Contemporary Challenges of Agricultural Extension Service Delivery in Tanzania

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Abstract

Agricultural extension services in Tanzania have always been considered to be weak since they have often not lived up to peoples' expectations in terms of their contribution to the development process. Yet under the ongoing government reform process the same services have been assigned critical role to foster the transformation of the agricultural sector and hence, accelerate the development process, especially in rural areas. This paper looks at the contemporary challenges facing agricultural extension services that are being provided by the public and the private sector under new institutional arrangements.

Keywords: Agricultural extension services, service providers

Introduction

Do we need Agricultural Extension Services (AES)? Conversely, can the agricultural sector be improved or transformed without an effective agricultural advisory service? These and related questions are not new to the debate regarding the efficacy of AES in Tanzania. Indeed, at one point while touring Mwanza region (during the 1970s), the first president, Mwalimu Julius K. Nyerere lashed at the poor performance of extension personnel in the region, going as far as saying that he could sack all agricultural extension staff (*Mabwana Shamba*) national-wide and agricultural production would continue unabated. Of course, the sacking did not occur. So what could have happened to agricultural production in the absence of *Bwana and Bibi Shambas* remains speculative? However, there is no evidence either that performance of the staff improved thereafter. In fact, various studies have shown that (i) agricultural productivity has not improved very significantly since independence (Isinika *et al*, 2005) (ii) most of the increase in production, especially of food crops has come from area expansion rather than productivity gains (Isinika et al, 2005; Isinika 1995) and (iii) the contribution of agricultural extension services to the limited level of productivity gains in agriculture have been marginal (Isinika, 1995). The question as to why the agricultural sector has not improved despite over forty years of post-independence agricultural extension services and research is not dealt with here because of the many external factors influencing agricultural performance.

Despite their shortcomings, AES have been perceived as critical instruments of agricultural transformation since independence (Mattee, 1978). As envisaged by the father of the nation, the first President of Tanzania, attaining food self sufficiency was high on the

political agenda then (Nyerere, 1973), even though policy instruments to achieve this goal were sometimes counter effective. Consequently, extension services were expanded in terms of personnel numbers and their mandate was broadened to include paying more attention to food crops (Hanak, 1986). However, developing effective AES to realize set development objectives has always remained a daunting challenge.

Meanwhile, Tanzania has undergone significant changes during the last two decades in terms of political and economic orientation. Previously, provision of AES was the exclusive mandate of the government, under the coordination of the ministry responsible for Agriculture. Other actors played a minor role for which they were not really accountable. Following economic liberalization from 1986, the roles of key actors in the economy, including the government, the private sector and the public in general has had to be redefined. This has also necessitated a change in the manner AES are perceived as well as how they are delivered to the clientele. This paper examines the contemporary challenges of providing AES in Tanzania, within a market economy framework and a globalising environment.

Contemporary Agricultural Advisory Services

The current and future orientation of agricultural extension services in Tanzania stems from the Agricultural policy of 1997, which clearly states the government's intention to broaden the spectrum within which AES are provided, in terms of both providers and the range of clientele. The Local Government act No. 6 of 1999 transferred the responsibility of providing AES from Agricultural Lead Ministries (ASLM) to Local Government Authorities (LGAs), which currently fall under the Ministry of Regional Administration and Local Government (MRALG). This implied decentralizing extension services from the technical ministries to LGAs. Consequently, in 1999 technical staffs responsible for delivery of agricultural extension services were redeployed to LGAs where they are answerable to the immediate beneficiaries of their services.

The national vision is to transform agriculture from the present subsistence mode of production to commercial orientation by the year 2025. Several policies and strategies have been developed to provide guidance in pursuing the national goals of poverty reduction and attaining food security both at the national as well as the household or personal level. For the agricultural sector, the transformation process is guided by the Agricultural policy of 1997, the Agricultural Sector Development Strategy (ASDS) of 2001 and the Agricultural Sector Development Programme (ASDP) of 2003.

