

# SUPPLY OF AND DEMAND FOR AGRICULTURAL EXTENSION SERVICES IN MALAWI – A SYNTHESIS

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There are more than 120 organizations and programs in Malawi working on agriculture that include extension service provision among their main activities. However, extension service provision is largely "projectized," uncoordinated, and unmonitored. This Note synthesizes the main findings from the recent surveys and interviews of households, communities, and service providers about the status of access to these extension services, challenges on both demand and supply sides, and suggestions and reflections that can inform the ongoing development of the National Agricultural Extension Strategy.

## NATIONAL CONTEXT

Malawi has made some progress in increasing agricultural production and economic growth and in reducing food insecurity in recent years, but much still needs to be done. Undernutrition and food insecurity are still widespread, with 37 percent of children under five being stunted according to the 2015/16 Demographic and Health Survey (DHS) and 6.7 million people estimated to be in need of food assistance in the 2016/17 crop year following a devastating drought (MoAIWD 2016). Despite early successes of the government's flagship agricultural program—the Farm Input Subsidy Programme (FISP)—agricultural productivity has been stagnating and many areas of the country remain food insecure. This necessitates bold actions to revisit the design and implementation of FISP and, at the same time, rethink the complementary services and systems, both within agriculture and other sectors, that need to be strengthened.

Agricultural extension is one of those complementary services and systems. In early 2015, extension services were highlighted as the priority area for increasing agricultural productivity during the extensive consultation process on the content of the National Agriculture Policy (NAP), which involved representatives from a broad range of agricultural stakeholder groups coming from 28 districts. Snapp et al. (2014) also suggested that lack of information among farmers on proper use of hybrid maize seed and fertilizer, due to ineffective extension services, may have been a factor in the low nutrient use efficiency observed among beneficiaries of the FISP, limiting the productivity and development impact of this flagship agricultural development program.

In response, the Ministry of Agriculture, Irrigation and Water Development (MoAIWD) initiated a study that looks at the issues and constraints facing the country's extension system. With financial support from the Government of Flanders, the German agency for international development (GIZ), and survey support from the USAID-funded Strengthening Agricultural and Nutrition Extension (SANE) project, a three-year project entitled "Assessing and Enhancing the Capacity, Performance and Impact of the Pluralistic Agricultural Extension System in Malawi" was initiated in 2016. This project completed its first year of activities, including four published papers and four ongoing research papers. This Note synthesizes the main findings from these papers and reports.

## DATA SOURCES

This Note utilizes various surveys and interviews conducted in Malawi between August 2016 and May 2017 including:

- Nationally-representative survey of 3,001 households;
- Census of extension service providers in 15 districts, representing all regions, Agricultural Development Divisions, agroecological zones, and farming systems (Figure 1);
- In-depth interviews with 30 service providers from state and nonstate services and 71 of their frontline workers;
- Focus group discussions in 12 communities in 8 districts;
- Survey of 299 Village or Group Villages Agricultural or Development Committees (VAC/GAC/VDC) in 29 districts; and a census of Area Stakeholder Panels (ASP), District Stakeholder Panels (DSP), and District Agricultural Extension Coordination Committees (DAECCs) in 10 districts that are part of USAID's Feed the Future project.

Figure 1. Map of Malawi and study districts



Source: IFPRI interviews (December 2016 to March 2017). All districts (except Lilongwe) are covered in the household and community surveys; those shaded with gray are the 15 focus districts of the census of service providers; and those with dots are the locations on the focus group discussions.

## SUPPLY SIDE

**Extension service providers (SP)** are defined as all organizations that have among their main activities the provision to farmers and farm households of information on agriculture (including crops, livestock, fisheries, postharvest concerns, markets, and natural resources), rural livelihoods, or food and nutrition security.

