in order to contribute to the implementation of policies and intervention strategies more favorable to sustainable family farming;
4. Consolidation of the network organization and governance to build sustainable institutional credibility, and that of its national platforms;
5. Development of technical teams for high-level implementation of ROPPA's vision and mission.

3.2.5 Plateforme Regionale des Organizations Paysannes d´Afrique Central (PROPAC)

PROPAC is a relatively young organization founded in 2005 to organize and represent Central African farmers. The members constituting PROPAC include:

- Concertation Nationale des OrganizationsPaysannes du Cameroun (CNOP),
- Conseil National de Concertations des Produteurs Ruraux du Tchad (CNCPRT),
- Concertation National des Organizations Paysannes et des Producteurs Agricoles du Congo,
- Confederation Paysannes du Congo,
- Concertation Nationale des Organizations Paysannes d´Afrique Central,
- Concertation National des Organizations de Producteurs Agricoles of Gabon,
- Federation National des Producteurs Agricoles Sao Tomé et Principe, and
- Confederation des Organizations des Paysannes et Cooperative Agricole of Angola.

Like the continental and the other regional African FOs, PROPAC is also financially dependent on several partners and donors. These include Affaires Mondiales, Relations Internationales et Francophonie Québec, Foundation Louise Grenier, Foundation Internationales Roncalli, World Bank, FIDA, Banque Interamericaine de Development (IDB), Union European, Fonds Solidarité Sud, and Fondation Serge Marcil. Other donors include Inter Church Organization for Development Cooperation (ICCO), La Terre de chez nous, Federation de L´UPA Chaudiére Appalaches (UPA), Les eleveurs du Voilaille du Quebec, Aliments du Quebec, Les Producteurs de lait du Quebec, Les producteurs de pommes Quebec, Les eleveurs de porc du Quebec, and L´Union des Producteurs Agricoles.

3.3 Support to Farmers´ Organizations in Africa Program (SFOAP)

Besides PAFO and the regional FOs, the African Union established a block-funding platform named SFOAP to support FOs across Africa in 2005. A detailed description of SFOAP is presented in Box 1.

Box 1: Support to Farmers´ Organizations in Africa Program (SFOAP)

Support to Farmers´ Organizations in Africa Program

The objective of the SFOAP is to facilitate linkages between the FOs and the NEPAD/CAADP network. With the support of the SFOAP, PAFO and the regional African FOs are supported to participate in international and continental advocacy, lobbying and negotiation meetings on agriculture and rural development. This is instrumental in increasing the FOs visibility among development partners and in boosting their recognition as an important player in the policy arena. The SFOAP also aims at strengthening and consolidating the institutional capacities of FOs and giving them a bigger voice in agricultural policies and programs (IFAD, 2017).

The SFOAP is financially supported by the European Union, Agence Francoise de Development (AFC), Schweizerische Eidgenossenschaft – Direction du Dévelopment et de la, Coopération (DDC), and IFAD. The funding sourced within the SFOAP is channeled through PAFO and the regional FOs to national FOs. From 2013-2018, the donor community financed the SFOAP to the tune of about 20 million Euros and reached about 52 million farmers in 49 countries via the continental, regional and 68 national FOs. The support was channeled into several programs such as institutional and organizational strengthening, policy engagement, provision of economic services, support to pan-African activities, and program coordination and monitoring.

The programs and projects financed through the SFOAP platform are largely technical advice on production related issues and market access and services. Less attention has so far been given to the policy and political lobbying dimensions. Farmers' participation as well as their influence on policymaking process remain weak. Perhaps one of the main reasons for the weak lobbying and policy influence of the FOs is due to the absence of reliable national political frameworks for engaging FOs. There is still a need for capacity building with a bottom-up approach to strengthen the various FOs so that they can vigorously contribute to agricultural development across the continent (Cees Blokland, AGRITERRA, Task Force Rural Africa, 2019).

Source: Authors' compilation.

3.4 World Farmers´ Organization (WFO)

The World Farmers' Organization (WFO) is a voluntary member-based association, bringing together national FOs and agricultural cooperatives from all over the world. WFO´s strength lies in its membership that is geographically organized in six continental constituencies: Europe, Asia, Oceania, Africa, Latin America, and North America. Today, WFO is composed of 69 national farmers´ organizations from 54 Countries. Among the case study countries, Uganda and Zambia are members of WFO through their respective national FOs. Financially, the WFO is fully supported by membership fees.

The WFO seeks to be the voice of millions of farmers and to represent and advocate on their behalf on all relevant international processes. It plays a leading role on global dialogues touching on issues such as agriculture, nutrition and sustainability, climate change, food security, disasters and risks mitigation, animal health, and international trade. The WFO is also considered a voice of farmers amongst international organizations (United Nations, FAO, WTO, World Meteorological Organization)

dealing with global issues affecting farmers. The WFO is at the forefront in seeking for the conditions, policies and programs that can improve the economic environment and livelihood of producers and rural communities while strengthening the contribution of agriculture in tackling global challenges.

The WFO provides a platform for FOs from developing countries to participate in international dialogues and engage with international organizations. This gives them the unique opportunity to address prominently the specific agricultural issues of concern in developing countries. The participation of farmers' associations from developing countries in relevant WFO events is made possible by financial support from farmers' associations from developed countries.

Box 2: La Via Campesina[4]

La Via Campesina

Besides the World Farmers' Federation WFO, La Via Campesina works at the global level. La via Campesina is one of the largest international social movements. “La Via Campesina brings together millions of peasants, small and medium size farmers, landless people, rural women and youth, indigenous people, migrants and agricultural workers from around the world. Built on a strong sense of unity, solidarity between these groups, it defends peasant agriculture for food sovereignty as a way to promote social justice and dignity and strongly opposes corporate driven agriculture that destroys social relations and nature” (La Via Campesina, n.d). La Via Campesina is mainly financed by donations and grants from international organizations.

The WFO is committed to the development of sustainable, entrepreneurial agriculture, which also takes into account the special needs of smallholder farmers. In the area of fair and balanced agricultural trade, the WFO also sees benefits for agriculture. In this respect, the WFO advocates fair rules that guarantee the sovereignty of national food production. In contrast, La Via Campesina is strictly against globalization, including in agricultural trade and bilateral trade agreements. Furthermore, La Via Campesina fights against agro-industrial development and promotes organic farming. Senegal is a member of this global body (through its membership in ROPPA).

Source: Authors’ compilation.

[4] www.campesina.com

4 Case Studies of Selected National FOs

This section provides detailed description of FOs in three countries – Senegal, Uganda, and Zambia – and begins by outlining the criteria for the case study selection. It is then followed by a brief description of the agricultural sector characteristics. The section thereafter presents and compares diverse matters relating to FOs in the three selected countries. It then provides a systematic description of national-level umbrella organizations and their structural relationship with regional and local-level organizations. The section finally describes membership, structure, objectives, financing and partnerships of the selected FOs. We complement primary data (key informant interviews and focused group discussions) with online search of relevant literature as discussed below.

4.1 Criteria for case study selection

Three case studies (Senegal, Uganda, and Zambia) were selected to provide evidence on the functioning of the FOs in the context of developing countries – and in line with the PARI[5] research agenda. The selection of the three countries followed the logical criteria outlined below.

1. Countries with multiple layers (vertical) of FOs – national, regional, district, and local levels – a review of the state of FOs across Africa;
2. Countries with a variety of stakeholder involvement (farmers, government, donors, international organizations);
3. The selection was also aimed at capturing a wide spectrum of variations across SSA (e.g. mix of anglophone and francophone countries);
4. Logistic, time, and budget considerations – countries where PARI has active networks;
5. Gender consideration – countries with active women and youth involvement (including in leadership) also informed the choice of countries.

Expert interviews through focused group discussions with representatives/officials of the following categories:

- National (umbrella), regional, and local FOs,
- Farmers from one of the local FOs (bottom-up approach),
- Special interest groups (commodity-based, women, youth FOs),
- Government ministry officials (agriculture, livestock, cooperatives),
- Other relevant stakeholders (e.g. research organizations, NGOs, private companies).

Table 1 provides the numbers of experts that were interviewed per country. The individuals selected were those directly responsible for the management of the affairs of the FOs. In their absence, the immediate assistant was selected for interview. The data and information collected included the following:

- Types and structure of existing FOs,
- Mechanisms through which FOs represent the interests of their members,
- Services provided to membership,
- Partnerships for strengthening FOs – existing partners and potential partners,
- Challenges faced by FOs and agricultural sector in general.

[5] Program of Accompanying Research for Agricultural Innovation (PARI) (www.research4agrinnovation.org).

Tab 1: Types and number of experts selected for key informant interviews

Category of participants	Number of interviewees in Senegal	Number of interviewees in Uganda	Number of interviewees in Zambia
National FOs	CNCR: 3 RESOP: 3	UNFFE: 4 UNYFA: 5 NUCAFE: 1	ZNFU: 2 NUSFAZ: 2 PAZ/DAZ: 2
National agricultural research organizations	ISRA: 3	NARO: 2	ZARI/IAPRI: 3
National farmers' cooperatives	UNCAS: 2	UCA: 3	ZCF: 2
Ministry of Agriculture and Livestock	4	4	4
Regional FOs	3	6	4
TOTAL (expert interviews)	**18**	**25**	**19**

(authors' compilation)

4.2 Brief overview of agricultural sector characteristics in some African countries

In this subsection, we expand our discussions to include several other African countries. Before delving into detailed descriptions of FOs in the three countries, it is of great interest to highlight some agricultural sector characteristics for a wider choice of countries. The countries included here are those whose data was available via online search.

Africa is a highly populous continent with most countries experiencing rather high population growth. While growth in other regions will slow significantly, SSA's population is projected to double by 2050, an expansion of nearly 10 times relative to 1960, from 227 million to 2.2 billion people (Suzuki, 2019). As a result, the share of SSA in the world's population is projected to grow from a low of just 7% in 1960, 14% in 2018, and ultimately to about 23% by 2050 (Ritchie & Roser, 2018). This implies that almost 1 in 4 people will reside in SSA by 2050.

Data from 2018 shows that even though urbanization is on the rise, the majority of people in Africa still reside in rural areas (Table 2). More than 80% of the people in Malawi and Ethiopia live in rural areas. Between 70 and 80% of the population in Burkina Faso (71%), Kenya (73%), and Uganda (77%) also live in rural areas. However, in Ghana and Côte d'Ivoire the proportion of people living in urban areas is growing at the same rate as the rural population. In several of these countries, approximately one third of the total GDP comes from agriculture. The highest shares of contribution of agricultural GDP are found in Kenya (35%), Ethiopia (34%), Tanzania (29%) and Burkina Faso (29%). Agriculture contributes more than 20% of the GDP in Benin (23%), Cote d'Ivoire (22%), Malawi (26%), Uganda (25%), and Ghana (20%).

SSA's countries host considerable amounts of arable land. Larger countries like Ethiopia and Tanzania can be characterized as more endowed nations with about 16.3 and 13.5 million hectares of arable land, respectively. Uganda and Cameroon have about 9 million ha and 7.5 million ha of arable land, respectively, while both Cote d'Ivoire and Ghana each have 7.4 million ha. As expected, smaller countries have a smaller amount of arable land. For example, Malawi has about 3.9 million ha which nevertheless represents a sizable proportion (40%) of its land mass. Despite these impressive figures, it is important to note that none of the countries has more than 1% of their agricultural land under irrigation (Table 2).