The decentralized AES are expected to play a facilitating role in order to complement the efforts of other actors in the agricultural transformation process. In this respect, the Agricultural Sector Development Programme (ASDP) has sub-programme B to address agricultural sector support at the national level. Agricultural advisory services fall under component B2, along with research, technical services and training. This component is designed to establish the basis for agricultural growth (URT, 2003). Under advisory services, possible interventions have been proposed that include:

- Improving the capacity for agricultural sector extension services
- Providing advise on extension operation and management to districts and other service providers
- Technical backstopping to districts and other service providers

Implementation of the ASDP and hence the ASDS is expected to be an ongoing concern up to the year 2010, setting the base for the long term national goal of reducing poverty through agricultural transformation from subsistence to commercial production, while also ensuring food security at all levels, from household to national.

It is now seven years since the ASDS was approved in 2001. The question is, can we observe on the ground, institutional and operational changes in as far as agricultural advisory services are concerned? And, if such changes are occurring, are they contributing to positive productivity gains and making changes such that rural incomes are rising and livelihoods are being improved? In this discussion we do not intend to provide answers to all these pertinent but daunting questions. Rather, these questions are raised here so that various actors in the agricultural transformation process will constantly come back to them as they strive to fill the gap between the present situation and the future desired target in as far as achieving sustainable livelihoods for all Tanzanians are concerned, especially in rural areas.

Both the ASDS and ASDP present the agricultural advisory service as a key element in the entire institutional set-up for agricultural transformation to occur. Meanwhile, there are several studies, which have shown that the AES are not always the primary source of agricultural technical information for the majority of farmers in Tanzania (Isinika and Mdoe 2001). For the advisory services to play a meaningful
role in economic transformation, farmers must exert an effective demand on the service providers, who must in turn make a difference to farmers and other stakeholders, both in terms of improving their productivity as well as enhancing their access to markets such that the bottom line (net returns as well as food security) is realized by an increasing number of people overtime.

In order to discern the role of service providers under the proposed future arrangements, involving extension service provider from the private sector, two studies were carried out in the year 2000 (MAC, 2000) and in 2003 (MAFS, 2003). While the main focus of both studies was privatisation of extension services, they nonetheless provided information on a number of issues that are pertinent to the present discussion as presented below.

Going through the Transition

Perceptions on Decentralized Extension Services

Following decentralization of AES in 1997 and redeployment of extension staff to LGAs in 1999, most officials within LGAs, including District Commissioners, District and Municipal Executive Directors, Council Chairpersons as well as Councillors were very receptive of the change. It was observed that under the new arrangement, District Council leaders would have more say on the quality of extension services and they would provide closer supervision than in the past.

However, Agricultural extension staff had mixed feelings. While a minority welcomed the idea of working under the direct supervision of District Councils, the majority were however, concerned that their performance may be judged to be poor because of lack of understanding on the part of Councillors, other leaders as well as farmers regarding the role of an extension worker, which is basically educational. In practice this translates into specific tasks that can be monitored and evaluated.

Moreover, such tasks should cumulatively (over time and space) be able to impact on agricultural performance and consequently on livelihoods within farming communities. There is ample evidence however, that extension agents are often assigned other non-educational roles, some of which actually undermine their primary

educational role (Benor, 1977; Isinika, 1995). The extension agents were also concerned that they have been detached from their technical support system (the ministry), which would affect their professional development.

To support their claims, extension agents cited several examples where their employers (LGAs) have forced them to undertake various tasks such as assisting in tax collection, which is in direct conflict with their educational role. At the same time, there have also been complaints levelled against extension agents who provide advisory services without having live examples on their own farms or on government demonstration plots. The latter have declined or are none existence due to lack of funds. Meanwhile, there is no law that requires Agricultural Extension Agents to have personal farms that also serve as demonstration plots.

While some Councillors were aware and receptive to the decentralization of AES, farmers were not informed of the administrative change and its implication to them as clients. It is therefore unlikely that farmers would exert different demands from the reorganized agricultural extension services. The apathy that farmers have towards the majority of Agricultural extension staff should be expected to continue. Meanwhile, future providers of extension services must also understand the current tasks of agricultural extension agent, upon which they are expected to improve in order to contribute to the agricultural transformation process.

