Decentralization and the quality of public service delivery in Tanzania

A study of the delivery of agricultural extension services in Morogoro Municipality and Hai District Council

Wilfred Uronu Lameek
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VRIJE UNIVERSITEIT

ACADEMISCH PROEFSCHRIFT

ter verkrijging van de graad Doctor aan de Vrije Universiteit Amsterdam op gezag van de rector magnificus prof.dr. V. Subramaniam in het openbaar te verdedigen ten overstaan van de promotiecommissie van de Faculteit der Sociale Wetenschappen op donderdag 4 mei 2017 om 15.45 uur in de aula van de universiteit De Boelelaan 1105

door

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Writing a PhD dissertation is always a long journey and it is not an easy task. It is often coupled with challenges and sometimes discouragement associated with what is supposed to be accomplished. The process of writing this thesis was indeed associated with challenges, but with encouragement rather than discouragement. It would not have been successful without the contribution from different individuals and institutions.

To start with, I would like to acknowledge the greatest contribution of my co-promoter Dr. Rudie Hulst of the Vrije Universiteit who tirelessly spent his time and energy in advising me on my research and making sure that all the necessary resources were available for me to carry out this PhD project. His contribution is not measurable. Moreover, he welcomed me to Amsterdam and introduced me to all places where I could get my social and academic needs. Although it was not my first time to travel to the Netherlands, I had not lived in Amsterdam city. Apart from taking me around, he also introduced me to other staff members of the department of Public Administration and Political Science of the Vrije Universiteit, who assisted me further and made my stay more pleasant.

Furthermore, I would like to acknowledge the big contribution made by my promoter Prof. dr. Leo Huberts. His advice on both administrative and academic issues related to my PhD cannot be neglected. It was through him that I was finally and confidently able to build on my research area and write this dissertation.

Moreover, I would like to thank all other staff of the Vrije Universiteit and the department of Public Administration and Political Science, who assisted me in different ways to accomplish my dissertation. I owe many thanks to Madam Dia Eek from the International Office of the university, who assisted me in all financial matters, such as my living allowance, the rent for my apartment and the payment of my books and courses. Without her, my life would have been very difficult or almost impossible in Amsterdam. I must also mention Dr. Bas van Gool, Dr. André van Montfort and Prof. dr. Fred Fleurke, who encouraged and advised me on numerous occasions and made my stay in the department comfortable. I thank my fellow PhD students in the department and in the Quality of Governance Research Group – especially Dr. Debora Rice and Dr. Anne Marie Reynaers - for their support and good company.
My research was part of a wider collaboration project between Mzumbe University of Morogoro, Groningen University and the Vrije Universiteit Amsterdam. It included a series of activities aimed at enhancing the capacity of the staff of Mzumbe University. The collaboration was financed by Nuffic, the Netherlands Universities Foundation for International Cooperation. I thank the initiators and the management of the project, Prof. Dr. Josephat Itika, Dr. Stella Kinemo, Prof. Dr. Ko de Ridder and Dr. Albertjan Tollenaar, for creating the conditions that enabled a number of colleagues from Mzumbe University and myself to embark upon a dissertation project. Without the financial support from Nuffic none of the activities that were undertaken over the past years would have been possible.