Tab 2: Agricultural sector characteristics in selected countries

Country	Benin	Burkina Faso	Cameroon	Cote d'Ivoire	Ethiopia	Ghana	Kenya	Malawi	Tanzania	Uganda	Zambia	Senegal
Population (million)	11.49	19.75	24.68	24.91	107.53	29.46	50.95	19.16	59.09	44.27	17.61	15.85
Rural (%)	53.23	71.26	44.22	49.67	79.69	44.59	73.44	83.29	66.95	76.80	57.02	54.27
Urban (%)	46.77	28.74	55.78	50.33	20.31	55.41	26.56	16.71	33.05	23.20	42.98	45.73
GDP (million US $)	9246.70	12322.9	34922.78	37353.28	80561.50	58996.78	79263.08	6303.29	53320.63	25995.03	25868.14	23578.08
GDP, PPP (current int'l $)	25441.4	35817.9	89538.34	95836.74	199759.0	129804.8	163632.0	22434.95	1401.70	80075.75	68933.60	57616.92
GDP per capita, PPP (int'l $)	2276.50	1866.16	3722.43	3944.75	1903.24	4501.85	3292.40	1204.75	2947.80	1868.18	4032.59	3535.6
% of GDP from Agri. (2017)	23.02	28.66	14.37	21.58	34.00	19.70	34.64	26.10	28.74	24.58	6.75	14.79
Cultivated arable land (cropland in mil ha) (2016) [1]	3.2	6.10	7.75	7.40	16.26	7.40	6.33	3.94	15.65	9.10	3.84	3.2
Arable land (% of land area)	23.94	21.93	13.12	9.12	15.12	20.66	10.19	40.31	15.24	34.41	5.11	16.6
Irrigated land (%)	0.39	-	-	-	0.42	0.16	0.05	0.60	-	0.07	-	0.7
Cereals ('000 ha)	-	-	-	-	3131.22	-	-	-	28.14	-	-	1327.53
Roots and tubers ('000 ha)	-	-	5.57	2.57	1177.41	0.03	2.41	-	1.09	-	-	-
Veg. & legumes ('000 ha)	-	-	-	-	1.76	-	0.42	-	2.66	-	-	-
Employment in Agri. ('000) [2]	1296 (2011)	1677 (2014)	4011 (2014)	4089 (2016)	25216 (2013)	2722 (2017) *	-	1398 (2012)	14400 (2014)	3759 (2017) *	680 (2017)	1177.5 (2017)
PROJECTED Employment in Agriculture ('000) 2018 [2]	1907	1953	4843	3855	33683	3873	10550	5670	17692	11495	3679	1183.1
Employment in Agri. (% of total employment) (2018) [2]	41.40	28.69	46.31	48.00	66.20	33.86	57.45	71.91	66.35	70.76	53.92	30.7
Number of farmers ('000) [3]	408 (1990)	886.6 (1993)	925.9 (1970)	1117.7 (2001)	9784.1 (2012)	2838.4 (2013)	4469.5 (2015)	2447.9 (2011)	5964.8 (2013)	4076.3 (2012)	1305.8 (2000)	437 (1998-1999)
Number of commercial farmers ("others") ('000) [4]	-	-	-	-	2474.39 (2012)	593.2 (2013)	854.4 (2015)	622.16 (2011)	1000.47 (2013)	458.8 (2012)	-	-
Number of subsistence farmers ('000) [4]	-	-	-	-	7309.74 (2012)	2245.16 (2013)	3615.09 (2005)	1825.78 (2011)	4964.31 (2013)	3617.48 (2012)	-	-
Livestock pop. (2017) [1]												
Cattle (thousand head)	2380.3	9647.0	5798.5	1687.8	60926.9	1763.9	18338.8	1508.3	26399.5	15393.2	4077.4	3578.3
Goats (thousand head)	1871.9	15179.5	5439.1	1460.8	30719.4	6400	24684.5	7718.9	17971.1	15666.7	2761.4	5714.3
Sheep (thousand head)	1496.3	10137.9	3468.8	1836.4	31836.7	4611.8	18759	283.4	7651.8	2058.8	257.1	6014.1

poultry (million head)	20.5	42.5	51.1	70	59.5	74.5	48.1	18.3	38.5	35.7	40.3	45
Imports of Agricultural products ('000 tons) [1]	2151.1 (2016)	1137.9 (2016)	1709.7 (2015)	2495.7 (2015)	1554.5 (2016)	2579.2 (2016)	33602.3 (2013)	464.1 (2015)	1769.1 (2016)	1323.7 (2015)	386.5 (2015)	2733.8
Imports of Agricultural products (mil US$) (2016) [5]	1186.00	466.00	872.00	1494 (2015)	1699.00	1414.00	3183 (2017)	287 (2015)	921.00	725.00	403 (2015)	1138.9
Exports of Agricultural products ('000 tons) [1]	343.7 (2016)	847.3 (2016)	791.9 (2015)	4129.3 (2015)	500.8 (2016)	1364.1 (2016)	1191.5 (2013)	497.3 (2015)	1202.3 (2016)	1139.7 (2015)	1370.6 (2015)	506.6
Exports of Agricultural products (mil US$) (2016) [5]	288	753	1113	6937 (2015)	1179	3196	3417 (2017)	864 (2015)	1709	1186	691 (2015)	544.3

Notes: * – Excluding workers who produce for their own consumption. [1]– Source: FAOSTAT (n.d.). [2]– Source: International Labor Organization (ILO) (n.d). [3] – Source: FAO (n.d). [4] – Source: Lowder, S. K., Skoet, J., Raney, T (2016). [5] – Source: Foreign Agricultural Service (n.d.).

(authors' compilation based on several sources. Except those noted above, all the above figures are extracted from FAO, 2019)

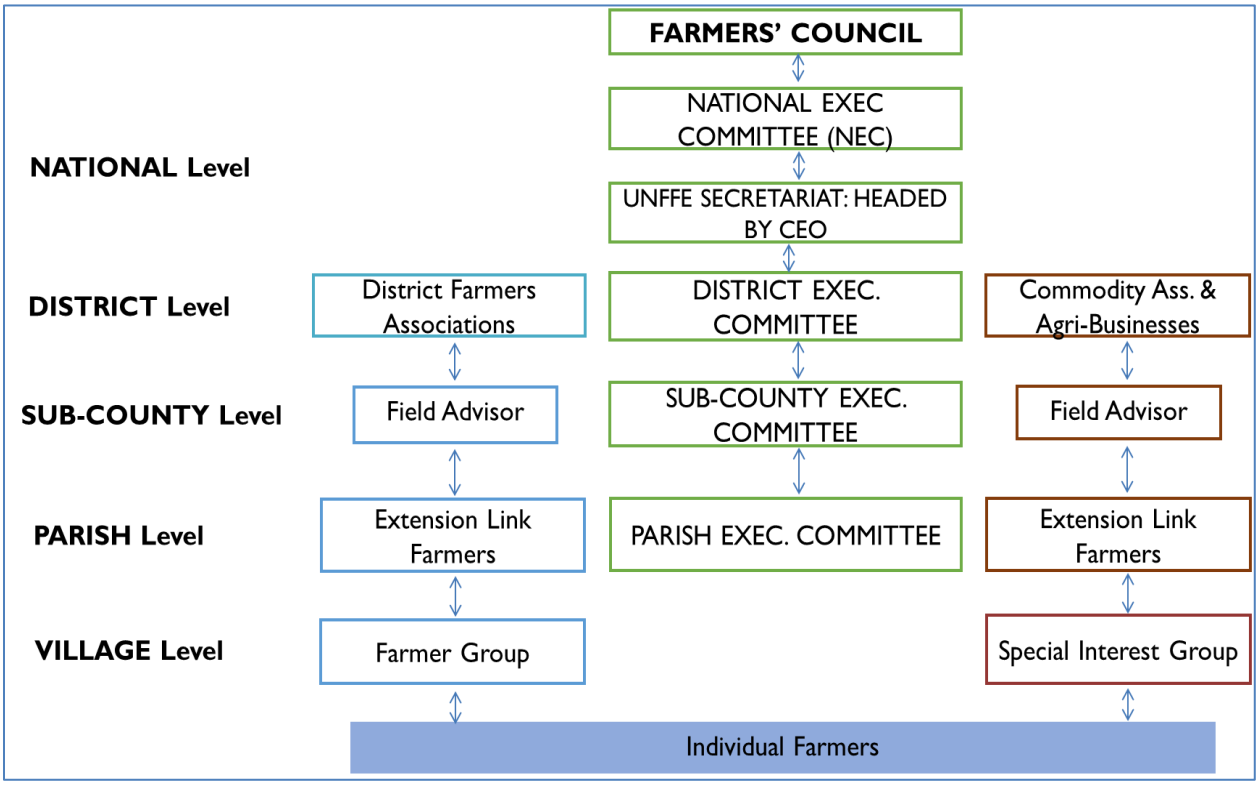
4.3 The structure, membership and objectives of FOs in Senegal, Uganda, and Zambia

This subsection provides a description of the national umbrella organizations in the three case study countries. We provide a description of the structures from the national, intermediate, and grassroots levels. We also elaborate the membership in these FOs as well as objectives of the FOs.

4.3.1 Uganda

Uganda National Farmers' Federation (UNFFE) is the official national umbrella farmers' organization in Uganda. UNFFE is a well-structured umbrella FOs and is divided into four regions (West, East, North, Central) – which follows the civic administrative regions of Uganda. In the four regions, farmers are organized in 90 (out of the 126 administrative districts) district FOs (DFOs). Membership of the DFOs are farmers' groups organized at village level. Figure 2 provides a depiction of the different levels of representation at UNFFE.

Figure 2: The Structure of Uganda National Farmers' Federation (UNFFE)



Source: Authors' creation based on expert interviews in Uganda.

The DFOs exhibit different strengths and weaknesses that reflect the state of the village level DFOs. The village level farmers' groups are seen as the "live-blood" of the farmers´ movement in Uganda. In total, the UNFFE structure represents about 2 million farmers organized in about 3,000 village-level farmers' groups. This implies that a relatively high number of subsistence farmers are yet to be part of the organized FOs. Besides the more than 90 DFOs, UNFFE brings together several agricultural-related organizations (such as agricultural cooperatives, input suppliers and marketing agents) to create a common voice of actors in the agricultural sector. Through the district and parish organizations, UNFFE has a good working structure among smallholder farmers positioning it to lobby for their interests.

UNFFE aims to address the food security and climate change issues in the midst of unpredictable agricultural and political policies. It seeks to:

(i) Lobby and advocate for farmer-friendly agricultural policies;
(ii) Build and develop capacity of FOs to render effective services;
(iii) Increase farmers' access to income opportunities and agricultural information;
(iv) Deliver agricultural advisory services;
(v) Distribute farm inputs/implements and market members' produce;
(vi) Promote agricultural shows and trade fairs;
(vii) Promote commercialization and industrialization of agriculture; and organize farmers' exchange programs both locally and internationally.

