

## **Towards A Cross-Sector Pluralistic Agricultural Extension System in A Decentralized Policy Context: A Ghanaian Case Study**

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### **ABSTRACT**

The dwindling government funding of agricultural extension in developing countries and the call on extension organizations to support farm households' livelihood security initiatives, has made the practice of pluralistic extension a realistic option for ensuring efficient and effective use of available resources for extension and sustainable development. The aim of the study was to understand the key factors that can contribute to successful pluralistic agricultural extension system in a decentralized policy environment in developing countries for sustainable agricultural development. The research used a qualitative case study based on a successful district level public agricultural extension organization in Ghana. Semi-structure interviews, supported with documents and observations, were used for the data collection. The case study shows that an important factor that can contribute to the success of a local level extension organization is its ability to coordinate its activities, and collaborate with other stakeholder organizations through the provision of forums, where organizations from different sectors can interact. Also, by establishing mutually beneficial working relationships and trust with stakeholder organizations where training of staff and other resources including working materials, funds, vehicles, and library resources can be exchanged or shared. These relationships can increase extension organization's capability to assist farm households in meeting their broader livelihood security needs in a more sustainable manner.

**Key words:** Pluralistic Extension, Decentralization, Agriculture, Cross-sector, Collaboration, Coordination

### **INTRODUCTION**

The agricultural extension system is one of the major vehicles for diffusing agriculture-related technologies and therefore has an important role to play in ensuring sustainable agricultural development and farm household livelihood security. Recent shift towards adoption, by decentralized extension organizations, of a sustainable livelihood approach requires the organizations to address a much wider range of farmer needs than they have in the past (Sutherland, Irungu, Kang'ara, Muthamia & Ouma, 1999; Ingram, Roncoli & Kirshen, 2002; Rivera & Qamar, 2003; Molua, 2005). To achieve this, extension organizations would have to foster a pluralistic extension system (Hanyani-Mlambo, 2002; Rivera & Qamar, 2003; Rivera & Alex, 2004). According to the authors, pluralistic extension system is one in which there is more than one extension service provider involved in the provision of extension services in a community. Smith (1997) and Rivera and Alex (2004) argued that public extension organizations can not do everything for farmers, and that there are areas of agricultural extension services (e.g. agricultural machinery, chemicals, hybrid seeds and livestock, veterinary supplies and pharmaceuticals) which are best suited to private sector provision. This point was also made by Rivera and Qamar (2003). Not surprisingly, other authors (World Bank, 2000; Minoiu, 2003; Richardson, 2003; Swanson & Samy, 2004;

Vannasou, 2006) have argued that as the focus of extension widens, decentralised extension organizations in developing countries will need to recognize the role other extension providers play in their local extension system.

Minoiu (2003) and Rivera and Alex (2004) argued that in developing countries, especially in Africa, extension services cannot use a single-sector approach, but rather, should operate as part of an integrated rural economy that incorporates agriculture and other sectors (e.g. education, health, finance, forestry, environment) to ensure sustainable development. The extension organization would have to view extension activities as an integrated part of a larger extension program, which is linked with other relevant organizations dealing with research, inputs, training, marketing, and other social services (Adhikarya, 1996). This is because the quality of extension programs depends fundamentally on good linkages with the programs of other development organizations (e.g. micro-credit programs, input supply) in a particular local system (World Bank, 2000). As such, extension can now be seen as a multi-sector network of knowledge and information support for rural people within the context of a wide rural development agenda where different organizations from the public and the private sectors provide differentiated services to meet the complex and wide-ranging needs of farmers (Röling, 1991; Rivera & Alex, 2004).

Several authors (Hanyani-Mlambo, 2002; Rivera & Qamar, 2003; Rivera & Alex, 2004) in the extension literature advocate for extension organizations in developing countries to operate as pluralistic networks of institutions providing varied information to farm households, for sustainable sources of resource for extension. Nonetheless, these authors have raised the concern that a pluralistic extension system presents a major challenge in coordination and collaboration among both public and private extension providers for unifying services, and avoiding duplication and wastage of scarce resources. Interestingly, little empirical information is provided in the extension literature on how pluralistic agricultural extension can be organized effectively in the new decentralized environment in developing countries for sustainable agricultural development. The purpose of this paper is therefore to provide an understanding of key factors critical to ensuring an effective and sustainable cross-sector pluralistic extension system in a decentralized agricultural extension environment based on a Ghanaian case study.