The government is still the dominant provider of extension services in Malawi. Each district has roughly 18 state subject matter specialists, in addition to 86 state extension workers ((agricultural extension development coordinators (AEDCs) and agricultural extension development officers (AEDOs)) on average. For each district, there are also roughly 1,500 lead farmers (LF), each trained by AEDOs to help promote two focus technologies in their communities. The most commonly promoted are conservation agriculture and pit planting.

There are also about 120 nonstate extension service providers active in the 15 sample districts covered. Two-thirds are local nongovernmental organizations (NGOs), farmer-based organizations, or private companies (including input dealers, banks, local radio stations, and mobile telephone operators). One-third are international NGOs. With all nonstate providers combined, each district has roughly 16 nonstate specialists (a 1:1 state-to-nonstate ratio) and 47 nonstate frontline workers (a 2:1 state-to-nonstate ratio).

The 1:1 state-to-nonstate ratio for specialists and the 2:1 ratio for frontline workers demonstrate the large contribution of nonstate service providers to extension services in terms of both human and financial resources. However, because all nonstate service providers work with AEDOs and AEDCs to implement their project activities, there is a heavy reliance by these nonstate service providers on the cadre of state extension agents.

The ratio of farmers to state agents is, roughly, either 2,352 or 3,274 to 1, depending on whether the agricultural census or production survey (APES) are used as the source for the number of farming households. If nongovernment agents are included, the ratio is, roughly, either 1,568 or 2,232 to 1. These ratios are significantly worse than those of some other African countries, such as the Democratic Republic of Congo (540 to 1) and Ethiopia (480 to 1), but much better (lower) than those in Nigeria (3,330 to 1) or India (5,000 to 1) (Table 1). While the farmer-to-agent ratio gets a lot of attention, without sufficient funds for operating costs, additional people on the payroll will not make any impact. Therefore, any additional funding needs to be balanced and prioritized in order to make a positive impact on both service coverage and agricultural outcomes.

**Table 1. Farmer per government agent ratios**

	No. of agents, 000s	Farmers per govt agent ratio
Malawi	2	2,352 to 3,274
DR Congo	11	540
Ethiopia*	60	480
China*	800	620
Kenya	6	950
Indonesia*	30	1,670
Tanzania*	7	2,500
Nigeria*	5	3,330
India*	60	5,000

Source: Ragasa, Mazunda, and Kadzamira (2015); \* Davis et al. (2010)

**Financial capacity:** Government funds for extension services are mainly for personnel compensation (73–83 percent), with operating funds (known as *other recurrent transactions*)<sup>1</sup> being limited (17–27 percent). The latter are mainly for administrative expenses; and funds to do actual extension work and farmer support are extremely limited. The estimated public funds for extension services are roughly 740,000 Malawian kwachas (MK) (US\$1,000) per AEDO per year, or MK 250 (US\$0.33) per farmer per year, which is very little.

Numerous projects and programs provide extension services. However, these are largely uncoordinated efforts. One would think of these efforts as “projectized”, which generally are ad-hoc, irregular, and infrequent. Focus group discussions also confirmed issues of duplication and concentration of the efforts, which result into conflicting and inconsistent messages that tend to confuse farmers. Survey results also reveal existence of gaps in many areas such as disadvantaged groups (females, uneducated farmers, and youth) being often left out. Together, all this mirrors the tendency of checking boxes to achieve quick results in many of the short-term projects. Ultimately, such development efforts tend to be unsustainable and deepen the sense of dependence and dole-out mentality among rural communities.

**Skills and training:** Roughly 16 percent of frontline workers sampled had only a secondary education (as opposed to the required minimum of two-year diploma). Moreover, most do not receive yearly trainings and half had not received any training or retraining in at least three years. There are some trainings and skills upgrading initiated by both state and nonstate providers, but efforts are largely uncoordinated. Moreover, most of the training materials and guides are outdated.

**Work incentives:** The average monthly salary for an AEDO is MK79,440 (US\$110), and about 40 percent higher for a nonstate frontline worker at MK 113,739 (US\$160). Nonstate service providers also give substantially more generous travel allowances to their extension workers, more training opportunities, and greater support in farm demonstrations and input provision compared to what is offered to AEDOs.