Agricultural Extension Tasks

The year 2000 study identified a number of agricultural extension tasks as stated by various stakeholders. Under the Local Government Act, District Councils are expected to perform a number of extension tasks, which include, sectoral data reports, markets and marketing of crops, advisory services to farmers and livestock keepers, control of crop pests and diseases and irrigation. Others are; fertilizer and agricultural chemicals for crops and livestock, crops seeds/gemplasm and livestock gene pool, farm tools and equipment for crops and livestock production, livestock health services, cooperatives, resource mobilization as well as coordination, monitoring and evaluation.

In contrast to these tasks, as stipulated in official documents, Table 1 below presents a list of extension tasks as stated by district-based stakeholders.

Table 1: Extension Tasks as listed by District Based Stakeholders

District Executive Directors & Councillors	Farmers	Extension Agents
• Manage livestock clinics • Coordinate supply of day old chicks • Provide artificial insemination services • Coordinate and facilitate supply of agricultural chemicals and fertilizer • Advice on various aspects of farming • Teach and advice on use of fertilizer and agricultural chemicals • Advice on management of cattle and goats • Offer technical advice on seed production • Manage demonstration farms	• Provide education and information to farmers • Provide information on new seed • Offer training on animal drawn technology (ADT) • Conduct farm visits • Advice on better crop management practices • Advice on management of eroded land • Offer technical advice on leasing land for agricultural development • Advice on organic farming and proper use of inorganic fertilizer • Advice on use of traditional medicine or indigenous technical knowledge (ITK) in agricultural production	• Offer technical advice on crop production • Educate and demonstrate on manure application • Conduct on-farm trials for different technology aspects • Provide assistance to get agricultural inputs to remote places • Mobilize farmers' groups to address specific needs (e.g. plant protection brigades in Kondoa district) • Advice on diseases and use of agricultural inputs including chemicals and drugs • Provide training on various aspects of farming • Conduct demonstration on different aspects of farming • Advice on soil fertility maintenance including fertilize and manure use • Advice on improving local livestock herd • Advice on dry land farming • Advice on use of local herbs and medicine (ITK) for livestock • Provide training on ADT • Advice on improved feed formulation • Advice on establishment of ranches and improvement of local cattle herds through cross breeding • Advice on soil and water management • Introduce leguminous pasture seed for dairy farmer • Sensitise and train farmers on food storage and utilization • Carry out meat inspection

Source: MAC (2000)

Based on this list, a number of conclusions were reached, some of which are discussed below. Although mobilization of farmers is stated as one of the extension tasks, local leaders and farmers alike do not reflect on this mandate in the list of tasks they perceive. On the list from agricultural extension agents, mobilization of farmers to address various farming needs was only mentioned in two districts among eleven that were visited in the year 2000. Tasks that relate to technology transfer dominate the list, which implies that the goal of reinforcing the group extension approach and that of increasing the use of participatory methods had not been achieved. Participatory methods

emphasize on problem solving as a strategy for empowering farmers and other stakeholders in order to enhance the effectiveness of extension services.

However, most of the extension agents expressed the view that mobilization of farmers was the work of political leaders. They stated for instance that an extension agent could not convene a meeting in a ward or a division. They also felt that as technical staff, they could only come in at a later stage in the development process, after farmers have realized the need for technical expertise in farming. It is widely known that many extension agents lack expertise in problem solving and group facilitation (BACAS, 1997). While efforts have been made to improve such skills, further improvement is still required.

Despite the stated intention of limiting the tasks of extension staff to their educational role (advisory, training and facilitation), both farmers and Councillors implied that they expect their local agricultural extension agent to be directly involved to supply farm inputs within their area of jurisdiction. It was noted that farmers tend to have more confidence on the quality of farm inputs that are supplied by extension agents. The existing institutional mechanism for quality control of agricultural inputs that are sold in the market is particularly weak. Moreover, the extension agents may be the only source of agricultural inputs in remote areas, where private traders do not operate. But, once extension agents take up the task of input provision they face a risk if the inputs they supply turn out to be of poor quality. This would undermine their educational role.