Wilfred Lameck
Morogoro, Tanzania, March 2017
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>ACBG</td>
<td>Agricultural Capacity Building Grant</td>
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<tr>
<td>AGRA</td>
<td>The Alliance for Green Revolution</td>
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<td>ARI</td>
<td>Agricultural Research Institute</td>
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<td>ARID</td>
<td>Agricultural Research Institute Director</td>
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<td>ARIL0</td>
<td>Agricultural Research Institute Liaison Officer</td>
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<tr>
<td>ASARECA</td>
<td>Association for Agriculture Research in East and Central Africa</td>
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<td>ASDP</td>
<td>Agricultural Sector Development Plan</td>
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<td>ASFT</td>
<td>Agricultural Sector Facilitation Team</td>
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<td>ASLM</td>
<td>Agricultural Sector Lead Ministries</td>
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<tr>
<td>A &amp; LD</td>
<td>Agriculture &amp; Livestock Department</td>
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<td>A &amp; LDBO</td>
<td>Agriculture &amp; Livestock Department Budgeting Officer</td>
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<td>BDO</td>
<td>Business Development Officer</td>
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<td>BOQ</td>
<td>Bill of Quantity</td>
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<tr>
<td>CBO</td>
<td>Community Based Organization</td>
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<td>CCM</td>
<td>Chama Cha Mapinduzi</td>
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<tr>
<td>CDO</td>
<td>Community Development Officer</td>
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<tr>
<td>CGIAR</td>
<td>Constitution of Agriculture on International Agricultural Research</td>
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<td>CIMMITY</td>
<td>International Institute for funding Agricultural Research</td>
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<tr>
<td>CORDEMA</td>
<td>Client Oriented Research Management Approach</td>
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<tr>
<td>DADG</td>
<td>District Agricultural Development Grant</td>
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<tr>
<td>DADP</td>
<td>District Agricultural Development Plan</td>
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<tr>
<td>DAEO</td>
<td>District Agricultural Extension officer</td>
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<td>DALDO</td>
<td>District Agricultural &amp; Livestock Development Officer</td>
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<td>DASP</td>
<td>District Agricultural Strategic Plan</td>
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<tr>
<td>DCC</td>
<td>District Council Chairperson</td>
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<td>DCO</td>
<td>District Crop Officer</td>
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<td>DCT</td>
<td>District Core Team</td>
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<td>DDS</td>
<td>District Development Strategy</td>
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<td>DED</td>
<td>District Executive Officer</td>
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<td>DFT</td>
<td>District Facilitation Team</td>
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<td>DIDF</td>
<td>District Irrigation Development Fund</td>
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<td>DPO</td>
<td>District Planning Officer</td>
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<td>DRD</td>
<td>Directorate of Research and Development</td>
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<td>EBG</td>
<td>Extension Block Grant</td>
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UNDP  United Nation Development Program
URT  United Republic of Tanzania
USAID  United States Agency for International Development
UWAMAMO  The Organization of Dairy farmers in Morogoro
VAEO  Village Agricultural Extension Officer
VEO  Village Executive Officer
WAEO  Ward Agricultural Extension Officer
WC  Ward Councilor
WCs  Ward Councilors
WDC  Ward Development Committee
WEO  Ward Executive Officer
WFT  Ward Facilitation Team
ZARDEF  Zonal Agricultural Research Development Fund
ZARDI  Zonal Agricultural Research and Development Institute
ZARELO  Zonal Agricultural Research and Extension Liaison Officer
ZDRD  Zonal Directorate for Research and Development
ZIELO  Zonal Information Extension Liaison Officer
ZIELU  Zonal Information Extension Liaison Unit
ZSC  Zonal Steering Committee
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1.1 A wave of decentralization

Over the past decades, many countries around the world, particularly developing countries, have adopted decentralization reforms to improve the quality of governance and service delivery. A key proposition of the theory on decentralization is that the proximity between the government and citizens will promote local democracy and accountable government, which will establish policies and render services that reflect the preferences of citizens (Tiebout 1956; Burns 1994:203; Kaufmann 1999; Treisman 2000; Azfar 2001:7; Smoke 2003:9). Decentralization implies that local government can choose between different measures and adapt service delivery to local circumstances or to the characteristics of individual service recipients. Besides, local governments are assumed to provide for efficient services, because in a decentralized setting, there is an incentive and a means to control expenditures financed by local revenues (Litvack et al. 1998; Fleurke & Hulst 2006:44).