Poor mobility is consistently reported as the major constraint for AEDOs. Thirty-two percent of AEDOs reported having access to a motorcycle, while the rest rely on bicycles. This makes it very difficult for AEDOs to cover their entire operational areas. The situation is even worse where an AEDO must cover two sections due to shortage of staff. In addition, mobility is worse in hilly areas.

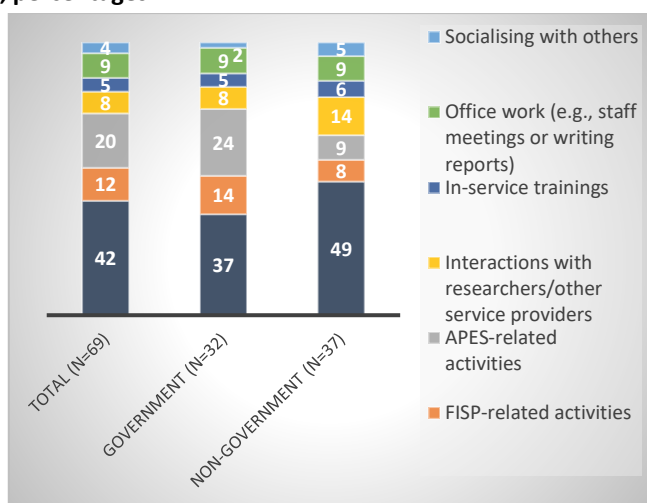
Other major constraints reported by AEDOs are poor housing; very low salary; limited recognition in terms of promotions, rewards, or allowances; and lack of skill-building and training opportunities. Another major constraint, common among both state and nonstate extension frontline workers, is inadequate or nonexistent resources for their activities, including funds and materials. Some workers, both state and nonstate, also cited a lack of interest, cooperation, and commitment from farming communities as a constraint.

**Time allocation:** Only 37 percent of AEDOs’ time is spent working with farmers, and 38 percent is spent on activities related to the FISP and APES (Figure 2). These proportions are much better for nongovernment frontline workers, who spend half their time helping and supporting farmers. Still, it seems that expectations are too high for frontline workers, who are not guided and not supported enough, especially the state AEDOs. If this time-use and expectations are to continue, it would be necessary to support extension workers to perform all these roles including: (1) provision of motorbikes and fuel allowance, which should be a relatively low-cost investment to ensure better mobility of extension

<sup>1</sup> These figures include development projects, such as ASWAp-SP and SAPP, that enter the government accounting system, but they do not include any agriculture-sector funds given to NGOs.

workers; and (2) use of low-cost mass media (radio, mobile phone/text messaging, videos) to ensure that more farmers are reached with information and options to create greater demand for extension services.

**Figure 2. Frontline workers' time allocation during planting season, percentages**



Source: Authors' in-depth interviews of frontline workers (December 2016 to February 2017). Note: FISP = Farm Input Subsidy Programme; APES = Agricultural Production Estimates Survey; NGO = nongovernmental organization.

**Monitoring and accountability:** Monitoring of performance and evaluation of outcomes and impacts are poor, particularly in the government system. Under both state and nonstate systems, targets are usually limited to inputs and outputs (such as the number of households trained) and do not reach the level of outcomes or impacts. Very few (13 percent of frontline workers and 10 percent of all service providers) reported having outcome indicators, such as crop yield performance or number of households that are food secure, as their performance targets. At a national scale, the main indicator still used is farmer-to-agent ratio, which can potentially be counterproductive, putting more strain on scarce resources without clear impact if no operating funds are added for extension work. Moreover, there are few incentives for good performance and no system to evaluate government extension workers and hold them accountable for their performance.