Extension agents similarly raised the concern that when they offer technical advice for which farmers fail to obtain the necessary inputs from the market due to unavailability or un-affordability, it makes their profession look redundant or even odd. In such cases farmers perceive the extension agents as being theoretical professionals with no practical solutions to their problems. It was further stated that some of the proposed technical solutions, such as use of organic manure and use of herbal pesticides could only be used on a limited scale and in some cases the efficacy of such prescriptions is still under investigation. Moreover uncoordinated use of such technologies may deplete the limited reserve of plants from which the pesticides are extracted, unless efforts are made to undertake sustainable harvesting or to replant. This means, while various alternative technologies are being widely publicized in the media, the frontline extension agents lack answers from research and policy makers on some of the fundamental questions regarding their efficacy and sustainability.

Will farmers increase the demand of an improved agricultural service system? Experience shows that, even if the extension services improves, it may take a while before farmers exert effective demand for the services. For instance, it is asserted that farmers may not know what type of services to demand from an extension agent since they perceive that they know everything they need to know about farming, on which they have a lifetime experience. Focus group members in Ilula village (Iringa region) for example, indicated that about 90% of the farmers in the village felt they did not need external advice on farming since they have accumulated many years of practice and experience. In the survey on the other hand, the majority of respondents who did not seek extension advice (34%) found little reason to do so, since they felt they had the required farming experience (Isinika and Mdoe, 2001). This group of clients will require specific targeting to change their mindset, before moving into changing their practice.

For this to happen, extension agents must have something really tangible to offer to farmers. Combining demonstration, persuasion and persistence will be critical elements as illustrated by the experience presented in Box 1.

Box 1: A Converted Farmer

"I will never go back to traditional farming methods again," said Dafrosa Dahaye, a farmer from Murray village in Mbulu district after obtaining from her demonstration plot ten times as much yield of maize as she normally used to get using traditional practices. Dafrosa and about 400 other colleagues had participated in an on-farm training and demonstration programme that was conducted by Farm Africa, a local NGO. The villagers had formed research groups. More than 18 group members put up demonstration plots to show their fellow villagers the benefit of improved farming methods. The results have been very convincing as illustrated by Dafrosa's testimony.

Majira Newspaper,
Friday, 18th February, 2005

Given the expectations of stakeholders and the prevailing shortcomings as discussed above, it was proposed that agricultural extension services in future should pay particular attention to the key aspects of extension delivery. Improving the quality and efficacy of extension methods that are used by different extension providers is paramount, paying particular attention to mobilization of and communication with farmers. Positive aspects of previous and emerging extension methods should be consolidated, and this should be one of the criteria for assessing extension providers.

There is also a need for strengthening the coordination of extension services. Given the current policy and institutional framework where extension services will be provided by the public and private sectors, the role of the actors needs to be redefined. Specifically, the coordination and supervisory role of District Councils requires clear delineation. It should be emphasized that there are three parameters of coordination that must be taken into account. First, there must be coordination for resource mobilization. Second, there is need to ensure equitable resource allocation as well as ensuring cost effectiveness. Thirdly, there is need for coordination to ensure effective information exchange among all the stakeholders within the agricultural extension system.

Financing agricultural extension services is an important element for effective and sustainable service delivery. Now that the arena involves more actors, including those from the private sector, resource mobilization and allocation will have to be rationalized so that spatial and economic strata bias does not occur in providing agricultural extension services. In addition, monitoring and evaluation of extension service providers requires institutionalisation. Emphasis should be placed on monitoring both the extension process (institutional and practice changes) as well as the impact of services on productivity and livelihoods. Examples of indicators in this respect are given in MAC (2000) and the farmers, who are the ultimate beneficiaries, should also know these.