In line with these assumptions, there is evidence that decentralized systems have improved the quality of governance and service delivery. With respect to governance, the empirical research shows that in developing countries, decentralization has increased transparency, leads to responsible and innovative leadership while reducing the incidence of corruption and grand thefts (Fiszbein 1997:7; Crook & Manor 2000; Tidemand & Msami 2010:30). Concerning service delivery, decentralization has improved access to social services such as education and health services. Overall, it has increased citizens’ satisfaction with local government services (Eskeland & Filmer 2002:20; Faguet 2001:21; Habibi et al. 2001; Bardhan & Mookherjee 2003; Tidemand & Msami 2010:31).

However, these successes form only a part of the total picture. In many developing countries, the high expectations of decentralization reforms have not been fulfilled. Overall, their impact is associated with failures rather than with success. For example, the empirical literature shows that the quality of local governance and economic performance is still very low despite the reforms. In more than half of the countries reviewed in Africa, fiscal decentralization was lagging behind and the capacity of elected authorities to address the needs of the local population is still limited due to inadequate finances and other resources (Wunsch 2001:279; Gabral 2011:6). Apart from that, even if there are financial resources available, there is a problem of elite
capture, a persistent inequality in the participation of different social groups in local decision-making and a lack of access to information, which in the end also has a negative impact on the quality of governance (Azfar 1999:1; Jutting 2004; Tidemand & Msami 2010: VIII).

Concerning the quality of services, the literature shows that on many occasions decentralization has not sufficiently improved service delivery. The quality of public services has either declined or remained unchanged. For example, in Tanzania, more than three quarters of the citizens involved in the empirical research conducted by Tidemand and Msami (2010) were seriously dissatisfied with the quality of service in various sectors. Overall, especially in developing countries, positive results fall short of the expectations (Crook & Manor 1998:271 et passim; World Bank 2001; Ahmad 2005; Conyers 2007; Robinson 2007:2).

The literature on decentralization offers a number of explanations for the underperformance of decentralized systems of public administration. The first relates to the limited validity of the claim regarding the benefits of a decentralized government. The key assumptions referred to above do not hold for all policy sectors and services. Two features are singled out as contraindications for decentralization. The first relates to economies of scale in service delivery. The transfer of the provision of services to the lowest administrative level can result in a loss of cost efficiency, if the service in question enjoys economies of scale and/or if decentralization to local government implies that minimum scales of production are not met (Prud’homme 1995:207-208; Smoke 2003:9; Kim 2008:9-12). The second concerns the presence of externalities. If policy decisions taken by local government have positive or negative effects outside its jurisdiction, and no special arrangements exist to regulate externalities, decentralization can result in the suboptimal allocation of resources and harmful competition between local governments (Crook & Manor 1998:18-19; Wilson 1999:272, building on Tiebout 1956; Azfar 2001:6; Smoke 2003:9; Kim 2008:9-12). Therefore, if the design of the public administration system, the allocation of responsibilities and decision-making authority between different layers of government, doesn’t take into account these specific features of the policy or service in question, it will fail to produce cost-efficient services, or services and policies that reflect the preference of citizens.

A second explanation concerns the incidence of incomplete decentralization. Even if a policy sector or service is not characterized by economies of scale or externalities, and governments decide to decentralize, some central government regulation or oversight will always remain to guarantee a basic level of service delivery, or to protect national standards or citizen’s rights (Smoke 2010; Venugopal & Yilmaz 2010; Yilmaz et al. 2010:262). However, on many occasions, governments transfer tasks to regional and local governments, presenting it as decentralization, but at the same time holding on to an extensive body of central rules, regulations, policies and oversight that
limits the discretion of local government in decision-making and service delivery (Conyers 1999; Faguet 2001:11; Venugopal & Yilmaz 2010:220). National guidelines and priorities for local planning, detailed central guidelines for spending budgets and grants, or arrangements for the supervision of local decisions by central government, prevent local governments from allocating resources according to the preferences of the local population, tailoring services to local or individual circumstances and conditions (Conyers 1999; Ribot 2003; Smoke 2003; Ahmad et al. 2005:1-2; Fleurke & Hulst 2006).