## **RESEARCH METHODOLOGY**

This research article is based on a scholarly work (Okorley, 2007) conducted between 2003 and 2007. The article provides an in-depth understanding to an aspect of an earlier article by Okorley, Gray and Reid (2009) which generally identified the key factors of success for decentralized public agricultural extension. The research adopted a single-case study method as the most appropriate strategy to understand in-depth the above phenomenon of pluralistic extension which deals with complex organizational processes. To select a case for this study, the determining criteria were that it was seen as: successful in terms of increased stakeholder participation and enhanced contribution to farmer household livelihood security; having staff that could articulate why the organization was successful; having the majority of the staff - particularly senior staff - who had worked for the organization from the inception of decentralization; and having good archival records of its extension activities. The Ministry of Food and Agriculture staff were asked to use these criteria to rank the four most successful district extension organizations within the Central Region that comprised some 13 district extension organizations. Based on a preliminary investigation on their suitability for the study, one case was selected because it was the most successful, accessible and the staff were receptive.

Multiple sources of qualitative data collection were used, namely interviews, documents and observations. Participants for the study were selected from within the case organisation and outside using a stratified sampling technique. The aim in the stratification process was to obtain information from both key informants at different levels of the organization and different stakeholders they work with. In all, it was possible to undertake 38 interviews from 32 key informants for the study.

The qualitative data analysis process involved coding data, searching for themes, and relationships between them, and summarizing and integrating the themes to highlight the factors that promote pluralistic extension in the study area. The computer program, NVivo, was used to undertake the qualitative data analysis. To ensure a high quality case study, several strategies including data triangulation, establishment of chain of evidence, and explanation-building analytic strategy were adopted to reduce threats to reliability and validity of the research.

## **RESULTS AND DISCUSSION**

### **The Context of the Case**

The organization under study is in the Assin district of Ghana. The organizational and environmental context of the case organization exhibits a wide range of factors that may have a consequence on how the organization operates. It is a district extension organization that has been decentralized since 1997 (Okorley, 2007). It is part of a national extension organization in the developing country, Ghana. The case is administratively decentralized, but this can be described as deconcentration because it has only operational responsibilities to design and implement extension programs together with the local people, under the supervision of the District Assembly and Ministry of Food and Agriculture (MoFA) at the regional and national levels.

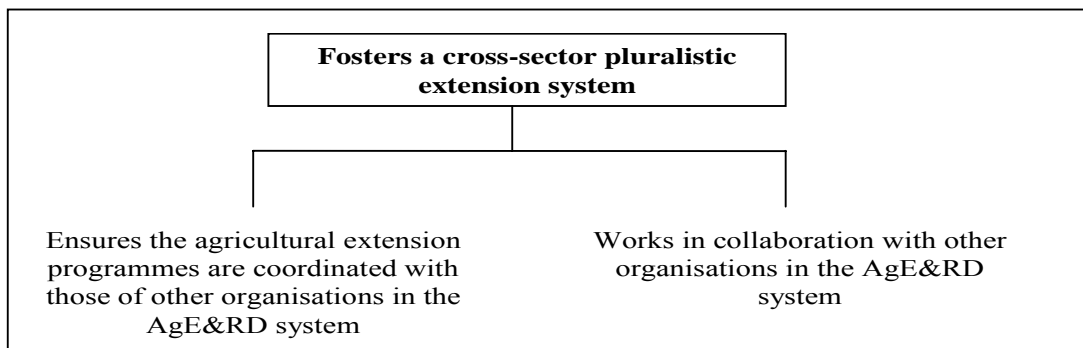
The District Assembly is responsible for the overall development of a district. The case organization, also called District Agricultural Development Unit (DADU), works under the District Assembly and has representation in the District's Development Planning Committee. It assumes and performs leadership roles in the planning and implementation of the district's agricultural development programs. As such, it plans and organizes local development activities with farmer groups in the sub-districts, under the supervision of the MoFA at the regional level and general oversight by national directorate. The farmer groups are made up of farmers with a common interest who undertake learning projects with the objective of addressing a particular need/problem and/or learning about particular techniques or technology.