Membership in FOs is voluntary. However, the very subsistence nature of agriculture makes it difficult for the smallholder farmers to support UNFFE financially. In an effort to support women farmers; UNFFE´s constitution stipulates that one third of all management positions must be filled with women on all levels of the organizational structure.

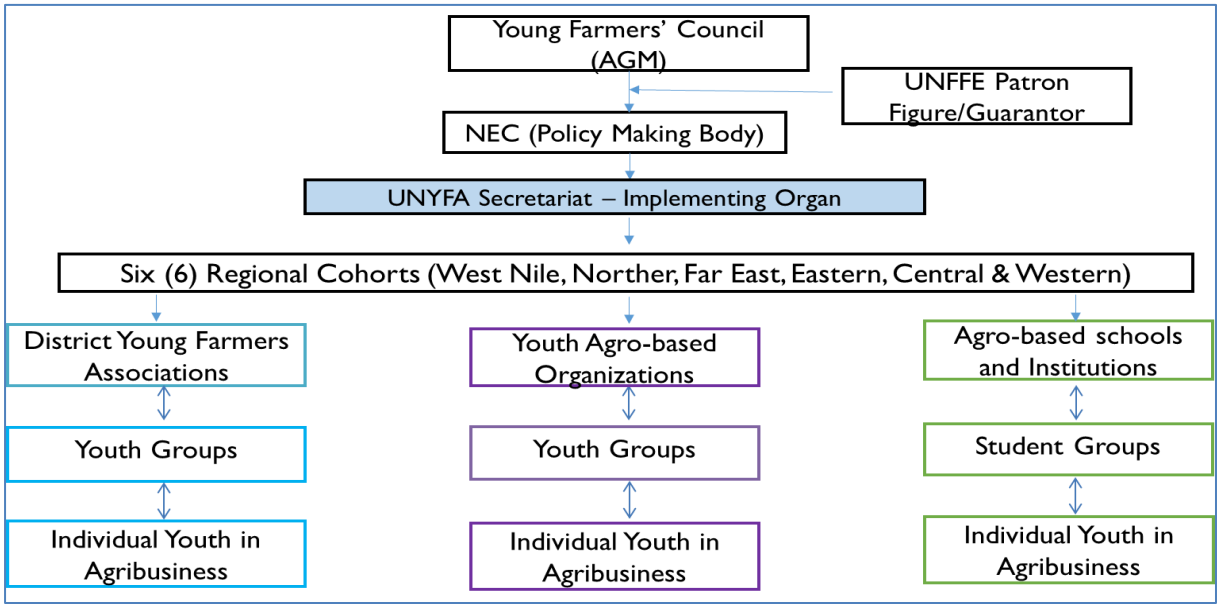
Alongside UNFFE, there is the **Uganda National Young Farmers' Association (UNYFA)** which is a national umbrella body that brings together the young farmers across the county. UNYFA targets youth between the ages of 12 and 39 years. UNYFA is a relatively young but very dynamic movement of young farmers founded in 2016 with the support of the German Federal Ministry for Cooperation and Economic Development (BMZ/GIZ). In a relatively short period of existence, UNYFA has reached 42 districts across Uganda. The different categories of members are district young FOs (that target rural-based youth), agri-business youth-based initiatives (such as youth cooperatives), schools, and tertiary institutions where school agricultural clubs are formed. The structure of UNYFA is presented in Figure 3.

UNYFA is composed of 42 district organizations (representing about 25,000 young farmers) and 500 agro-based youth groups. Uganda, like many other African countries, has a predominantly young population, most of whom is involved in agricultural value chains. UNYFA represents the young farmers by voicing their needs and challenges. More recently, UNYFA has collaborated with young FOs from developed countries in an effort to learn from their experience.

These cooperatives provide support to farmers in input sourcing and marketing of their produce. The President of UNYFA, Mr. Geoffrey Okot, provided the vison of the organization as follows:

> "UNYFA lobbies for youth participation in the formulation and implementation of agricultural and administrative programs in Uganda. They are empowered to make informed decisions on which programs suit them best. They also receive general training on issues such as execution of government programs, tax exemptions and compliance, business registration, land access and management, agricultural finance [and] effective family farm succession." (Mr. Geoffrey Okot, President of UNYFA).

Figure 3: The Structure of Uganda National Young Farmers' Association (UNYFA)



Source: Authors' creation based on expert interviews in Uganda.

The other national-level FOs in Uganda include: **Uganda Cooperative Alliance (UCA)** which was founded 1962 and brings together all agricultural cooperatives; **National Union of Coffee Agribusiness (NUCAFE**) which was founded in 2003 to represent associations of coffee growers; and **Uganda National Development Organization (TUNADO)** which brings together bee keeper associations in Uganda. UCA coordinates the new cooperative movement that is driven by farmers. Ms. Brenda Karungi, Communications Officer of UCA, underlined the vision of the alliance as follows:

> "Uganda is experiencing a new cooperative spirit. The farmers' cooperatives in Uganda had completely collapsed in recent decades due to several reasons – but more so due to political interference and limited ownership by farmers. UCA was formed to bring a new face to the cooperative movement. The renewed cooperative movement is based on the principles of honesty, dedication, transparency and integrity." (Brenda Karungi, Communications Officer).

The central objective of the revival of cooperatives is to link farmers to markets and improve their participation in agricultural and food value chains. UCA, as the umbrella organization for all cooperatives, serves as a coordinated voice of this cooperative movement on the national and international level. UNFFE and UCA have managed to forge a good working relationship with the Ministry of Agriculture, Animal Industry & Fisheries. The objectives of UCA are:

- Advocate and represent the interests of the cooperative movement,
- Dispute settlement in the sector following the Cooperative Act,
- Capacity building in leadership, management, and business skills,
- Providing advisory services for cooperatives,
- Mobilizing resources for supporting the cooperative movement,
- Youth empowerment – creating awareness among youth on the significance of cooperatives.

Uganda has the youngest population in the world – about 78% of Ugandans are below the age of 30 (Canning et al., 2015). The objective of UNYFA is to attract and empower young rural people to engage in agriculture and related businesses through professionalization, education, training, and advocacy. The strategies of the organization are developed in close cooperation with the bigger federation (UNFFE) at the national as well as at the district levels.

4.3.2 Senegal

The national umbrella farmers' organization in Senegal is **Le Conseil National de Concertation et de Coopération des Rureau (CNCR)**. The CNCR is composed of 14 regional FOs – which follows the national administrative units. Additionally, 14 other organizations/institutions are members of the CNCR including the Fédération des Organisations no-gouvernementales du agricultures du Sénegal (FONGS), the Union National des Cooperatives Agricoles du Sénegal (UNCAS), and other commodity-specific FOs parallel to the 14 general purpose FOs. In total, the CNCR represents approximately 2.5 million farmers who are enrolled in the local level FOs. We must however note that the CNCR could not conclusively provide exact data of the actual up-to-date figures of the active members.

The membership in the CNCR and all local FOs is voluntary but requires the payment of an annual subscription fee. The adverse economic situation of smallholder farmers limits their contribution in terms of membership fee. This may explain the low membership contribution for those already enrolled and the reluctance by many more to join the FOs. The CNCR could not provide the actual number (but stated that it represents the interests of some 2.5 million) of farmers, most of whom are small-scale producers.

The CNCR – as an umbrella organization – represents the interests of farmers as well as the interests of agricultural cooperatives at the national level. The purpose of the CNCR is to contribute to the development of peasant agriculture, which ensures sustainable socio-economic advancement of family farms. To achieve this, the CNCR strives to:

(i) Promote consultation and cooperation between its members;

(ii) Foster a partnership with its members, the State and other public and private partners; and

(iii) Promote the strengthening and enlargement of the Network of Farmer Organizations and Agricultural Producers in West Africa (ROPPA).

As a business arm of the CNCR, the Association Senegalese pour la Promotion du Development à la Base (ASPRODEB) was founded in 1995 to provide a wide range of services for farmers and cooperatives such as input sourcing, marketing of produce and seeking finances (credit). It also coordinates and monitors funding from development partners for decentralized projects in the different regions of the country. More recently, the ASBPRODEB has engaged in negotiating contracts and commodity prices on behalf of local FOs.

The ASPRODEB provides FOs with technical and organizational capacity building services, financial management and advisory support. Its main objectives include:

(i) Support producer organizations at national, regional, and local level in the implementation of programs negotiated with the state and development partners;
(ii) Provide federations and all components of the peasant movement with the technical and professional support and advice necessary for the realization of the economic programs;
(iii) Inform producers' federations and provide them with advice and support promoting greater professionalization in the services rendered to their members;
(iv) Support producer organizations in their structuring and the development of the competitiveness of agricultural sectors.

Special women's and youth interest groups were created in 2005 and 2012, respectively. These two interest groups were established to champion the interests of women and youth in agriculture. However, the youth continues to face challenges in agriculture. As explained by Michel Séne, farmer and chairperson of regional FOs in Kaolack, Kaffrin and Fatick, young farmers remain disinterested in agriculture.

> "Youth in Senegal is not interested in agriculture. Reasons for that are a lack of access to land and modern farming methods. This leads to a serious aging in agriculture in Senegal." (Michel Séne, farmer and chairperson of regional FOs in Kaolack, Kaffrin and Fatick, Senegal).

Interestingly, the national union of farmer cooperatives – UNCAS – is a member of the CNCR. Farmer cooperatives have a long and successful history in Senegal dating back to soon after independence. The government has had a strong influence on cooperatives but the period of structural adjustments in the 1980s and 1990s saw a significant reduction of government support to cooperatives. The umbrella organization brings together about 337 rural cooperatives that are grouped into 90 district-level associations. A similar but parallel body called **Le Réseau des Organisations Paysannes et Pastorales du Sénegal (RESOPP)** was founded in 2002 and brings together 37 cooperative associations in nine districts in Senegal.

4.3.3 Zambia

Zambia has two umbrella FOs the **Zambia National Farmers` Union (ZNFU)** and the **National Union for Small Scale Farmers (NUSFAZ)**. The ZNFU can be said to be relatively well structured with organs at the national, district, and local levels. It also covers the entire area of agricultural and food value chains – from production to processing and marketing. The ZNFU is composed of 80 (out of the 116 administrative districts) district farmers' associations (DFAs), 14 commodity organizations, 35 corporate members, 30 agribusinesses (private companies), and the Zambian Agricultural Chamber. In total, the ZNFU represents 500,000 small-scale farmers and about 1,000 commercial farmers. The sub-structure of the ZNFU shows 80 districts organizations (ZNFU-DFOs) – in the whole of Zambia. For example, the Chongwe DFA comprises about 1,500 individual small-scale farmers (out of about 20,000 small-scale farmers in the district).

The ZNFU, originally an association of large agricultural holdings operated by white farmers, has become an umbrella organization for all Zambian agricultural producers. The ZNFU is a political mouthpiece for all farmers but with a special focus on strengthening smallholder producers. The ZNFU underlines its political independency and neutrality. In addition to political lobbying, the ZNFU offers its members various services:

(i) Support to members regarding their access to the public input support program (FISP),
(ii) Support to farmers regarding access to the financial credit "Liam Credit System",
(iii) Support to farmers regarding their access to land with appropriate property titles "Group Land Survey Program",
(iv) Extension training programs provided by district commodity FOs,
(v) In the field of communication, ZNFU publishes a monthly magazine "The Zambian Farmer" and a Friday-Briefing for members on current political events and topics,
(vi) Organization of the annual agricultural show "AgriTech Expo".