## DEMAND SIDE

Analysis of the demand for extension services reveals that only a few farmers actually demand or request agricultural information and that service provision is still heavily supply-driven, rather than demand-driven as envisioned in the National Extension Policy. Most farming households do not participate in meetings or processes where they can articulate their needs for agriculture- or nutrition-related advice. Only 14 percent of those receiving extension advice actually requested it, indicating that not many farmers are articulating their demand for extension and advisory services. This may be a reflection of the projected extension service provision, characterized by lack of coordination and limited awareness and information campaigns on options available to farmers to support their demand for services and inform their choices and decisions.

There are several implications of this result. First, there are limitations to farmers' capacity to demand services and awareness of options to choose and demand for. Interviews show that farmers either do not know what to demand; do not know the options; do not know that they can demand; or do not care or simply do not believe that the extension system can help them. Second, there is opportunity to create or facilitate demand for specific extension and advisory services by intensifying general awareness of

proven improved technologies through cost-effective use of mass media (radio, phone, text-messaging, video). Third, there is also a need to strengthen capacity of farmers and their organizations and the Village Agricultural and Development Committees to support farmers in articulating their needs and demands. Fourth, from a survey and research perspective, researchers should also seek more creative ways to capture and ask about farmer demand for information in survey and interview settings. Capturing information needs can start with participatory identification of farmers' constraints and determine how information can play a role in reducing those constraints.

**Access to advice:** Three-quarters of households reported having received some agricultural advice in the past two years. This mirrors major efforts in extension service delivery overall. However, half of households received advice in the last 12 months, indicating that provision of advice is irregular and infrequent. Moreover, provision of advice is heavily focused on crop production. At the farmer level, only 7 percent received information on market access or marketing (Table 2). Eleven percent obtained advice on postharvest practices or agroprocessing, and for those who received this, the advice was mainly on applying storage chemicals. Ten percent received advice on livestock, mainly on livestock housing and disease control or vaccination. The number of people receiving advice on health and nutrition advice can also be further improved: 47 percent of farmers received advice in the last two years, and 29 percent in the last 12 months. Health workers and hospitals/clinics are the major sources of information. Only a few households reported getting such advice from agricultural extension workers. Nutrition advice is still not well integrated into agricultural extension.

**Table 2. Topics and sources of agricultural and nutrition information, % of farmers**

	Production	Livestock	Market	Processing	Environment	Health
Received advice from any source last two years	43	23	15	24	36	47
Received advice from any source last 12 months	23	10	7	11	18	29
<b>By source (% of those receiving advice)</b>						
Govt extension	68	68	40	55	51	9
Non-govt extension	24	22	30	14	14	8
Lead farmer	9	2	2	3	3	1
Other farmers	10	4	5	8	9	5
Radio	27	22	40	39	60	30
Health workers/clinic	0	0	0	0	0	45
<b>By approach (% of those receiving advice)</b>						
Community/group meetings	60	55	47	44	44	54
Face-to-face visits	28	24	17	15	14	42
Short-term training	15	16	11	15	12	10
Radio	21	19	37	37	52	22
Farmer demonstration	8	0	1	0	1	0
Phone/text-messaging	3	1	4	1	2	1
Farmer field day/agricultural fair	2	1	0	1	1	0
Farmer field/business school	2	1	0	0	1	0
Farmer cluster	1	0	1	1	1	0
Television/internet/video	0	0	1	0	1	1

**Equity of advice:** While the National Extension Policy envisions equity and states that "... the public sector must make sure that the poorest segments of the population, women, youth, and

people with disabilities are not left out of the development process,” (p. 25), our dataset shows that access to extension services is lowest amongst the more disadvantaged segments of the farming population. The poorest households, households with young heads, those adults with limited formal education, female producers, and those in more remote areas are less likely to access agricultural advice.

The issue of youth is of particular interest. Youth (defined here as less than 35 years of age) are less likely to access advice on most of these topics. In general, youth are less likely to participate in VAC/GAC/VDC and less likely to demand or request advisory or extension services. As a result, youth are less likely to be aware of, to try out, and to adopt improved technologies than their older counterparts (Qi and Ragasa 2018). This is a topic that needs further investigation since these results are in contrast to claims and hopes that youth are the drivers of agricultural innovation and rural transformation.