The DADU has highly qualified, mature (mostly 30-45 years old), and experienced management and field staff. However, it has limited staff (field staff to farmer ratio is 1: 5364), physical infrastructure, and funding from government is inadequate and uncertain. Yet, it has the mandate to increase food security, reduce poverty, and improve the livelihoods of farmers, fishermen, processors, and traders in the district (MoFA, 2002). Thus, the organization must service a large number of clients over a large geographical area where the road network is poor. Farmers in the district are generally poor, illiterate, and farm small plots ( $\leq 4.0$  ha). Nevertheless, there are several farmer-based organizations, NGOs, and some support organizations (e.g. banks, agro-industries, input shops) in the district. There also are decentralized departments of the District Assembly who work in conjunction with the case organization in district development planning and in different areas. The departments include the District Administration, Education, Youth and Sports, Social Welfare and Community Development, Health, Roads and Transport, Works, Trade and Industry, Disaster

Prevention, Health, Finance, Physical Planning, and National Resource Conservation. The network of these organizations involved in agricultural extension and other rural development activities forms the Agricultural Extension and Rural Development (AgE&RD) system. It is in the light of the above context that the results and discussion of this research is presented.

**Towards a cross-sector pluralistic extension system**

The results of the study show that the case organization (i.e. DADU) has recognized that its efforts to support sustainable development and food security initiatives to improve livelihood security of farm households have a greater chance of success if it fosters a cross-sector pluralistic extension system to integrate its activities with those of other sector organizations and groups in the Agricultural Extension and Rural Development (AgE&RD) system. Thus, it ensures that its agricultural extension program is coordinated with those of other organizations in the AgE&RD system and works in collaboration with stakeholders’ organizations in the system (Figure 1).



**Figure 1. DADU's means of fostering a cross-sector pluralistic extension system**

Fostering a cross-sector pluralistic extension system for the organization under study means that it tries to ensure that its efforts are integrated with those of other sector organizations (e.g. health, environment, and road and transport) in the AgE&RD system that are working to improve farm households’ livelihoods in the district. This approach was found to be critical to the success of the organization because of farmers’ needs (or problems) in one single sub-district encompass many different sectors and go beyond the capabilities of a field extension agent and the district extension organization to meet or solve. The approach re-affirms this view expressed by a key informant that:

...we (staff of DADU) realized that the responsibilities (assisting farmers to improve their livelihoods) are not on MoFA (DADU) alone. Certain problems will best be solved in collaboration with other organizations (District Director of Agriculture, personal communication, May 21, 2004, para. 235).

**Coordination**

Similarly to the views expressed in the literature (World Bank, 2000; Minoiu, 2003; Richardson, 2003; Vannasou, 2006), the case organization is moving away from the single public sector approach to a multi-sector approach to promote increased and sustainable agricultural production. First, it is important to note that a pluralistic extension environment is

already available in Ghana where extension services are provided by NGOs, input providers, and some government departments. The case organization has realized that it can make use of this pluralistic environment by taking a coordinating role so that the resources it and other organizations put into extension are used more efficiently for sustainable agricultural development in the district. Second, it has realized that it does not have the capabilities to meet the broader livelihood security needs of farm households in the district where it operates; therefore, it has sought input from extension providers and other organizations from sectors outside of agriculture, such as forestry, health, and road construction. Thus, it is attempting to coordinate cross-sector extension provision.

Even though the pluralistic extension system is not covered extensively in the extension literature, some authors (Röling, 1991; Qamar, 2000; World Bank, 2000; Rivera & Alex, 2004) have suggested the need to have a mechanism for coordinating stakeholder activities for an effective pluralistic extension system involving NGOs, professionals, and private institutions in extension provision. Qamar (2000) made the point that the key challenge in adopting a pluralistic extension system is the coordination of the various organizations. In Qamar's view, the absence of such coordination can lead to conflicting technical recommendations which can create confusion for farmers.