The annual ZNFU membership fee per individual farmer is about 100 Zambian Kwacha (equivalent to about 7 Euros). Of this amount, 70 Kwacha are remitted to the national organization. However, members are occasionally unable to pay these fees especially when they experience bad harvests. The DFAs are expected to establish information centers where they engage the members. For example, we visited Chongwe in the course of this study, where the district farmers' association has established 36 information centers through which they have direct contact with the members. The information centers support farmers in several ways, such as: training, access to the national input support programs, collection and bulking of produce, farm mechanization, and coordination of external support (projects) from partners and donors.

A board – consisting of 10 elected representatives from the DFAs and the associated members – that meets quarterly runs the operations of ZNFU. However, a management team manages the day-to-day business. Additionally, the ZNFU has a council that consists of about 120 members (the chairpersons of all DFAs and one representative of each of the associated members). Commodity committees (focusing on fruit and vegetables, grains, oilseeds, beef, pigs, poultry, and dairy) are responsible for executing the ZNFU's technical work. Elected representatives of the DFAs and associated members form the membership of these committees. However, some technical work such as that involving milk and poultry is outsourced to the respective FOs – the Dairy Association of Zambia (DAZ) and the Poultry Association of Zambia (PAZ). Both DAZ and PAZ are members of the ZNFU. The overarching issues and concerns are handled by the ZNFU while those that are very specific are directed to the respective organizations. This calls for close cooperation between the associations to avoid duplications of roles and to ensure an efficient manner of serving the members.

The **NUSFAZ** on the other hand was founded more recently – in 2014. Various NGOs (such as OXFAM) support the NUSFAZ in its activities. As stated by Mr. Noel Semukonde, Director of NUSFAZ:

> "The establishment of NUSFAZ followed a perception that small agricultural producers were not appropriately and professionally represented". (Noel Semukonde, Director of NUSFAZ).

The NUSFAZ is an association that develops from top to bottom and not bottom-up. Lead farmers in the districts seek contact with farmers at their base and campaign for membership in the association. The main objectives the NUSFAZ pursues are:

(i) Organize smallholder farmers,
(ii) Represent the interests of smallholder farmers politically,
(iii) Promote smallholder producers' access to markets,
(iv) Promote education and training for small producers.

Other important national level (overarching) players include the **Zambia Cooperative Federation (ZCF)** and the **Young Emerging Farmers Initiative (YEFI)**. The agricultural cooperatives for the joint collection and processing of agricultural products have a long tradition in Zambia. However, cooperatives in Zambia look back on a difficult and challenging history. Mr. James Emmanuel Chirwa, President of ZCF, characterized the situation of cooperatives in Zambia:

> "The White farmers founded the first cooperatives in 1914. During the British administration and in the early years after independence, cooperatives were at a peak. By mid 1990s, cooperatives were the third largest employer in Zambia. However, in the following years, they were systematically destabilized politically. Many cooperatives went bankrupt or faced economic difficulties due to the cancellation of guarantees in the procurement of loans, a politically driven wave of privatization and political interventions in markets". (Mr. James Emmanuel Chirwa, President of ZCF)

The cooperative movement is quite active in different segments of the economy, including in the agricultural sector. It is composed of nine provincial cooperative unions (PCUs). The PCUs draw their members from the district cooperative unions (DCUs). About 1,300 primary cooperatives on local levels are form the DCUs. The government has a strong influence on the management of the cooperatives; however, the management of cooperatives at the grassroots level is largely unknown. On the other hand, the YEFI was established recently (2015) with a mission to promote agribusiness among the youth. The YEFI mainly focusses on providing relevant information for young farmers, providing training in agriculture and agribusiness, and mobilizing youth to engage in farming.

Regarding political change, cooperatives have been given new attention since late 1990s. Today, cooperatives are important elements in providing markets for small-scale producers. In particular, cooperatives provide collective marketing and value addition. The new cooperative movement in

Zambia can achieve more success with knowledge transfer and financial support to farmers (e.g., some initial successes have been reported such as the creation of 1,500 cooperative solar corn mills). Table 3 summarizes some of the key issues concerning structure, membership, and objectives of FOs in Senegal, Uganda, and Zambia.

Though FOs are, undeniably, an important component in the development and agricultural transformation in Africa, the capacity of the existing organizations remain limited and weak. The majority of the population is agrarian (ranging from 31% in Senegal, 54% in Zambia to 71% in Uganda) but the membership in the FOs is still limited. This includes about 550,000, 2 million and 2.5 million farmers in Zambia, Uganda, and Senegal, respectively – representing about 6.4%, 10.9% and 30.1% of farmers in Zambia, Uganda, and Senegal, respectively. There exist organizational structures from the local to the national level in the three countries, albeit representing a smaller proportion of smallholder farmers. While the structures mostly follow the government administrative layers, in some cases the structures follow specific commodities and thus are not nationally represented but are regional in nature. This is also important because the kind of support smallholder producers need varies from product to product. Some structures also are youth or women specific.

We have explored in detail the structure as well as the objectives of the various umbrella FOs in the three countries. We find that the FOs have a clear set of objectives and a clear structure following a top-down approach. The regional and national level showed healthy working relationships in all the case study countries. However, the FOs lacked a transparent register of the members (fee-paying members) they represent. Information about the actual numbers of members in the several grassroots organizations was hard to come by or verify. Nonetheless, as previously shown, the members the FOs claimed to represent (compared to the number of small-scale and medium-scale farmers) is still low. Indeed, not enough efforts and resources have been deployed to build FOs and mobilize farmers from the bottom-up.

Additionally, FOs do not have a clear strategy nor the capacity to influence policies and engage in the agricultural sector. The expert interviews revealed a pattern of weak capacity of elected officials that prevents them from preparing or participating in policy processes. Earlier studies have shown that inadequate capacity inhibits participation of different actors in policy processes – as it is, for instance, linked to the inability to follow debates in policy formulation (FAO, 2017; Vorley et al., 2012). Similar characteristics (available largely through online literature search) for seven other African countries are provided in the Annex (Table 5).

Tab 3: Summary of national FOs in Senegal, Uganda, and Zambia

1. Uganda

Organizations	Characteristics	Structures	Members	Finances	Donors/Partners
Uganda National Farmers´ Federation (UNFFE) (founded in 1992)	National umbrella organization with sub-national structures (district and local level). UNFFE is a member of EAFF and WFO	President, Board (11 elected members), 8 subject and commodities committees, National Executive Committee (NEC), National Farmers Council (3 representatives per district organization) – 1/3 women leaders is a requirement of the constitution	95 district organizations (2 million farmers – voluntary members), young farmers (UNYFA), **Associated Members:** Uganda Cooperative Alliance (UCA), National Union of Coffee Agribusiness (UNFEE), Uganda National Agriculture Development Organization (UNADO)	Marginal membership fees (< 2% of the budget) (>98% of the budget is financed by donors. Annual fee is 5,000 UGX (€ 1.20) per person	USAID, TRIAS, EAFF, BMZ/GIZ, We Effect, European Commission
Young Farmers Federation of Uganda (UNYFA) (founded in 2017)	National umbrella organization with district level and local level sub-structures. UNYFA is a member of WFO	Young Farmers Council, President, policy making body, special committees, regular working structure	42 district-level organizations, 25,000 Young Farmers organized via the district organizations	Membership fee currently at 10% of total budget. Donors finance 90% of activities. Annual fee is 2,500 UGX (€ 0.75) per person	AHA Germany, Agriterra Netherlands, Farm Africa, Swiss Contact, UNFFE
National Union of Coffee Agribusiness (UNFEE) (founded in 2003)	National level commodity (coffee) umbrella organization	Chairperson, Board of Directors, Management Team, field staff (active in 19 districts)	200 farmer-based coffee cooperatives, 1.2 million coffee producers	N/A	SFOAP, IFAD, EU, EAFF, Trias, Agriterra

2. Zambia

Zambia National Farmers` Union (ZNFU) (founded in 1905)	National umbrella organization	President, General Assembly, Council, Secretariat, subject committees, women's forum	75 DFA´s, several commodity FOs, corporate and associated members (agribusinesses), Agricultural Chamber	Marginal membership fee (approx. 5% of budget). Donors finance 95% of budget. Annual fee is 100 Kwacha (€ 4.50) per person	PAFO, SACAU

Zambia Cooperative Federation (ZCF)	National umbrella organization	Member of SACAU and WFO	9 provincial cooperatives unions (PCUs), district cooperative unions (DCUs) are members of the PCUs 1,300 primary cooperatives at local levels (who are members of DCUs)	Marginal membership fee (approx. 5% of budget). Donors finance 95% of budget. Annual fee is 70 Kwacha (€ 3.00) per person	PCUs, DCUs, and primary co-ops are supported by different donors/partners

3. Senegal

Organizations	Characteristics	Structures	Members	Finances	Donors/Partners
Le Conseil National de Concertation et de Coopération des Rureau (CNCR)	National umbrella organization	President, Council, General Assembly, Secretariat, subject committees, women's and youth forums	28 member organizations consisting of 14 regional FOs, commodity FOs, cooperative organizations	Marginal membership fee (5% of budget). Donors finance 95% of budget. Annual fee is 1200 CFA (€ 2.20) per person	SFOAP via ROPPA, IFAD, USAID, World Bank

(authors' compilation based on expert interviews with representatives of FOs in Senegal, Uganda and Zambia)

4.4 Lobbying: Do FOs have any influence on politics?

Having elaborated on the representation in the previous section, we highlight another important role played by FOs – the lobbying and political influence. Well-organized associations are crucial to addressing farmers' needs – especially by bringing their voices together.

4.4.1 Senegal

The Senegalese national umbrella organization (CNCR) has a cordial working relationship with the government and other relevant organizations in the farming sector. Expert interviews with the representatives of the Ministry of Agriculture revealed that the CNCR is a respected partner in defending the interests of small-scale farmers and agricultural cooperatives. However, the Ministry of Agriculture finds big deficits in leadership and capacity in the organizations and their sub-structures mainly regarding a lack of reaching out to small-scale producers. The Ministry also notes excessive uncoordinated external influence on the FOs.

4.4.2 Zambia

The ZNFU is a well-structured association and has a political latitude as the voice of agricultural producers. For many years, the ZNFU has acted as an effective interlocutor in all overarching agricultural issues in Zambia. However, recently, a misappropriation of finances has tainted the image of the formerly highly esteemed organization and has led to a loss of trust between the political leaders and the organization (Lusakatimes, September 20, 2016). Though once vibrant and respect in national circles, the ZNFU's performance and capacity to advocate and lobby for farmers has also been severely jeopardized due to the episodes of financial mismanagement and corruption in the highest ranks (Lusakatimes, Sept. 20, 2016).

Efforts to rebuild the organization are ongoing (through reorganization of leadership). The relatively young NUSFAZ has also received attention in starting to be engaged by the government in agricultural deliberations.