These criteria are used to assess the nature and composition of agricultural extension service providers who are likely to be the key players under the liberalized environment for AEA service provision

Emerging Agricultural Extension Providers

Composition and spatial coverage

The intention of the government to broaden the spectrum of agricultural extension service providers was stated by the Agricultural policy in 1997. Until the year 2000, there was very

little evidence of private providers apart from NGOs and a few cases involving private sector providers contracting animal dipping services. Now however, there is evidence that more actors are venturing into this new area of service provision, be it at a low level, as revealed by a follow-up study on "Privatisation and demand driven extension services" that was done in 2003. Information regarding institutions as well as businesses that provided any kind of extension service was collected from 40 districts in 19 regions. Sixteen out of these districts had been visited in the year 2000, which provided a basis for comparison. The type of services supplied by various providers is given in Table 3. Generally, these may be classified under the public or private domain while some of the services (a few) are classified as mixed, as presented in Table 2.

Table 2: Type of Agricultural Extension Service Provided

Category of Services	**No.**	**Type of Service**	**Proportion of Providers (%)**
Public goods domain	1.	General extension services	22.2
	2.	Livestock extension and services	10.2
	3.	Mobilization and capacity building	4.1
	4.	Providing low cost credit and training on financial management	2.2
	5.	Research and outreach	2.2
	6.	Irrigation services	2.0
	7.	Grants for input supply	2.2
	8.	Providing market information	3.5
	9.	Support for nurseries, tree planting and agro forestry	1.4
	10.	Soil fertility, land use, resource management and environmental conservation	3.2
	12.	Promoting beekeeping and fish farming	0.3
	14.	Providing training on post harvest handling	0.6
	15.	HIV -AIDS	0.2
	16.	Gender issues	0.2
Sub-Total			54.5
Private goods domain	16.	Input supply	27.3
	17.	Processing agricultural products	3.9
	18.	Marketing agricultural products	3.5
	19.	Exporting agricultural products	1.0
	20.	Providing infrastructure and services (meat shops, dips and tractor for hire)	1
	21.	Production of crops and livestock	3.9
	22.	Lobbying	0.4
Sub Total			41
Mixed	23.	Seed multiplication and semen production	2.2
	24.	Business promotion and development	2.1
	25.	Market promotion and support	0.2
Sub total			4.5
GRAND TOTAL			100

Source: MAC 2003

Table 3: Composition of Agricultural Extension Service Providers

Category	Proportion (%) in Year	
	2000	2003
Government institutions	18	23
Non Governmental organizations (NGOs)	65	30
Donor Funded development projects	NA	10
Agribusiness	14	32
Community based organizations on (CBOs)	NA	5

NA = Information not available

Source: MAC (2003)

As summarized in Table 3, the proportion of government institutions (including LGAs) has increased slightly from 18% to 23%, while the proportion of NGOs and donor development projects has declined from about 65% to about 40%. The NGOs alone constituted about 30% of all the providers in 2003, of which about 31% were local while 33% were religious and 36% were international organizations. The proportion of agribusiness has increased from 14% in the year 2000 to 32% in 2003. Community based organizations (CBOs) were not included in the year 2000 study as a separate category, but they represent about 5% of the providers in 2003.

Agribusinesses represent a growing category that is listed as providing various forms of extension services. Most of them are involved in selling agricultural inputs, to which they attach some advisory service in order to ensure effective use of the inputs they sell. It should be noted however that most of the agribusiness are located in urban areas even though they may provide services to clients within entire districts. A study conducted in Kahama district during 2007 (DASS, 2007) revealed that input suppliers will open supply points only within Kahama town, due the poor state of roads and low demand in remote villages and wards.

According to stockists interviewed in Kahama town, who signed contracts to distribute subsidized fertiliser throughout the district, they buy a bag of fertilizer at 17,500 Tshs in Shinyanga town, add 2,000 Tshs as transport cost and they are allowed to sell a bag at 23,100 Tshs in Kahama town, getting net return of 5,600 Tshs per bag. The cost of distributing fertilizer beyond the district headquarters was generally higher by 1,500 Tshs to 2,500 Tshs per bag due to the poor state of roads. The stockists argue that, the contract not withstanding, they can only distribute to nearby stoking points to ensure that they do not incur losses. During the 2006/07-production season, stockists who distributed subsidized fertilizer were not allowed to sell above 23,100 Tshs per bag anywhere within Kahama District. But, fertilizer that was procured by the stockists from other sources such as Mwanza was sold for 25,000 Tshs to 28,000 Tshs per bag in distant villages.