To promote coordination between the organizations that work with farmers in the district, the case organization provides platforms (fora) where organizations from different sectors can interact. Several authors (Röling, 1991; Pretty, 1995; Chambers, 1997) have underscored the importance of creating a platform for stakeholder interaction for the provision of extension services that reflect the needs, values, and realities of stakeholders. The case organization uses two types of fora to promote this coordination. First, it uses a stakeholder consultative planning workshop to create a forum where the extension capabilities of various extension providers are identified and this information is used to plan its extension activities and the ways in which it will collaborate with other extension providers. Second, the case organization conducts issue-focused fora where it brings together farmers and organizations that have an interest in the issue to develop a coordinated approach to deal with the issue. These interactions provide opportunities for the organizations to build relationships and to understand each others' aims, roles, activities, and capabilities. Such information is necessary for fostering a cross-sector pluralistic extension system in the district. This approach aligns with the views of Röling (1991) and Rivera and Alex (2004) that rural development is complex and requires the provision of differentiated - but interrelated - extension services from several organizations.

The findings from this study support the emerging view that no one organization can promote broad-based sustainable development without coordination with, and support from, other stakeholders (Röling 1991; Chambers, 1997; Pretty, 2003). Farm household needs, such as HIV/AIDS education/awareness campaigns and child nutrition, are key agricultural needs as they significantly impact on farm households' ability to improve the contribution agriculture makes to their livelihood security. Such needs are beyond the capability of the case organization to address. The term capabilities here, refers to what resources and organizational structures are available to the organization to meet the needs of farm households on an ongoing basis. However, given the importance of HIV/AIDS awareness/education and child nutrition to the livelihood security of farm household, the case organization and the Ministry of Health in the district are coordinating their efforts to assist farm households in these two areas of need. Field extension agents incorporate HIV/AIDS awareness information into their farmer extension meetings. Likewise, if the case organization has organized

a farmer forum for a particular reason, it will inform other organizations such as the Ministry of Health or relevant NGOs, so that they may come along and present relevant information to the forum as well.

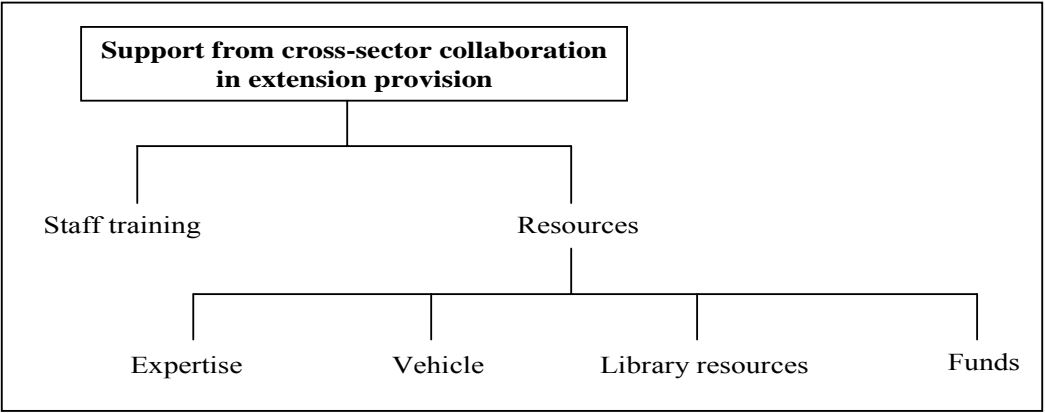
This integration, as described above, allows farmers to choose among alternatives to address one or several of their livelihood needs because the various organizations that coordinate with the case organization offer different services. This, again, is also consistent with the views of key authors in extension and rural development (Röling, 1991; Pretty, 1995; van den Ban & Hawkins, 1996; Scarborough, Killough, Johnson & Farrington, 1997; Rivera & Qamar, 2003; Rivera & Alex, 2004) that extension is no longer a unified public sector service, but rather it is a multi-institutional network of knowledge and information support for rural people. More importantly, the finding supports the views of Rivera and Alex (2004) and Cristóvão, Koehnen and Portela (1997) that government extension organizations can play an important “coordination” role in the development of a pluralistic extension system, where different organizations can work concertedly along individual lines or in collaboration to provide extension to meet a variety of farmer needs in a community.