4.4.3 Uganda

Similarly, the UNFFE is seen as a key partner that represent farmers' voices and interests. The inclusion of the UNFFE in many important committees in the Ministry of Agriculture (such as extension, agribusiness, and marketing), other statuary bodies, and in the private sector foundations is a boost of confidence in the FOs. Our study finds the engagement between FOs and the respective ministries (like agriculture and cooperatives) to be improving. For instance, the Ministry of Agriculture in Uganda notes that the two organizations (UNFFE and UCA) are critical components in the development of the sector; however, the leadership and institutional capacity of both institutions is considered weak especially in the lower (regional) levels. New strategies are needed to strengthen the FOs and to mobilize small-scale farmers to join them. In this regard, the ministry has started special training modules to empower district FOs in cooperation with the district administration.

Furthermore, the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) adopted a new Extension Strategy (2016-2021) whose objective is to transform extension services from a largely institutionally fragmented system (with different entities for both public and non-state actors) into well-coordinated, harmonized, regulated pluralistic service systems for farmers with multiple providers addressing diverse needs. However, inadequate skilled extension trainers and weak financial capacities to serve all districts challenge the new extension systems. The MAAIF has also adopted a new Cooperative Act that focusses on bottom up mobilization and ownership by farmers. The Act provides a legal basis for financing, monitoring, and regulating cooperatives.

The political influence of the government on the FOs in Uganda and vice versa is potentially significant because the President of the Republic of Uganda is the patron of the UNFFE. This might present an opportunity for farmers to be heard at the highest level of government but also might lead to the government influencing FOs. This situation poses a challenging conflict of interest as far as lobbying and political independence and functioning of the UNFFE is concerned. The expert interviews with representatives of government ministries revealed that FOs are not entirely representative of small-scale farmers – majority of the small-scale farmers are not enrolled in the FOs. Thus, irrespective of the established cooperation between the FOs and the government officials, the FOs political assertiveness seems to be limited.

Although the FOs leaders interviewed in all three countries criticized the agricultural policies as unpredictable and unreliable, they were unable to provide a clear framework of how to engage governments to improve the situation (e.g. regarding agricultural imports, technology policies, agricultural extension policies or the inability to meet international commitments like the Malabo Declaration). This might point to the capacity challenges faced by FOs' leaderships. The focus of the organizations is rather on providing technological support to existing members to increase agricultural production and productivity than on lobbying for a change of policies on a meta-level.

4.5 Service provision to members

One of the biggest expectations of the members of the FOs is the provision of services (such as marketing, input sourcing, and value addition) by their respective organizations. Thus, besides political lobbying and advocacy, many FOs have embarked on offering services for their members with support from different partners and donors. In Senegal, Uganda, and Zambia, such services range from the provision of village loans and savings programs to crop insurance, collective marketing of produce, and extension services. However, the provision of these services is quite limited due to a lack of adequate resources and capacity of the organizations as currently constituted.

In Senegal, the umbrella organization (CNCR) has employed the services of the ASPRODEP to offer technical advice to farmers (for an extra fee). Similarly, in all three countries, the umbrella organizations have a close relationship with the agricultural cooperatives as well as the national ministry of agriculture (and cooperatives) in order to bring services to their members.

Understandably and as discussed earlier, the partnerships are also short-lived and linked to certain topics and at times available to few farmers only. Most of the needs of smallholder farmers fall in the purview of the governments (such as market infrastructure, farmer education, and training and extension services). These public goods are difficult for the (poorly financed) FOs to provide. Many FOs have been said to be undermined by attempts to take on too many over-ambitious objectives that range from covering all kinds of commodities in diverse regions to providing public goods to their communities (e.g. market information, agricultural extension, advocacy) (Shiferaw et al., 2008).

In all three countries, the national umbrella organizations also try to get involved in service provision. However, offering quality services requires specific knowledge and funding. All the examples mentioned in the area of service provision could only be realized with external expertise and funding. As soon as this funding fails to materialize, the service provision collapses. A concrete example is the ZNFU in Zambia. After financial irregularities, the donors withdrew. The Lima Credit Program, which had been successful up to that point, and the advisory service that had been built up in the districts collapsed as the ZNFU was unable to continue these services based on its own funds.

4.6 FOs' financing and partnerships in Senegal, Uganda and Zambia

This section is dedicated to the financing of FOs. We describe the role of membership fees and donor contributions in financing the running and activities of FOs. We also enumerate the organizations providing financial support to the FOs in the selected countries. While it was very difficult to adduce detailed information on finances across the three countries, our assessment of the FOs in the three countries shows that they are all financially dependent on donations. We were unable to obtain information on the budget breakdown for the current or previous years in all three countries. Below we discuss the information we obtained by country.

4.6.1 Senegal

The three sources of financial resources for the CNCR include annual membership fees, government support (seed funding), international organizations (World Bank, FAO, FIDA, IFAD, and PAM), and private and multilateral partners and donors (AgriCord, USAID, JICA, Belgium, Austria, and GIZ). Although the membership fees in all local FOs are determined annually depending on the harvest of the previous season, these fees are meagre and cannot support the running of the activities of the FOs. The annual average membership fee is about CFA 1200 (equivalent to € 2.20) per farm household. This translates to about 5% of the annual budget. The bigger proportion of the budget (95%) is financed by donations from international organizations as well as private and multilateral partners and donors.

A proportion of the membership fees (70%) is transferred to finance the higher regional and national level structures. Due to the limited financial collections from the members at the local FOs, the regional and national FOs are perpetually weak and their activities are greatly hampered. Dependence on partnerships to run activities at the regional and national level has proven ineffective. More recently, the FOs have started deducting membership fees from the profits realized by individual farmers after the sale of produce marketed through the FOs. Arising from financial difficulties, the government and the international organizations have sought to ensure institutional strengthening of the FOs by initiating farmer-driven cooperatives, transfer of knowledge, innovation and training and by creating value addition through processing of agricultural produce. This way, the FOs are expected to increase collections and thereby increasing financial independence.

4.6.2 Uganda

Similarly, in Uganda membership fees cover just about 2% of the UNFFE´s annual budget. Annual fees are 5,000 Uganda Shillings (equivalent to € 1.20) per farm household. However, the newly established UNYFA supports about 10% of the total budget through membership fees (the annual fee per young farmer is 2,500 Uganda Shillings, which is equivalent to about € 0.75). The entire operations of the UNFFE are run from donations and finances sourced from various partners and donors. Such financial support is linked to certain projects or programs in some topical areas (like organic farming, commercialization of cereals and milk). These programs are poorly linked and coordinated.

Our discussions with representatives of UNFFE showed an enormous challenge to convince and motivate its members to commit finances to support the organization. Smallholder farmers seem not to see the benefits of FOs. This is due (in part) to the difficulty of the FOs to influence market fundamentals for their members. At the regional level, some districts are performing better (especially for commodity-based FOs). For example, in Kayunga and Sembabule districts, membership fees cover about 10% of the annual budget. Farmers in these districts have a more direct relationship to FOs and feel that they benefit more directly from their activities. In future, the UNYFA intends to supply paid services to members in order to raise more money and reduce donor dependency.

4.6.3 Zambia

The situation is similar in Zambia. Numerous donors and partners support the bigger proportion of the annual budget. With 5% of the total budget the membership fee is marginal. Annual fees per member are about 100 Kwacha (approximately € 4.50). Though the lower levels remit a bigger proportion of the membership fee (70 Kwacha per member of the 100 Kwacha received), the national farmers' organization is still unable to meet its financial obligation without donations. More recently, several partners and donors have withdrawn their engagement with the ZNFU and have tried to channel resources directly to the DFAs due to financial improprieties at the national body. The ZNFU is currently in the process of reestablishing trust and accountability to both donors and its members. Thus, the ZNFU relies mainly on its own (highly inadequate) financial resources today which has affected its capacity to provide services to farmers.

In summary, though the membership fees exist, they are very low and show limited impact. The FOs in all three countries are economically dependent on donations. The functioning of the FOs is sustained by donations from national and international organizations, partners, and donors. These partners and donors focus on different, and more often than not, on very specific project issues. There exists a lack of coordination and common strategy between these projects and the FOs have no clear political strategy. They compete for and survive on external funding to run their operations. This hinders self-determined development and sustainability. Thus it is not surprising that the need for improved and stricter coordination of the multiple projects were highlighted by both the different stakeholders and the government.

5 Conclusions and Options for Action

The formation of FOs is a long-term process. Though considerable progress has been made across Africa, more needs to be done to strengthen the existing FOs. FOs in Africa have a long history of successes and failures. African FOs have long been missing in action unlike in Europe, North America and Asia where FOs are widely respected and recognized partners in the design of agricultural policies. Nevertheless, African FOs are increasingly becoming an important component in the development of agricultural transformation policies in Africa.

FOs, in principle, should represent the needs and the unequivocal voices of farmers in all spheres of development and especially in policymaking. Though there exists a number of FOs across Africa, with some dating back to colonial eras, they have not evolved with times to rally the voices of farmers from the grassroots to the national and regional levels. The markets are more dynamic today because of increasing regional and global integration; yet the FOs in Africa are not equipped to advocate and lobby for the interests of their members at this level.

This study shows that FOs in the three countries are more or less well-structured. The national-level (umbrella) FOs are linked to the local-level substructures. However, membership in these FOs is voluntary and a sizeable majority of small-scale producers is yet to join the organized FOs. Their lack of participation in the FOs may be linked to either a lack of means to pay membership fees, due to the subsistence nature of their production, or due to an inability to see the benefits of being a member. Farmers expect their associations to offer material support (services) or project funds. The "royal discipline" of associations as political drivers for transformation in the agricultural and rural sector, and leadership for a more reliable policy framework in agriculture is not very pronounced among farmers in the three countries.

The available evidence collected from the continental, regional and the three country case studies suggests that many FOs face capacity and financial constraints. Our analysis shows that virtually all FOs are dependent on external resources. The national and the five regional organizations (EAFF, SACAU, ROPPA, PROPAC, UMNAGRI) as well as the continental organization (PAFO) have meager financial resources of their own. Most of their activities are funded by support solicited from international organizations (World Bank, FAO, IFAD), and from different bilateral and multilateral partners, donors, and NGOs. Not a single organization, particularly in the three case study countries, has full financial independence despite their sizable membership base. They generate a very meagre proportion of their budget from their members (through membership fees) – amounting to just about 5% of the annual budget.

The financial support from third parties is generally linked to various specific projects or topics such as general and entrepreneurship training, agricultural production, and agricultural mechanization. These specific projects and partners are poorly linked and coordinated. It is, therefore, difficult to leverage such projects to transform and develop the entire agricultural sector. What can be seen is a patchwork of local or regional activities characterized by insufficient coordination and a lack of broader strategy for the sustainable improvement of agriculture and rural areas. During the expert interviews with leaders and representatives of the various FOs, there were no discernible strategies to wean from external financial dependence in the medium to long term. Programs and impetus to rally members to contribute towards the organization would be timely. However, this must be accompanied by prudence from the leaders of the FOs and transparency in the use of financial resources. Additionally, members must begin to see the fruits of their enrollment through policies that the FOs are able to influence and develop on behalf of their members. Financial support should be merited. Funding from donors should be channeled to well-functioning and accountable organizations. Financial support to FOs should also expand the focus to include institutional development that would strengthen FOs rather than only supporting micro-projects.