Services that fall under the public domain dominate, comprising of more than 50% of the service providers. This category is dominated by general extension services, which account for about 22% of all the providers. This mostly involves extension services for crop production such as promoting new crops such as vanilla in several regions, but now expanding to other parts of the country, paprika production in Iringa region, sunflower and mushroom in various parts of the

country as well as other new crops. General extension services also includes demonstration and training on various husbandry practices such as organic farming, promoting quality improved seed, Integrated Pest Management (IPM), training extension agents, production and dissemination of extension material, and dissemination of agricultural technologies in general.

The most dominant group of providers under the private domain was input suppliers, accounting for about 29% of all the listed services providers. Within this group, those who provide veterinary drugs and agrochemicals dominate, being 23% and 22% within that category, respectively. They were followed by agribusinesses that supply seed (20%) of which slightly less than half (45%) supply vegetable seed while the remaining supply seed for various types of cereals and field crops. The next category was businesses, which sell tools and agricultural implements (10.3%) and others sell fertilizer (15.7%). The category, that mix and supply animal feed accounted for only 2% of the sample. In most cases the agribusinesses provide the advisory service to promote the products they sell. The costs of such services are imputed in the input price. Under the new institutional set up, some of these businesses could be contracted to provide extension services on a larger scale if they meet the required criteria.

Other categories of extension service providers included; government institutions, local and international NGOs, religious organizations, CBOs, and development projects. From Table 4 it can be inferred that the majority of providers (47.7%) target to cover entire districts, be it within selected villages at a time. Less than one fifth of the providers target their services only at selected villages, wards, divisions or regions. Selected wards and villages within the district are the target for about 12% of the services while ward divisions and regions are the target of 16%, 14% and 11% of the providers respectively.

Table 4: Spatial coverage of services classified according to proportion provided by each provider category

Type of Provider	Spatial coverage of service providers (%)				
	Village(s)	Ward(s)	Division(s)	District(s)	Region(s)
Local NGO	2.6	0.8	2.1	5.2	0.8
Religious NGO	1.3	2.6	1.0	2.9	1.6
International NGO	1.8	1.8	2.6	3.1	0.3
CBO	2.1	1.0	2.1	2.1	0.3
Government Institution	0.3	0.3	0.8	3.9	1.0
Development Project	1.8	0.5	3.2	3.1	2.9
Private sector	1.6	8.6	2.6	27.0	4.2
Total	**11.5**	**15.7**	**14.3**	**47.4**	**11.0**

Source: MAC 2003

Implications of the new institutional set-up

As stated earlier, under the new institutional set-up, LGAs and their parent ministry PMO-RALG) is now responsible for providing coordination as well as monitoring the provision of agricultural extension services. The agricultural sector lead ministries have the mandate for policy guidance and providing technical backstopping. In terms of actual service provision, it is expected that the public sector may gradually but increasingly limit its role to financing, and the provision of public goods and services that the private sector is unwilling to provide, as well as targeted

goods and services to overcome poverty (URT, 2003).

Provision of agricultural extension services by actors that are not government institutions is not a new phenomenon. Non-government institutions including religious organizations have always been active in the development arena, offering a range of services to complement government efforts. What is different now is that the government will actively promote such participation and where necessary seek partnership with private providers. Contracting out such provision of extension services has been discussed and various options have been considered.

In order to effectively operationalise the process of LGAs to contract out extension services, each district must address a number of issues, including the following.

- Which organization within the district can effectively provide extension services on a contractual basis?
- What should be the spatial mandate of each contractor?
- What should be the duration of the contract?
- What should be the specific responsibility of the contractor?
- How should the district conduct coordination, monitoring and evaluation for the contracted services?