### **Collaboration**

Collaboration with other organization within the district, AgE&RD system is a major move by the case organization towards establishing a cross-sector pluralistic agricultural extension to ensure sustainable development and farm household livelihood security. The term collaboration here means working together or in association with others for a common aim. Because the knowledge and information needs of farmers are diverse, there are benefits from having a range of stakeholders collaborating in the delivery of extension services in a decentralized extension environment (Rivera & Alex, 2004). The Asian Productivity Organization (2003), using Asian countries as examples, indicated that a major problem of decentralized extension systems in developing countries is their weak collaboration with farmer organizations, NGOs, and the private sector in service delivery.

To succeed, it is suggested that decentralized extension organizations in developing countries would need to establish and maintain ongoing collaboration with farmers and other stakeholders (World Bank, 2000; Madukwe, 2003; Rivera & Qamar, 2003; Garforth, 2004; Rivera & Alex, 2004; Swanson & Samy, 2004). Interestingly, there is limited empirical information in the extension literature on mechanisms and forms of collaborations that can inform theory, policy, and practice in decentralized extension organizations, especially those in Africa for sustainable agricultural development.

The forms of collaboration undertaken by the case organization are twofold. It collaborates to support the efforts of other organizations in the system, likewise, it collaborates with other organizations to gain support for their efforts. The organization supports other organizations in the district in two key ways (Figure 2). Firstly, it provides training for staff of other organizations. Some organizations in the district AgE&RD system are working with farm households in areas of agricultural production in which they lack technical expertise. Where the case organization has capabilities in these areas, it assists these organizations through staff training. An example of this is the organization’s work with the Forestry Service Division (FSD) in the district. The FSD were promoting bee keeping, mushroom production, and snail farming as alternative sources of livelihood for farm households living close to forest reserves in the district. The case organization provided training for FSD field staff as they lacked technical expertise in these non-traditional agricultural enterprises.



**Figure 2. Typology of supports from cross-sector collaborations in extension provision**

The second way in which the case organization provides collaborative support is by making available its own staff and resources, such as vehicles, libraries, and contract funds to assist the field efforts of other organizations in the AgE&RD system. The level of collaboration by the case organization with other organizations varies depending on the extent to which the efforts of the other organizations are directed at farm households’ needs similar to those that are a focus for the case organization’s extension work. Staff may work with another organization for a short period of time or the relationship may be more of an informal partnership. The case organization’s field staff works together with the FSD to implement and monitor FSD’s alternative livelihood schemes in the sub-districts because the scheme’s desired outcomes for farm households match those that the case organizations also seek. Similarly, the Director of World Vision International (WVI), operating at the study district, highlighted this type of collaboration in the following quotation:

...we are interested in helping development at the grassroots level in the rural communities in the area of food security... But we are not so operational (no field staff) so we depend on the stakeholders. We are interested in the MoFA (DADU) because their frontline staff are in the communities and, if we work with them, the support will eventually reach the beneficiaries (Director, World Vision International, personal communication, May 6, 2004, para. 96).

The WVI funds a project that promotes bee-keeping and improved banana and plantain varieties among farmers. Although WVI does not have field staff, because the focus of the project complements the work of DADU, their field staffs works to implement the project in the sub-districts. The DADU also has a library facility that allows them to lend relevant agricultural reference materials to other organizations in the district.

Although the practice of contracting out NGOs by DADU for specific agricultural extension services in the district is not well developed, this is contributing to ensuring the best use of DADU’s capabilities in meeting the key needs of farmers in the district. The term contracting out is being used in the sense that DADU established a formal contractual agreement with NGOs and fund specific services they undertake with farmers, which is also a major priority of DADU. In this formal contractual relationship, DADU works with NGOs for mutual dependence and thus their mutual interest in developing a co-operative relationship to assist farmers. As such, it ensures quality control of the activities of NGOs it outsources through regular monitoring and technical support where necessary.