These two explanations concern the design of the intergovernmental system in public administration. Apart from these, the literature offers a second category of explanations, concerning the conditions that affect the performance of a system. One condition that is frequently mentioned to explain the poor performance of decentralized systems of government in developing countries is the lack of resources. A transfer of responsibilities and decision-making authority to local government presupposes the capacity of a local administration to fulfill the tasks of general government adequately and to provide the services for which it is responsible (Prud’homme 1995:208; Johnson 2001:524; Wunsch 2001:279; Ribot 2003; Smoke 2003; Jutting et al. 2005:641). There is ample evidence that local governments in developing countries are poorly staffed and that the technical expertise and equipment to provide services are often not sufficient. In part, this is due to the general scarcity of resources these countries have to deal with. However, it can also be the result of central government policies, when central governments attribute responsibilities and tasks to local government, but do not allocate the corresponding personnel and budgets. It is clear that the volume and type of resources required vary with the policy sector or service (Conyers 1999; Faguet 2001:11; Ndegwa 2002:13-14; Bardhan & Mookherjee 2003; Ahmad et al. 2005:1-2; As-Saber et al. 2009:63; Crawford 2009:75-76; Venugopal & Yilmaz 2010; Nickson 2011:1-2).

A second category of resources affects the performance of decentralized systems of government. It concerns the absence of human and social capital in local communities. The literature shows that illiteracy, low levels of education, the absence of civil society organizations or their limited capacity for social mobilization hinder the emergence of active citizenship, and limit the possibilities for citizens to articulate their preferences and hold local governments accountable. This way, the benefits attributed to decentralized systems of government, such as a vital local democracy and an allocation of resources that reflects the preferences of the local community, are not materialized (Boadi 1996:123; Brown & Kalegaonkar 1999; Johnson 2001:524).

A third category of explanations refers to the role of informal institutions, i.e. the norms, values and social rules which give meaning to reality and guide the behavior and interactions of individuals, groups and organizations. In general, the role of informal institutions receives little attention in theoreti-
cal debates on centralization and decentralization. Empirical research however shows that how local governments operate, how local councils decide on plans and policies, how local democracy functions, whether and how citizens participate (or are allowed to participate) in local decision-making and how civil society organizations interact with local government can at least partly be explained by the informal institutions in place (Prud’homme 1995:208; Crook & Manor 1998:29-31). For example, if there is no culture of accountability present, local councils avoid meetings with citizens or show themselves immune of their criticism. If local officials put a high value on administrative rules, they will tend to ignore citizen’s claims for tailor made services. Absenteeism, corruption and elite capture by officials and elected executives only occur if they are up to a certain point considered as admissible practices. Women will not voice their needs and complaints in council and village meetings if social rules tell them to hold their tongue in the presence of men (Prud’homme 1995:208; Barnett et al. 1997:8-9; Crook & Manor 1998:29-31; Oyugi 2000; Ndegwa 2002:13-14; Devas & Grant 2003:307; Ribot 2003; As-Ahmad et al. 2005; Lange 2008:1125; Saber 2009:56).

Overall, the literature identifies a series of factors that influence the performance of decentralized systems of public administration. However, it does not paint the full picture of the relative importance of different factors, nor does it show how they work out in combination in a specific context. Moreover, the role of informal institutions so far has received relatively little attention in the theory of decentralization. This research therefore aims to contribute to the theory on decentralization with an in-depth study carried out using a conceptual model that includes the formal features of the administrative system, informal institutions and the availability of resources as key factors, and giving attention to how these factors separately and in combination affect the performance of a system of public administration. We chose to conduct research into the delivery of agricultural extension services in Tanzania.