Males are more likely to receive agriculture-related advice than females, although both are equally likely to receive advice on other livelihoods and or health/nutrition. Among females, female members in male-headed households have a lower likelihood of receiving agriculture advice than females who are household heads. This may be due to the persistent focus on household heads as recipients or beneficiaries in many extension, training, and capacity-building programs. A study by Ragasa, Aberman, and Alvarez-Mingote (2017) find that reducing the gender gap and targeting both female and male adults in the same household can increase productivity and food security of the households.

**Quality of advice:** Farmers gave very high ratings and are satisfied with the advice that they receive overall: 76 percent of farmers are very satisfied; 77 percent said they found the advice very useful; 86 percent said they followed the advice; 92 percent said the advice was something they wanted or needed. Ratings are similar to those reported in the Integrated Household Survey (IHS3) (see Ragasa, Mazunda, and Kadzamira 2016). Nevertheless, there is some inconsistency between these ratings and reported adoption of technologies—that is only a small proportion of those receiving advice and those giving high ratings on a particular technology are actually adopting it. Self-reported ratings should be interpreted with caution; and the focus could be on understanding the barriers to uptake and adoption of extension messages.

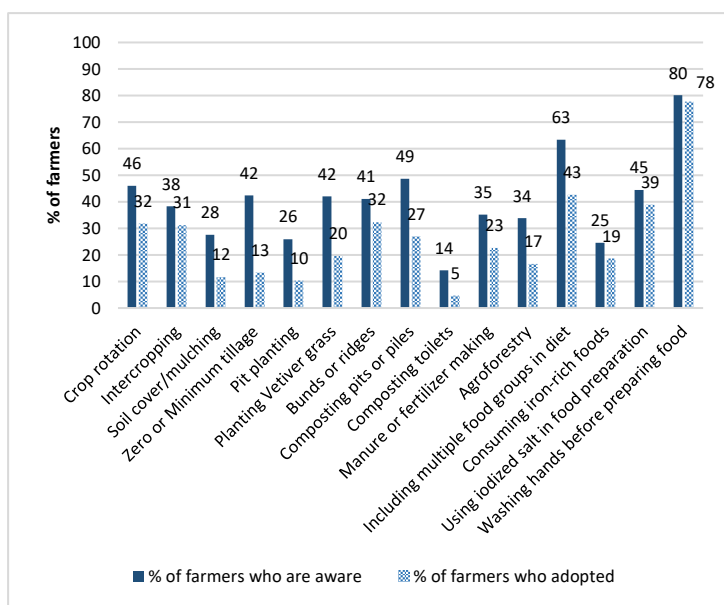
**Technology awareness and adoption:** Technology promotion is just one of many activities that state and nonstate extension workers are involved in. In particular, state extension workers have a heavy mandate for technology promotion. Farmers’ awareness of technologies being promoted is still low, signaling low or weak coverage of extension services to date. More than half of farmers still are not aware of many of the promoted practices

(Figure 3), so there is room for extension services to teach farmers about the benefits and processes of adopting these technologies.

In general, there is high adoption of chemical fertilizer and hybrid seeds and other improved varieties, given the heavy focus on investments and farm subsidies to promote their use, however, there is low adoption of many of the promoted management practices (Figure 3). Adoption rates of promoted management practices in the 2016 cropping season range from 4 to 42 percent of all plots. Use of crop rotation and intercropping are relatively spread, but other promoted management practices have low adoption rates (Figure 3).

When asked using open-ended questions to list new practices tried out in the last three years, only 6 to 9 percent of farmers reported trying out new practices. And if this trend continues, it will take 20–30 years before we see 50-percent adoption of most of these technologies.

**Figure 3. Percent of farmers who are aware and are adopting promoted agricultural and nutrition-related practices**



## EXTENSION APPROACHES

Government extension is still the dominant source of advice (reported by 68 percent of households), but nonstate sources are growing (24–29 percent). And, the distinction between state and nonstate frontline workers are becoming more blurry because of the continuous reliance on government agents by the nonstate providers.