For example, the organization has signed a contract with an NGO called Rural Friend to train farmer-based organizations (FBOs) in what it calls “development dynamics” (leadership skills, functions of management committees, conflict management resolution, and book keeping) and business planning (production strategies, costing and marketing, and small-scale project management and expansion) in the sub-districts. This is important to the case organization because it has an aim which is similar to that of Rural Friends, that is to build the business capacity of FBOs – an important mechanism for establishing a sustainable group-based extension approach (Okorley, Gray & Reid, 2008). However, it currently lacks the capability in terms of expertise in development dynamics and business planning to train the FBOs in the district. Similarly, due to a lack of field staff numbers, the case organization is engaging another NGO called the Adventist Development and Relief Agency (ADRA) to provide extension services to cocoa farmers (commodity-specific extension) in some cocoa growing sub-districts in the district.

By and large, by establishing different working relationships with other stakeholder organizations, the case organization has also obtained access to resources for extension delivery and staff training. This finding agrees with the claims of several authors in extension (World Bank, 2000; Madukwe, 2003; Pretty, 2003; Rivera & Qamar, 2003; Garforth, 2004; Rivera & Alex, 2004; Swanson & Samy, 2004) that ongoing working relationships and collaboration with stakeholders are essential for successful extension operation. The finding thus highlights the importance of the Ghanaian agricultural policy strategy, FASDEP (MoFA, 2002), which supports and encourages stakeholder collaboration in extension provision.

To facilitate collaboration, the case organization has placed emphasis on building strong relationships with stakeholder organizations. To this end, it involves stakeholder organizations in its decision-making processes (planning and evaluation). This opens up the organization for public scrutiny, builds trust, and enhances networks for service provision. Similarly, Torres, Douthwaite, Velasco and Ashby (2004) in a case study of extension through research in Colombia, reported that effective collaboration for extension provision depends on mutual trust among stakeholders. This is also consistent with the view of Jackson and Stainsby (2000), who emphasized the importance of good and mutually beneficial working relationships with stakeholders. In their view, such working relationships promote commitment for collaborative action in extension provision. Also, Torres et al. (2004) have argued that contact, respect, accountability, and shared decision making with stakeholders are useful in forging good working relationships for effective extension work. The case organization’s actions also support the claim of Leeuwis and van den Ban (2004) that stakeholder involvement in planning and evaluation processes strengthens the extension organization’s relationship with stakeholders for collaboration.

## **CONCLUSIONS**

This case study portrays a district level public extension organization that is making efforts to engage other government agencies, NGOs, and private organizations in partnerships for sustainable agricultural development through coordination and collaboration. It can be concluded from the case study that sustainable agricultural development in African can be improved through cross-sector pluralistic extension approach. The study established that key factors that have contributed to the success of the case organization have been its ability to coordinate its activities with other development organizations and collaborate with stakeholders in the district, a practice supported by the extension policy in Ghana and



a necessary condition for sustainable agriculture. The study shows that in a context where other extension service providers, such as NGOs, input providers, and some government departments, exist and are functional, it is realistic to practice a cross-sector pluralistic extension to create the capabilities needed to meet the broader livelihood security needs of farm households. The study shows that an important means by which this can be achieved is for extension organizations to create platforms/fora where organizations from different sectors can meet and interact to build mutually beneficial relationships and to understand each others' aims, roles, activities, and capabilities. It can also be concluded, based on this study, that a local agricultural extension organization can establish different collaborative working relationships – formal and informal – with other stakeholder organizations based on trust and mutual respect, to obtain access to resources for extension delivery and staff training. The resources it can obtain from such collaborations may include materials, access to vehicles, staff, and funds. Also, a local agricultural extension organization can provide resources and training to other stakeholder organizations where it believes such inputs will help it improve the contribution which agriculture makes to farm household livelihood security. Similarly, these may include access to vehicles, library resources, staff, and funds.

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