Meanwhile, the national vision for the agricultural extension system in Tanzania has been re-oriented to become demand driven, cost effective, participatory, and should be provided in collaboration or in coordination with various actors, including the beneficiaries, so that the farming communities may improve their income levels and the overall standards of living (Rutatora and Rwenyagira, 2005). It has accordingly been proposed that extension services should adopt a number of principles to guide the contracting of extension services. These include:

- Providing high quality services to beneficiaries,
- Farmers' empowerment through participatory approaches,
- Motivating farmers through formation and strengthening farmers' organization,
- Stimulating strong and independent community based institutions to cater for farmers' needs, such as credit, inputs and marketing,
- Promoting environmentally friendly technologies,
- Adopting community based approaches and
- Adopting gender sensitive approaches

In this regard, it is important to know the characteristics of the potential private AES providers who have been reported above in Tables 2 - 4, vis a vis what is expected of them, in terms of contribution to the transformation process. The private extension services providers, who could be eligible for contracting include; (i) NGOs, (ii) CBOs including farmers' association, cooperative societies and farmers' networks, (iii) agribusiness, and (iv) religious organizations. The strengths and weaknesses of each of these groups are discussed briefly next.

Non-government organizations have been found to be effective in integrating several services such as credit, training and follow-up activities under one programme. This enhances the accessibility of such services to farmers. Moreover, NGOs have been strong in promoting the empowerment of farmers as well as their organizations in terms of knowledge, organization, instruction and finance. It has been noted however that often, NGOs do not have staff of their own, especially at the ward and village levels. They often use government staff providing them with transportation and topping up allowances. While this is a good example of institutional complementarity, it is not well accepted by extension staff from the public extension service. They argue that,

in many cases, NGOs are given a lot of credit for their work, without acknowledging that the extension agents working for those NGOs actually come from the public extension services, often representing the best staff of their lot. This undermines the performance and credibility of public advisory services.

Community based organizations provide a good atmosphere in which new or improved technical information can be introduced. The case study of the farmer from Mbulu district cited earlier (Box 1) is a good example. According to the study on contracting extension services (URT, 2003) mobilization, training, providing information and general advisory services constitute more than 60% of the services that were listed as being provided by CBOs. This reflects the increasing role of these organs, particularly at the local level.As observed earlier, agribusiness often provide advisory services where they can recover the cost through inputs and services they sell or the products they buy. According to figures presented in Table 3, agribusiness represented 32% of those who provided in the sample for 2003. This category can be contracted to provide extension services that target specific commodities, often within specific geographic locations using different institutional arrangements. Likewise, religious organizations can be contracted to serve specific areas or social groups. Often, religious organizations have philanthropic agenda, and they may be better endowed with resources. So they could be contracted to serve more remote areas that are less accessible, and often represent poorer segments of society. Precautions need to be taken to avoid the danger that such services do not favour members of a particular religious group or denomination.

Contracting modalities

Two modes of contracting the extension services have been proposed (URT 2003). Under partial contracting arrangements, LGAs could contract out extension services to providers who have a competitive advantage in that area. Examples may include community mobilization as well as training and capacity building of CBOs, which could be done by NGOs. These processes often come during initial stages of an extension programme. Dissemination of information regarding technologies and markets could also be partially contracted out. Extension staff from the public sector could develop the information packages or contract out such tasks to specialized institutions. Then the packaged information could be disseminated through public or private media, newsletters and local newspapers. Zonal research stations are well positioned to play a coordinating role through the Zonal Research and Extension Liaison Officer.

Public institutions such as research stations, agricultural training centres have a competitive advantage to offer specialized training, especially on aspects that relate to technology dissemination. Public institutions and some NGOs are also strong for offering training on credit and financial management. Training and related services can be contracted out for specific durations, sometimes working in collaboration with LGAs extension staff.