Among all actors, there is increasing diversity of extension methods and approaches being used, with community and group meetings and radio playing primary roles, followed by face-to-face visits, and then by short-term trainings and farm demonstrations. There is increasing use of phone and text messaging, especially for market information. In particular, radio is becoming more prominent (26 percent of households for production advice; 40 percent for marketing advice; 60 percent on environment; 30 percent on health/nutrition) (Table 2).

Service providers also mentioned farmer field days, agricultural fairs, and farmer field schools (FFS) or farmer business schools (FBS) as common extension approaches used. However, very few households (1–2 percent) reported accessing agricultural information from these sources and approaches (Table 2). Mobile vans and listening clubs used in the past are now rarely used. Extension campaigns, which are coordinated use of different extension methods (like mobile vans, radio, videos, television, printed materials, and face-to-face visits) were planned and implemented

in selected communities in the past, but farmers surveyed reported not witnessing such campaigns for many years. The use of television and internet to transmit agricultural information is limited. The use of video on agricultural practices was not reported by farmers in the national surveys, although there are reports of early impacts of these videos in some districts in the Southern region where they are being promoted (Access Agriculture workshop November 7 2017, Sunbird Hotel Lilongwe). Nevertheless, rigorous impact evaluations are yet to be done to determine whether these approaches had positive impacts and how they can be improved.



Most service providers also reported having trained some lead farmers (LFs), however, only 9 percent of households who received some agriculture-related information reported sourcing this information from LFs according to the national surveys (in this project and the IHS3). This is consistent across various questionnaire modules, and has been validated in four communities post-survey and in district-level meetings in 11 districts. When asked about the source of knowledge or awareness of an agricultural technology, 36 to 63 percent of respondents reported being aware of many of the promoted technologies through other farmers (but not those trained as LFs). This underscores the importance of peer effects and social networks in the spread of information on improved technologies. At the same time, there is need to consider how to strengthen the support to and capacity of LFs to make them better partners in extension service provision.

Musopole et al. (2013) show that transparent community selection of LFs, as well as incentives and support for LFs, can be critical to the success of the approach. Fisher, Stein, and Katengeza (2017) and Niu and Ragasa (2017) stress the complementarity of the LF approach to other approaches. In fact, experiments by Beaman et al. (2015) show that most farmers are convinced to adopt a new technology only if they receive information about it from multiple sources. The challenge would be to use local contextual knowledge to find entry points or opportunities where most farmers would have multiple contacts or sources of information.

Another implication is that activities of LFs seem to depend on how active and motivated the AEDO or NGO extension worker is that they are supporting. If the AEDOs or NGO agents are not active in the community, LFs are also not active. Serious issues in terms of building capacity, motivation, and accountability at the service provider level need to be addressed first so that farmer-to-farmer extension can be more effective. So, equipping them with proper training and support will be crucial.

Also needed is to go beyond using lead farmer-to-farmer ratio as a main indicator of extension service provision. Instead, indicators should be on the number of households that have adopted the technologies and that are better-off because of the knowledge imparted by the LFs.

While evidence on the effectiveness of various extension approaches is scarce, an assessment of successful agricultural extension approaches was conducted by the Malawi Forum of Agricultural Advisory Services (MaFAAS) in 2015. Mthinda (2015) summarizes the selected eight documented innovative approaches: farmer-to-farmer extension (by National Association of Smallholder Farmers of Malawi, NASFAM); host farmer demonstrations (Agricultural Research and Extension Trust, ARET); farmer cluster and *Ulimi wa Mndandanda* model<sup>2</sup> (Department of Agricultural Extension Services, DAES); radio-based extension delivery (Farm Radio Trust); long-term extension programs for significant poverty alleviation (World Vision Malawi); farmers' clubs, (Development Aid from People to People, DAPP); farmer voice radio (Malawi Broadcasting Corporation); and lead farmer approach (Development Fund of Norway). However, these are based on self-reported achievements of the project teams, with limited validation, and no impact evaluation.