Furthermore, the distinction between the roles of FOs and farmer cooperatives in Africa is not clear. While FOs advocate, lobby and represent the interests of farmers, farmer cooperatives provide an

important link for small-scale farmers to markets. Cooperatives are primarily supposed to engage in activities such as collective processing, quality improvement of produce, storage, and marketing of produce. The farmers' associations in the selected countries have been drawn into these activities – which further overburdens them.

The evolving agricultural policies have now seen FOs assuming the roles previously played by governments, such as agricultural education, marketing of produce, and provision and distribution of farm inputs. However, many of these FOs are not equipped to do so because of limited skills, weak organizational capacity, and severe resource restraints. In the end, FOs are undermined by attempts to take on too many roles and taking on over-ambitious objectives and providing public goods.

In order to move agriculture to the next level, development policies should focus on political transformation by strengthening and empowering FOs. The diverse (and externally funded) projects cannot compensate for policy deficits. Change processes should emanate bottom-up. Going forward, multiple efforts are needed to address the identified shortcomings. For example, the performance of FOs depends on the participation of their members; therefore, it is crucial for them to provide services and structures that are of relevance to their members and that satisfy farmers' individual needs. Inevitably, a crucial task of FOs is to establish a closer interaction with their members so that they might increase their understanding of farmers' economic needs and surrounding social structures. In so doing, the FOs would be able to give more suitable incentives and needs-based services as well as to develop empowering structures that further increase farmers' benefits from being a member and their willingness to participate in collective activities. FOs must clearly set their agenda and have officials who can commit to performance-based leadership terms. Other viable ways of raising revenue for FOs may include strengthening farmer-driven cooperatives, transfer of knowledge, innovation and training of members, and creating value addition through processing of agricultural produce. Through these means, the FOs would be expected to increase collections and thereby their financial independence. The necessary skills, knowledge, and funding of FOs to provide these services must not be ignored.

The existing FOs require energizing, first through building the capacity of the existing leaders, increasing the membership base and their financial contribution to support the operations of the organizations, and by creating opportunities for the FOs to engage policy makers on a regular basis. In order to increase members' participation in collective activities, the existing organizations have to establish a reliable, cooperative working atmosphere of mutual commitment, trust, accountability, and a sense of community. Moreover, members have to see a clear benefit of enlisting in the group. Leaders must be prudent and transparent on how finances are used, clearly set their agenda, not shy away from scrutiny of the members, and commit to performance-based leadership terms. Governments should also give FOs the right to sit in all decision-making bodies examining agricultural, food and rural development issues.

African FOs should ensure that their leaders' actions are transparent, that the leadership is accountable to the members and that the leaders embrace a compelling vision. They should also ensure regular engagement with members from a bottom-up approach to identify challenges and possible solutions. Political and financial independence is also key in this regard.

6 References

Abate, G.T. (2018). Drivers of agricultural cooperative formation and farmers' membership and patronage decisions in Ethiopia. Journal of Co-operative Organization & Management, 6(2), pp.53-63. https://doi.org/10.1016/j.jcom.2018.06.002.

Ackerman, J. (2004). Co-Governance for Accountability: Beyond "Exit" and "Voice". World Development, 32(3), pp.447-463. https://doi.org/10.1016/j.worlddev.2003.06.015.

AGRA. (2019). Africa Agriculture Status Report: The Hidden Middle: A Quiet Revolution in the Private Sector Driving Agricultural Transformation (Issue 7). Nairobi, Kenya: Alliance for a Green Revolution in Africa (AGRA). Available at https://agra.org/wp-content/uploads/2019/09/AASR2019-The-Hidden-Middleweb.pdf. (accessed November 30, 2020).

Alley, S., & Marangos, J. (2006). A comparative political economy approach to farming interest groups in Australia and the United States. American Journal of Economics and Sociology, 65(3), pp.497-524. https://doi.org/10.1111/j.1536-7150.2006.00467.x.

Arias, P., Hallam, D., Krivonos, E., & Morrison, J. (2013). Smallholder integration in changing food markets. FAO: Rome, Italy. Available at http://www.fao.org/3/i3292e/i3292e.pdf. (accessed November 30, 2020).

Bachke, M.E. (2019). Do farmers' organizations enhance the welfare of smallholders? Findings from the Mozambican national agricultural survey. Food Policy, 89, p.101792. https://doi.org/10.1016/j.foodpol.2019.101792.

Barham, J., & Chitemi, C. (2009). Collective action initiatives to improve marketing performance: Lessons from farmer groups in Tanzania. Food Policy, 34, pp.53-59. https://doi.org/10.1016/j.foodpol.2008.10.002.

Bonnal, J. (2017). The Role of Intermediate Organizations: Agricultural Professional Organizations and Farmers' Association. Food and Agriculture Organization of the United Nations: Rome, Italy. Available at http://www.ciesin.org/decentralization/English/Issues/farmerorg.html (accessed November 25, 2020).

Borsellino, V., Schimmenti, E., & El Bilali, H. (2020). Agri-Food Markets towards Sustainable Patterns. Sustainability, 12(6), pp.2193. https://doi.org/10.3390/su12062193.

Bosc, P.-M., Eychenne, D., Hussein, K., Losch, B., Rondot, P., & Macintosch-Walker, S. (2001). The Role of Rural Producers Organizations (RPOs) in the World Bank Rural Development Strategy. Commissioned Study. World Bank: Washington, DC.

Brune, N.E., & Bossert, T. (2009). Building social capital in post-conflict communities: Evidence from Nicaragua. Social Science & Medicine 68, pp.885-893. https://doi.org/10.1016/j.socscimed.2008.12.024.

Canning, D.J., Jobanputra, S.R., Yazbeck, A.S. (2015). Africa's demographic transition: dividend or disaster? Africa development forum. World Bank Group: Washington, D.C. Available at http://documents.worldbank.org/curated/en/131891468179371220/Africa-s-demographic-transition-dividend-or-disaster. (accessed November 30, 2020).

CRS & MEAS (2015). Organizing and managing farmers' groups: A SMART Skills manual. Catholic Relief Services, Baltimore, MD, and Modernizing Extension and Advisory Services project, University of Illinois at Urbana-Champaign, IL. Available at https://www.crs.org/sites/default/files/tools-research/organizing-and-managing-farmers-groups-smart-skills-manual.pdf. (accessed November 30, 2020).

Cseres, K.J. (2020). 'Acceptable' Cartels at the Crossroads of EU Competition Law and the Common Agricultural Policy: A Legal Inquiry into the Political, Economic, and Social Dimensions of (Strengthening Farmers') Bargaining Power. The Antitrust Bulletin, 0003603X20929122. https://doi.org/10.1177%2F0003603X20929122.

Davidova, S.M., & Thomson, K. (2013). Family farming in Europe: challenges and prospects. European Union. Brussels, Belgium. Available at https://www.europarl.europa.eu/RegData/etudes/note/join/2014/529047/IPOL-AGRI_NT(2014)529047_EN.pdf. (accessed November 30, 2020).

Eaton, C., & Shepherd, A.W. (2001). Contract farming: Partnerships for growth. FAO Agricultural Services Bulletin 145: Rome. Available at http://www.fao.org/3/y0937e/y0937e00.pdf. (accessed November 30, 2020).

FAOSTAT (n.d.). Available at http://www.fao.org/faostat/en/#data. (accessed January 13, 2021).

FAO (n.d). Family Farming Knowledge Platform. Available at http://www.fao.org/family-farming/data-sources/dataportrait/indicator-details/en/?ind=83450FAO (2017). Strategic Work of FAO to Reduce Rural Poverty. Rome, Italy. Available at http://www.fao.org/3/a-i6835e.pdf. (accessed November 30, 2020).

FAO, IFAD, UNICEF, WFP & WHO (2019). The state of food security and nutrition in the world 2019: safeguarding against economic slowdowns and downturns. FAO: Rome, Italy. Available at http://www.fao.org/3/ca5162en/ca5162en.pdf. (accessed November 30, 2020).

FAO & International Fund for Agricultural Development (IFAD). (2019). United Nations Decade of Family Farming 2019–2028. Global Action Plan. FAO: Rome, Italy. Available at http://www.fao.org/3/ca4672en/ca4672en.pdf. (accessed November 30, 2020).

Fischer, E., & Qaim, M. (2011). Linking Smallholders to Markets: Determinants and Impacts of Farmer Collective Action in Kenya. World Development, 40(6), pp.1255-1268. https://doi.org/10.1016/j.worlddev.2011.11.018.

Fischer, E., & Qaim, M. (2012). Gender, agricultural commercialization, and collective action in Kenya, Food Security, 4, pp.441-453. https://doi.org/10.1007/s12571-012-0199-7.

Foreign Agricultural Service (undated). Available at https://apps.fas.usda.gov/gats/ExpressQuery1.aspx. (accessed November 30, 2020).

Francesconi, G.N., & Wouterse, F. (2015). The Health of Farmer-Based Organisations in Ghana: Organizational Diagnostics and Governance Implications. The Journal of Development Studies, 51(3), pp.262-273. Available at https://www.ifpri.org/publication/health-farmer-based-organizations-ghana. (accessed November 30, 2020).

Fukuyama, F. (1999). Social Capital and Civil Society, IMF Conference on Second Generation Reforms. Available at www.imf.org/external/pubs/ft/seminar/1999/reforms/fukuyama.htm. (accessed November 30, 2020).

Fulton, M., Sanderson, K. (2003). Co-operatives and farmers in the new agriculture, report prepared for the co-operatives secretariat agriculture and agri-food Canada, March 2002. Occasional Paper #03.01, Centre for the Study of Co-operatives, University of Saskatchewan.

Herbel, D., Crowley, E., Ourabah Haddad, N., & Lee, M. (2012). Good practices in building innovative rural institutions to increase food security. Food and Agriculture Organization of the United Nations (FAO): Rome, Italy. Available at http://www.fao.org/3/a-ap096e.pdf. (accessed November 30, 2020).

Holmes, B. (2011). Citizens' engagement in policymaking and the design of public services. Canberra: Parliamentary Library. Available at https://www.aph.gov.au/about_parliament/parliamentary_departments/parliamentary_library/pubs/rp/rp1112/12rp01. (accessed November 30, 2020).

International Fund for Agriculture Development (IFAD) (2019). Support to Farmers Organizations in Africa Programme (SFOAP) Main Phase (2013-2018). Completion Report. Rome, Italy. Available at https://www.ifad.org/documents/38714170/41910781/sfoap_completion_report.pdf/df1a0e2a-d264-ff68-8e50-4865520f52e1. (accessed November 30, 2020).

International Labor Organization (ILO). (n.d). Labour statistics https://www.ilo.org/ilostat/faces/wcnav_defaultSelection?_afrLoop=718561470176849&_afrWin

dowMode=0&_afrWindowId=null#!%40%40%3F_afrWindowId%3Dnull%26_afrLoop%3D718561470176849%26_afrWindowMode%3D0%26_adf.ctrl-state%3D4b0yq4u4r_78. (accessed January 13, 2021).

International Labor Organization (ILO) (2020). ILOSTAT database. Data retrieved in May 10, 2020.