The second type of contractual arrangements involves outright contracting of service provision to cover specific locations. It is known that as farmers strive to solve their problems, they often require multifaceted solutions. Under outright contracting therefore, a provider would be expected to address all the development impediments of that area in a holistic manner, including linking with other relevant institutions to handle problems that may be of immediate priority to local community members, but they fall outside the mandate of extension providers. It is conceivable that an extension provider could be required to cover a ward, division or an entire district depending on their resource envelope and their capacity, especially in terms of manpower and experience.

For reasons of efficiency it is proposed that the ward should be the lowest level

for this type of contracting. However, the main contractor may sub-contract specific tasks within their jurisdiction area to CBO and Para-professionals. Larger development projects that cover more than one district would require coordination at the national level. As it has been pointed out NGOs, religious organizations as well as development projects often use staff from the public extension services under various arrangements. If such institutions were to take up contracts to provide extension services, they would require a more stable staff base, which they could hire from the existing cadre within districts or new graduates from agricultural training institutions. The attrition of staff from the public extension service to private providers should not be seen as a threat because in due course it is expected that at the district level, only a team of core staff will remain to provide coordination, follow-up and technical backstopping. The movement of staff across the two sectors should be seen as a healthy interaction.

The duration of such contracts should be long enough to allow for the impact of interventions to be felt. On the other hand, they should not be too long to allow under-performing contractors to continue. Two-year contracts, with performance evaluation being done at the end of each year have been proposed (UTR, 2003). For contractors who maintain a track record of good performance, the duration of subsequent contracts could be extended.

Experience tends to show that for significant irreversible agricultural technological and social transformation to occur, a minimum critical mass of adopters is necessary before change is felt community-wide. The diffusion model for adoption of agricultural technologies suggests that the critical mass is reached when 50% of the farmers have adopted a particular technology. Attainment of such a critical mass should be used as a basis for limiting temporal targeting of extension services to a particular area or group. This could guide the duration of contracts for providers who have proved capable of offering good quality services

Resource allocation

Having mobilized the pool of financial resources that are to be used for contracting, it is envisaged that LGAs will identify services that will be contracted, including categorizing them for partial short-term or longer term outright contracting. Local Government Authorities will also have to regularly update the list of current and prospective private service providers, including their human and physical resource capacity. Terms and conditions for contracts will have to be developed at the beginning and updated subsequently. Developing criteria for awarding contracts will also be necessary, while LGAs will also have to establish whether such services will be provided as public goods (free of charge) or on a cost-sharing basis, where a fee will be charged as a basis for cost recovery procedure.

Exerting Effective Demand

The future extension system is expected to be demand driven and participatory and therefore empowering. It is expected that internalisation of participatory approaches at the local level will enable farmers to exert effective demand on extension service providers so that such services become demand driven. But what does the latter term really mean? Does it mean services that farmers are willing to pay for or does it include services that address farmers' felt needs? The challenge to both LGAs and service providers is to ensure that both categories of services (i.e. those for cost recovery and free services representing public goods) are catered for.

Conclusion

This paper explores prevailing challenges of providing agricultural extension services under evolving institutional arrangements. The discussion is mainly based on two studies that were conducted in 2000 and 2003 to look into modalities for privatising agricultural extension services. It is established that the ongoing

institutional reforms have influenced extension services delivery, in terms of the number of service providers, where the proportion providers from agribusiness, NGOs and CBOs is increasing. This broadens the scope of providers for contracting extension services, which is given prominence under the new institutional arrangements.

The role of the government has been re-defined to focus on coordination in order to accommodate other actors. However, the stakeholders' perceptions and expectation regarding extension service roles is still influenced by historical roles and performance of government extension services. In order to change these entrenched views, contemporary AES must be seen to add value to farmers' efforts and investments. For this reason, improving the quality of services is imperative.

Enhancing the government's coordinating role requires clarity on a number of issues, including; (i) modalities for contracting (ii) resource allocation, (iii) quality assurance, and (iii) how to empower stakeholders so that they can exert effective demand on extension service providers. Continuing critical analysis and discussion on these and other relevant issues is important, looking backward to learn from past experiences in order to shape the future of a more effective agricultural extension system.

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