Other studies have attempted to evaluate different extension approaches used in Malawi. Here we draw the main lessons from these studies.

First, combining approaches has worked better than relying on a single delivery tool. One of the successes of Farm Radio Trust is the ability to combine radio programs with call-in features and text messaging (Chapota et al. 2014). Ragasa and Niu (2017) highlight the huge potential of radio and other mass media in technology awareness campaigns to create demand for extension services. Niu and Ragasa (2017) also stressed the importance of more intensive training and face-to-face interactions for complex agricultural management practices. Follow-up and continued mentoring by extension agents, facilitators or field officers of both lead farmers and other farmers are necessary. For instance, Ward et al. (2018) and Fisher, Stein, and Katengeza (2017) show the complexities of conservation agriculture (CA) and show that encouraging the adoption of the whole CA package leads to very low compliance. Rather, it may be more effective to find "leverage" points and prioritize and sequence the promotion of specific dimensions of CA based on farmer's current practice (see specific suggestions from Ward et al. 2018). For some technologies, reassessment and reevaluation will be critical to know if they are really beneficial to farmers and what is constraining their adoption.

Second, an evaluation of farmer business schools (FBS) implemented by the government, using the case of Dedza, shows no follow-up of graduates and poor monitoring of project outcomes. A third of FBS participants did not complete the program; the most common reason was that the facilitator or the program did not continue for various reasons; some initial participants mentioned that they just lost interest. Chilemba and Ragasa (2017) show no impact of FBS participation or graduation; and only a few FBS participants experienced (small) increases in income.

Malawi has implemented various extension approaches in the past. They involve good principles, and are well-intentioned and effective in delivering information to communities. Oftentimes, it is not the extension approach that is the source of concern. Limited access to information or low awareness and adoption of promoted technologies is often due to lack of funds to scale up proven good approaches. When projects finish, so does much of the extension service provision.

<sup>2</sup> Farmers in a stretch of not less than 1 km agree to implement similar recommended and innovative agronomic practices in their field, more like collaborative large-scale demonstrations

Third, the surveys and interviews highlight the need to revisit the expectations placed on the decentralized structures for demand articulation and coordination and to be realistic about what they can really do. Only a third of the communities have a VAC/GAC set up; and participation by households in these VAC/GAC/VDC is low (only a third of those farmers aware of these committees were actively participating). There is generally low awareness on these VAC/GAC/VDC and much confusion about their roles and functions. Only a fifth of the randomly-selected communities have implemented the model village concept, being promoted as an integrated approach for solving communities' challenges. The model village concept is not associated with improved community outcome indicators based on econometric models; and its implementation should be reviewed and improved in order to improve development outcomes (Ragasa, Alvarez-Mingote, and McNamara 2017). Moreover, only a few VAC, ASPs and DAECs are active and responsive, almost all DSPs are not working (Table 3); and many of them do not have the institutional setup, resources, and capacity to coordinate, monitor, and harmonize service provision at the district level (Ragasa, Alvarez-Mingote, and McNamara 2017). Current capacity strengthening of these structures seems to be done mechanically, focusing on their set-up but without providing adequate support for their long-term functionality such as designing monitoring practices and tracking of key objectives.

Last, several studies also highlight that, in many instances, information may not be the only binding constraints—access to inputs and capital is also crucial. Chilemba and Ragasa (2017) show that the lack of positive impact of FBS on farm incomes in Dedza district is likely due to limited resources of FBS participants to apply the FBS lessons and start profitable ventures. A study by Ambler, Godlonton, and de Brauw (2016) of NASFAM farmers in Ntchisi and Dowa districts shows that financial support to farmers (cash and in-kind transfers) lead to shifts away from tobacco toward groundnut and soy production and increases in legumes production; no difference in impact was found among different extension approaches used. Therefore, a holistic approach to production and livelihoods will be necessary, including information access. A holistic approach highlights putting farmers as the center, and all technical departments and service providers contributing in a coordinated matter and not working in silos.