Jera, J., & Ajayi, O.C. (2008). Logistic modelling of smallholder livestock farmers' adoption of tree-based fodder technology in Zimbabwe. Agrekon, 47(3), pp.379–392. https://doi.org/10.1080/03031853.2008.9523806.

Kamara, A., Conteh, A., Rhodes, E.R., & Cooke, R.A. (2019). The relevance of smallholder farming to African agricultural growth and development. African Journal of Food, Agriculture, Nutrition and Development, 19(1), pp.14043-14065. Available at https://www.ajfand.net/Volume19/No1/BLFB1010.pdf. (accessed November 30, 2020).

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). American Psychological Association: Washington, DC. http://doi.org/10.1037/14953-010.

Kleinfeld, R., Zimmer, A., & Willems, U. (2007). Lobbying – Structures, Actors, Strategies. In: Kleinfeld, R. (Hrsg.): Lobbying. Strukturen, Akteure, Strategien. Wiesbaden: pg, 7-36.

Kristjanson, P., Okike, I., Tarawali, S., Singh, B.B., & Manyong, M.V. (2015). Farmers' perception of the benefits and factors affecting the adoption of improved dual-purpose cowpea in the dry savannas of Nigeria. Agricultural Economics, 32, pp.195-210. https://doi.org/10.1111/j.0169-5150.2005.00338.x.

La Via Campesina, n.d: The International Peasants' Voice. Globalizing hope, globalizing the struggle! https://viacampesina.org/en/international-peasants-voice. (accessed Jan 13, 2021).

Levins, R.A. (2001). Collective bargaining by farmers: time for a fresh look? Choices, 16(4), pp.15-18. Available at https://www.jstor.org/stable/43663319?seq=1. (accessed November 30, 2020).

Lowder, S.K., Skoet, J., & Raney, T. (2016). The Number, Size, and Distribution of Farms, Smallholder Farms, and Family Farms Worldwide. World Development, 19, pp.16-29. https://doi.org/10.1016/j.worlddev.2015.10.041.

Lusakatimes, September 20, 2016. Financial scandal of top brass of diverted billions to fund lavish-lifestyles. Available at https://www.lusakatimes.com/2016/09/20/znfu-financial-scandal-top-brass-diverted-billions-fund-lavish-lifestyles/. (accessed on January 13, 2021.)

Mastercard Foundation (2020). Farmer Organizations [WWW Document]. Available at https://www.raflearning.org/topics/farmer-organizations. (accessed November 25, 2020).

Ma, W., & Abdulai, A. (2016). Does cooperative membership improve household welfare? Evidence from apple farmers. China Food Policy, 58, pp.94-102. https://doi.org/10.1016/j.foodpol.2015.12.002.

McInerney, E. (2014). Cooperatives key to achieving sustainable agricultural Development, FAO, Rom http://www.un.org/esa/socdev/documents/2014/coopsegm/McInerney.pdf

Meemken, E.M., & Bellemare, M.F. (2020). Smallholder farmers and contract farming in developing countries. Proceedings of the National Academy of Sciences, 117(1), pp.259-264. https://doi.org/10.1073/pnas.1909501116.

Mishra, A.K., Kumar, A., Joshi, P.K., & D'Souza, A. (2018). Cooperatives, contract farming, and farm size: The case of tomato producers in Nepal. Agribusiness, 34(4), pp.865-886. https://doi.org/10.1002/agr.21563.

Naerstad, A. (2018). More and Better co-coordinator "Focus on family farming, food security and food sovereignty". Available at http://www.moreandbetter.org/en/news/successful-congress-for-the-pan-african-farmers-organization. (accessed January 13, 2021).

NEPAD (2014). Agriculture in Africa. Transformation and outlook [WWW Document]. Available at https://www.tralac.org/images/docs/6460/agriculture-in-africa-transformation-and-outlook.pdf (accessed November 25, 2020).

Ostrom, E. (2000). Collective Action and the Evolution of Social Norms. The Journal of Economic Perspectives, 14(3). Available at https://www.jstor.org/stable/2646923?seq=1. (accessed November 30, 2020).

Pappi, F.U., & Henning, C.H. (1999). The organization of influence on the EC's common agricultural policy: A network approach. European Journal of Political Research, 36(2), pp.257-281. https://doi.org/10.1023/A:1007057022114.

Penunia, E.A. (2011). The role of farmers' organizations in empowering and promoting the leadership of rural women. UN Women, FAO, IFAD, and WFP: Accra, Ghana. Available at https://asianfarmers.org/the-role-of-farmers%E2%80%99-organizations-in-empowering-and-promoting-the-leadership-of-rural-women/. (accessed November 30, 2020).

Pingali, P., Khwaja, Y., & Meijer, M. (2005). Commercializing small farms: Reducing transaction cost. Available at http://www.fao.org/3/a-af144t.pdf. (accessed November 30, 2020).

Pingali, P., Aiyar, A., Abraham, M., & Rahman, A. (2019). Linking farms to markets: reducing transaction costs and enhancing bargaining power. In Transforming food systems for a rising India (pp. 193-214). Palgrave Macmillan, Cham.

Poole, N., & de Frece, A. (2010). A review of existing organizational forms of smallholder farmers' associations and their contractual relationships with other market participants in the East and Southern African ACP region. Available at http://www.fao.org/fileadmin/templates/est/AAACP/eastafrica/FAO_AAACP_Paper_Series_No_11_1_.pdf. (accessed November 30, 2020).

Ragasa, C., Lambrecht, I., & Kufoalor, D. S. (2018). Limitations of contract farming as a pro-poor strategy: The case of maize outgrower schemes in Upper West Ghana. World Development, 102, pp.30-56. https://doi.org/10.1016/j.worlddev.2017.09.008.

Ram, D., Ganpat, W., & Narine, L.K. (2017). Management performance of farmers groups and its impact on membership: A prerequisite for group sustainability in Trinidad. Journal of Agricultural Extension and Rural Development, 9(10), pp.239-246. Available at https://pdfs.semanticscholar.org/53af/0316e48d4bff54e0694c7e44cc440d96065e.pdf. (accessed November 30, 2020).

Ritchie, H., & Roser, M. (2018). Urbanization. Our World in Data. Oxford University, UK. Available at https://ourworldindata.org/urbanization. (accessed November 30, 2020).

ROPPA, 2014: Pourquoi Une Universite Paysanne Du ROPPA (UPR): Why the University Paysanne ROPPA (UPR). Accessed on January 13, 2021. Available at https://roppa-afrique.org/IMG/pdf/magazine_vision_paysanne_du_roppa_no3.pdf. (accessed on Jan 13, 2021.)

Ruttan, V.W. (1968). Bargaining Power for Farmers (No. 1701-2016-139525). Staff Papers 14099, University of Minnesota, Department of Applied Economics. https://doi.org/10.22004/ag.econ.14099.

Scott, H.M.S. (2015). Interest Groups and Contemporary Agricultural Policy: An Examination of Niche Theory (Doctoral dissertation, The Ohio State University). Available at https://core.ac.uk/download/pdf/47055181.pdf. (accessed November 30, 2020).

Shiferaw, B., Obare, G., & Muricho, G. (2008). Rural market imperfections and the role of institutions in collective action to improve markets for the poor. Natural Resources Forum, 32(1), pp.25-38. https://doi.org/10.1111/j.1477-8947.2008.00167.x.

Shiferaw, B.A., & Muricho, G. (2011). Farmer organizations and collective action institutions for improving market access and technology adoption in sub-Saharan Africa. Review of experiences and implications for policy. Towards priority actions for market development for African farmers. https://www.researchgate.net/publication/281321739_Farmer_Organizations_and_Collective_Ac

tion_Institutions_for_Improving_Market_Access_and_Technology_Adoption_in_Sub-_Saharan_Africa_Review_of_Experiences_and_Implications_for_Policy. (accessed Nov 30, 2020).

Sinyolo, S. and Mudhara, M., (2018a). Farmer groups and inorganic fertilizer use among smallholders in rural South Africa. South African journal of science, (114(5-6), pp.1-9). https://doi.org/10.17159/sajs.2018/20170083.

Sinyolo, S., & Mudhara, M. (2018b). Collective action and rural poverty reduction: Empirical evidence from KwaZulu-Natal, South Africa. Agrekon, (57 (1), pp.78-90). https://doi.org/10.1080/03031853.2018.1451349.

Shokoohi, Z., Chizari, A.H., & Asgari, M. (2019). Investigating Bargaining Power of Farmers and Processors in Iran's Dairy Market. Journal of Agricultural and Applied Economics, 51(1), pp.126-141. https://doi.org/10.1017/aae.2018.26.

Straβner, A. (2006). Associations as a manifestation of neopluralism: Ernst Fraenkel. In Classics of Association Research. VS Verlag für Sozialwissenschaften. Wiesbaden, 2006 pp. 73-89.

Suzuki, E. (2019). World's population will continue to grow and will reach nearly 10 billion by 2050. World Bank Blogs, July, 8 2019. Available at https://blogs.worldbank.org/opendata/worlds-population-will-continue-grow-and-will-reach-nearly-10-billion-2050 (accessed Nov. 25, 2020).

Task Force Rural Africa (2019). An Africa-Europe Agenda for Rural Transformation, European Commission. Available at https://ec.europa.eu/info/sites/info/files/food-farming-fisheries/farming/documents/report-tfra_mar2019_en.pdf. (accessed November 30, 2020).

Tolno, E., Kobayashi, H., Ichizen, M., Esham, M. & Balde, B.S. (2015). Economic analysis of the role of farmer organizations in enhancing smallholder potato farmers' income in middle Guinea. Journal of Agricultural Science, 7(3), pp.123. https://doi.org/10.5539/jas.v7n3p123.

Vanni, F. (2014). Agriculture and Public Goods. Springer Science+Business Media Dordrecht. Available at http://www.springer.com/978-94-007-7456-8. (accessed November 30, 2020).

Verhofstadt, E., & Maertens, M. (2014). Smallholder cooperatives and agricultural performance in Rwanda: do organizational differences matter? Agricultural Economics, 45(supplement), pp.3952. https://doi.org/10.1111/agec.12128.

Verhofstadt, E., & Maertens, M. (2015). Can Agricultural Cooperatives Reduce Poverty? Heterogeneous Impact of Cooperative Membership on Farmers' Welfare in Rwanda. Agricultural Economics, 45(supplement), pp.39-52. https://doi.org/10.1093/aepp/ppu021.

Vorley, B., Cotula, L., & Chan, M.K. (2012). Tipping the Balance: Policies to shape agricultural investments and markets in favor of small-scale farmers. Oxfam Policy and Practice: Private Sector, 9(2), pp.59-146. Available at https://pubs.iied.org/G03470/. (accessed Nov. 30, 2020).

Windsperger, J., Cliquet, G., Hendrikse, G., & Srećković, M. (eds.) (2019). Design and Management of Interfirm Networks. Contributions to Management Science. https://doi.org/10.1007/978-3-030-29245-4.

Wolfenson, K.D.M. (2013). Coping with the food and agriculture challenge: smallholders' agenda. Food and Agriculture Organization of the United Nations: Rome, Italy. Available at http://www.fao.org/3/a-ar363e.pdf. (accessed November 30, 2020).

World Bank (2015). World Development Report: Mind, Society, and Behavior. World Bank: Washington, DC. https://doi.org/10.1596/978-1-4648-0342-0.