**Table 3. Performance indicators of the various decentralized extension structures.**

Indicators	VDC (n=299)	ASP (n=84)	DSP (n=10)	DAECC (n=10)
1. % that are active (meets at least once per year)	84	90	20	60
2. % that are responsive to needs and concerns raised	15	11	0	44
3. % with opportunity to provide feedback on the quality of governmental extension services		79	40	82

Source: Adopted from Ragasa, Alvarez-Mingote, and McNamara (2017).  
Note: N=sample size

## REFLECTIONS FOR THE NATIONAL AGRICULTURAL EXTENSION STRATEGY

Study results show that the current agricultural extension system at national and district levels has delivered useful advice on agriculture, environment, and nutrition to the majority of rural producers across the country. While the system is becoming increasingly pluralistic, key stakeholders will have to do much more and take bolder actions to achieve a truly demand-driven, pluralistic, and equitable system, as envisioned in the National Extension Policy.

First, a significant increase in public funding for extension is needed. The role of DAES and MaFAAS for advocacy and mobilization of resources can be further strengthened to this end. However, greater balance between operating and salary costs has to be ensured in order to make positive impact. Without funds for operating costs, adding staff to the payroll will not help and would be counter-productive, crowding out other investments that can deliver development outcomes. Moreover, the system has to move beyond farmer-to-agent ratio as its main performance indicator and should monitor farmers' access to useful information and their feedback on the messages and technologies being promoted.

Second, coordination and harmonization of messages has never been more important and urgent, given the growing pluralism of the system. The government can focus on this role. The National Agriculture Content Development Committee instituted by MoAIWD in 2014 is a good start and should continue to be funded and strengthened to this end.

Third, DAES should focus on a monitoring, evaluation, and learning (ME&L) role for government, which includes regular monitoring of outcomes for disadvantaged groups (female farmers with dual-headed households, female-headed households, youth, the poorest, and those in remote areas). Another part of the ME&L role should include staff performance evaluation systems that incorporate more rigorous performance indicators. This should be coupled with increased supervision of extension workers, and a reform of incentive structures.

It is common to hear extension workers express something like, "The project was a success, so it is the farmers' fault that they do not continue to adopt the technologies promoted." This statement is worrisome. It mirrors how extension workers may be viewing their role and reflects how they are supervised and monitored. It reflects the ad-hoc nature of most projects, the culture of "checking boxes" among these projects, and the lack of evaluation and learning. It reflects a supply-driven approach of pushing technologies, rather than putting farmers at the center and working together to support them. The extension system (state and non-state) has to be bold to start changing mindsets, reform its performance indicators and focus on ME&L and coordination in the projectized extension service provision on the country.

Fourth, research, other technical departments and extension should collaborate on assessment of the productivity, profitability and usefulness of technologies and extension messages being promoted. Research-extension linkages are particularly weak and should be carefully designed and strengthened. DAES and researchers should experiment with institutional arrangements and incentive systems for behavioral change among researchers and extension workers to improve and sustain research-extension linkages.

Fifth, regular training of both state and nonstate extension workers to upgrade both technical and facilitation skills is needed. Several capacity-strengthening efforts by nonstate projects are largely uncoordinated. Coordination of these capacity-strengthening efforts and feedback system to and from the agricultural colleges and training institutions will be useful to ensure that demand and supply of skills and expertise meet.

Last, there is urgent need to facilitate demand for specific extension and advisory services by intensifying awareness of proven technologies and various options to guide farmers' choices and decisions through cost-effective mass media. There is need to strengthen capacity of farmers, their organizations and groups, and the Village Agricultural Committees to articulate and advocate for their needs. A more holistic provision of information is also needed, with more attention to advice on markets, postharvest, value-addition, income diversification, and nutrition.

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