Wortmann-Kolundzija, E. (2019). Empowering Smallholder Farmers through Farmer Organizations: Insights from Kenya and Burkina Faso. https://dx.doi.org/10.2139/ssrn.3498199.

Wossen, T., Abdoulaye, T., Alene, A., Haile, M.G., Feleke, S., Olanrewaju, A., & Manyong, V. (2017). Impacts of extension access and cooperative membership on technology adoption and household welfare. Journal of Rural Studies, 54, pp.223-233. https://doi.org/10.1016/j.jrurstud.2017.06.022.

Zimmermann, R., Brüntrup, M., Kolavalli, S., & Flaherty, K. (2009). Agricultural Policies in Sub-Saharan Africa. Deutsches Institut für Entwicklungspolitik, Bonn. Available at https://www.die-gdi.de/uploads/media/Studies_48.pdf. (accessed November 30, 2020).

Annex

6.1 Agricultural Sector Characteristics in Selected Countries

Tab 4: Other National FOs in selected countries in Africa

1. Rwanda					
Organizations	**Characteristics**	**Structures**	**Members**	**Finances**	**Donors/Partners**
National Farmers Organization (IMBARAGA) of Rwanda (founded in 1992)	National umbrella organization	General Assembly; Board of Directors; coordination community; 4 regional offices; 25 district organizations; 1021 Farmers groups on village level; farmers' training center in Musanze	27.400 individual farmers (55% women farmers) organized in 26 districts in 4 regions (Northern, Southern, Western and Eastern Province)	Unknown	USAID, IFAD, FAO, EAFFF, Agriculteurs francais et development International (AFDJ), Criox Rouge Belgique, Swiss Development Cooperation Agency (SDC), Swedish International Development Agency (SIDA)
Syndicat Rwandais des Agriculteurs et Éleveurs (INGABO) (founded in 1992)	National umbrella organization, member of EAFF and WFO	President, Board, conflict resolution committee	4 district organizations (South Rwanda); 800 farmers' groups; 15.000 individual farmers; 56% women farmers	Unknown	SFOAP Programme - (IFAD, EU, SDC, AFD); FAO; Agriterra
National Cooperative Federation of Rwanda (NCCR)	National service to all forms of cooperatives	Board of Directors; Director General; service and advisory body	No individual member	Unknown	Rwanda Development Board; Sparkassenstiftung (German Ministry of Trade and Industry); IFAD, International Co-operative Alliance, World Trade Organization
2. Tanzania					
Organizations	**Characteristics**	**Structures**	**Members**	**Finances**	**Donors/Partners**
Agricultural Council of Tanzania (ACT) (founded in 1999)	National	President; General Assembly; Board of Directors; 7 district representations; member of SACAU and of WFO	97 member organizations representing 2.7 million farmers; fishermen groups; agriculture trade unions; agribusiness companies; sgricultural service providers and suppliers	Membership fee for the different members unknown	Agence Francaise de Development (AFD); Bill and Melinda Gates Foundation; East African Business Council; European Union (EU); IFAD; Swiss Development Agency (SDC); Yara International; German Ministry of Education; Norwegian Agency for Development Cooperation (NORAD)

Network of Small-Scale Farmers (MVIWATA) (founded in 1993)	National umbrella organization	Annual general meeting; Board of Directors; Council (Board and regional representatives); National Secretariat; 26 district organizations	200.000 farmers' groups – representing 3 million beneficiaries; 30 % of members women farmers	Unknown	Agence Francaise de Dévelopment (AFD); Agri. agencies via AgriCord; Alliance for Green Revolution in Africa (AGRA); European Union (EU); Fund for Agricultural Development (IFAD); SWISS Development Agency; USAID
Tanzania Federation of Cooperatives (TFC) (founded in 1994)	National umbrella organization	Unknown member of EAFF	6.000 primary cooperatives from all sectors; 700.000 individual members; 47 cooperative unions	Unknown	SWOAP via EAFF

3. Kenya

Organizations	Characteristics	Structures	Members	Finances	Donors/Partners
Kenya National Farmers Federation (KENAFF)	National umbrella organization	President; National Board; management team; county leader and coordinator; 20 projects financed by different donors	48 county organizations; 11 cooperative societies; 9 large scale farmer businesses; 36 commodity organizations	Annual membership fee is: Ksh.35,000 for County organizations, Ksh. 5,000 for cooperative societies & Ksh. 10.000 for commodity org. & large-scale farmers	IFAD; European Commission; AHA-Germany; AGRA FOSCA Programme; Finish Government; USAID; Kenyan Government; World Bank; FAO; EAFF; Norwegian Development Agency DANIDA (Danish Government); Agriterra
Cereal Growers Association (CGA) (founded in 1996)	National commodity organization	President; Board of Directors; field staff in counties; different projects financed by different donors	Cereal farmers; cooperatives	Ksh.25.000 pa large scale>500 acres; Ksh.10.000 Pa medium scale >50-499 acres; Ksh. 2.000 pa small-scale <49 acres	World Food Program (WFP); KBC-Bank; Christian Aid; French Development Agency; The Netherland Space Office (NSO)

4. Benin

Organizations	Characteristics	Structures	Members	Finances	Donors/Partners
Federation des Unions de Producteur du Benin	National umbrella organization	General Assembly; Conseil d´Administration;	6 regional organizations; 8 commodity organizations (Ass. Nat.	Membership fee	Dutch Embassy; Agence Francaise de Development; Cooperation

(FUPRO) (founded in 1994)		Bureau Executive; Departements de Sujet	des Aviculteurs, Ass. Nat. Mareyeurs, Ass. Nat. de Producteur de Cotton, Conseil de Concertation de Riziculteurs, Federation Nat. des Producteurs de Semences, Reseau des Producteurs d´Ananas, Union Nat. des Producteurs de Soja, Reseau Nat. des Pisiculteurs); 2 social organizations (Ass. Nat. des Femmes Agricultuers, and Ass. Des Jeunes Agriculteurs Modern)		Suisse; Agence des Etats-Unis le development international; International Fertilizer Development Centre; GIZ
Plateforme Nat. des Organizations de Producteurs des Agricoles (PNOPPA) (founded in 2006)	National umbrella organization	–	Federation des Union de Producteurs (FUPRO); Le Groupement des Exploitants Agricoles (GEA); Ass. Nat. des Aviculteurs (ANAB); Ass. Nat. des Epiciers et Primeur (ANEP); Organization Nat. des Producteurs (ONBB); Union Nat. des Pecheurs Marins et Assinliés (UNPMA); Synergie Paysanne (SYNPA); Federation Nat. des Producteurs du Palmier á Huile (FNPPH); Ass. Nat. des Organizations; Professionelles d´Eleveurs de Ruminant (ANOPER); Ass. Nat. des Femmes Agriculteurs	Membership fee	SFOAP; Agriterra; Agence Francaise de Dévelopment International; European Union; Cooperation Suisse

5. Ghana

Organizations	Characteristics	Structures	Members	Finances	Donors/Partners
Coalition of Farmers Ghana (COFAG)	(new initiative to organize farmers on national level)	No structure yet	Members not yet identified	Unknown	No partners / donors yet

FOs on district level	Service oriented organization	In various regions with several FBOs: Ashanti- 34 FBOS; Brong Ahafo- 10 FBOS; Central- 39 FBOS; Eastern- 119 FBOS; Grater Accra - 34 FBOS; Upper West- 14 FBOS; Volta - 4 FBOS; Western - 8 FBOS	Individual farmers (small-scale and large-scale); around 40% female farmers	Unknown	SFOAP program; World Bank

6. Malawi

Organizations	Characteristics	Structures	Members	Finances	Donors/Partners
Farmers Union of Malawi (FUM) (founded in 2003)	National umbrella organization Is a member of SACAU and WFO	President; Council; Board	**Regular members:** 256 local farmers groups (representing 1,024 million small scale farmers); 650 medium/large-scale farmers **Corporate members:** Agribusiness companies, agri-service organizations **Tertiary Institution Members:** Students, colleges, universities **Affiliated Members:** District/local government entities	Unknown	USAID, Swedish International Development Agency (SIDA), Japan Social Development Fund, World Bank, OXFAM, Royal Norwegian Embassy, We-Effect
National Smallholder Farmers Association of Malawi (NASFAM) (founded in 1994)	National umbrella organization Is a member of SACAU and WFO	General Assembly; National Assembly; Board of Directors; NASFAM-national; NASFAM-associations; regional level; 43 NASFAM-action groups; district and village level NASFAM clubs; rural women committee; NASFA-development; NASFAM-commercial	43 smallholder farmer groups representing 100,000 famers with 13 regional offices nationwide	Unknown	Unknown

7. Mozambique					
Organizations	**Characteristics**	**Structures**	**Members**	**Finances**	**Donors/Partners**
Ajuda Desenvolviemento de Povo Para Povo (ADPP) (Farmers Clubs Program of ADPP was founded in 2006)	Non-Governmental Organization	Farmers clubs in 7 provinces, each club has 25-50 members and a committee comprised to equal proportions of women and men; farm infrastructure for 5 clubs	Individual farmers in farmers' clubs	No membership fees Annual budget $23 million for all 4 sectors of activities 16% is from ADPP programs the rest is financed by donors	Foreign Affairs Ministry Finland; Spanish Government (AECID); International Union for Conservation of Nature IUCN); USAID; UDSA; European Commission; various foundations; private sector companies
National Peasant Union (UNAC)	National umbrella organization	None	Farm groups on local level; Cooperatives	Limited membership fee	IFAD; FAO; NGOs

(authors' compilation based on review of literature and organizations' web pages)

6.2 Investment priorities in FOs

In terms of investment priorities in the FOs, we suggest the following priorities. Table 5 provides a detailed description of activities in each of these areas:

Tab 5: Support (investments, capacity-building, and partnerships and networking) for FOs

	Types of services	Types of support for Farmers' Organization		
		Investments	**Capacity-building**	**Partnerships**
Political empowerment		Training materials, exchange visits	Training on how to lobby/advocate in policy processes, training on cooperation with different stakeholders	Regional and international FOs, government agencies
Services to support production	Access to inputs (seeds, fertilizers, pesticides), access to productive equipment, agricultural advisory services	Working capital, Input stores, productive equipment, training room(s),	How to deal with group purchase of inputs, how to design input supply mechanism for members, how to deal with equipment management, technical training,	Input providers, finance institutions, equipment providers, research institutes, providers for agricultural advisory services
Services for value addition	Access to equipment for processing, access to packaging and storage facilities, certification	Working capital, processing equipment, packaging material, certification fees, warehouses	Management of processing equipment, training on required techniques for certification, management of storage facilities,	Rural financial institutions, processing equipment providers, building material providers, certification enterprise/stakeholder
Services to support marketing	Collecting/grouping the supply, prospecting potential buyers, negotiating of contracts with buyers, providing information on market prices	Working capital, warehouses, market impact studies, communication network	Management of grouped sales, warehouse receipt systems, management of storage facilities, contract negotiation MIS training	Rural financial institutions, private buyers/transporters, public buyers (institutions), private exporters

(authors' compilation)

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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.
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Phone: +49-228-73-1861
Fax: +49-228-73-1869
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