1.2 The case of Tanzania

In Tanzania over the past 100 years, centralized systems of public administration have alternated with decentralized systems. In 1926, under British rule local native authorities were installed. The native authorities’ ordinance established a form of local government and empowered local chiefs to exercise substantial executive, judicial and administrative authority (Tidemand et al. 2010). At the time of independence, Tanzania inherited the local government system left by the British (Mollel 2010). Service delivery by local government had a lack of capacity in finance and human resources, thus proving to be inefficient and not responsive to local needs. In 1972, a centralized system of service delivery was set up. In this system, central government and
regional deconcentrated agencies became the main providers of services (Ngwilizi 2002:2).

When the centralized system of service delivery also failed to produce the desired output, local government was reintroduced as the main vehicle for service delivery and development. In 1982, legislation established districts in rural areas and municipalities and cities in urban areas. Elected councils were empowered to collect revenues, enact by-laws, and determine local budgets and plans (Tidemand et al. 2010:5). Since then, several reforms have been introduced to strengthen decentralization. The most renowned concrete reform program started in the year 2000 following the enactment of the local government reform agenda of 1996 and the 1998 policy paper on Decentralization by Devolution.

The goal of the reform was to increase participation of people in decision-making and local elections, giving local councils power over all local affairs and creating accountable local government. Notwithstanding, recent evaluations show that, despite the reforms, service delivery does not meet the standards and expectations set at the beginning of the decentralization process. The literature offers a number of explanatory factors: the role of central government, which in practice leaves little discretion for local government; the lack of adequate revenue collection by local authorities; the inadequacy of human resources; a low level of civic education concerning citizens’ rights and democratic participation; and a low capacity of managerial and leadership skills (Mjwahuzi 2005; REPOA 2008:8; ALAT 2011:4-5).

1.3 The case of agricultural extension services

Agriculture is a key sector in the Tanzanian economy, representing around 25.8% of Gross Domestic Product (URT 2013a:11). More than 75% of the population is somehow active in growing crop or keeping livestock. The delivery of agriculture extension services is considered an important means to improve agricultural production and marketing (URT 2013b:14). Agricultural extension services include the transfer of knowledge on agricultural technology to farmers; the assistance of farmers’ groups in the development and execution of special projects to enhance production or improve marketing skills; and the collective training of farmers either in field schools or in workshop like settings (Sanga et al. 2013:42).

Before 1999, the prime responsibility for the delivery of agricultural extension services was in the hands of the central government, more specifically the ministry of agriculture. A number of entities and offices were engaged in the regulation and actual provision of extension services: the headquarters at the ministry itself, regional offices, district offices, division officials and extension workers at the village level. The district offices formed part of the central government bureaucracy and worked under the instruction and supervision of the regional offices (Rutora & Mattee 2001; URT 2004).
This structure was criticized for hindering the smooth flow of information and showed a lack of responsiveness of extension officers to farmer’s needs. Extension officers were much more concerned with the government as their employer than with farmers as their clients. The farmers did not have the power to hold extension officials accountable for poor performance. This was due to a lack of transparency and knowledge about the roles of extension workers and a lack of involvement in decision-making on extension services. The bureaucratic structure did not allow for participation by farmers, to identify their needs and to discuss these with the extension staff. There were no effective farmer groups to represent the demands of farmers at the various levels of government (Rutaora & Mattee 2001:159).

In 1999, agricultural extension services were decentralized to local government. Since then, the local departments of agriculture and livestock, instructed and supervised by the local councils, are responsible for the planning and delivery of the services. Field extension officers, educated in one of the countries’ agricultural institutes, operate from the offices of the administrative sub units of local government, the wards or villages. From there, they visit individual farmers, farmers’ groups and villages to provide their services in direct contact with farmers. Farmers also come to the ward offices for individual advice or to receive training. In the district or municipal offices, a number of planning officers and specialists in agriculture and livestock instruct, supervise, assist and coordinate the activities of the field extension officers. Research institutes, one in each of the seven agro-ecological zones the country is divided into, have the task to conduct demand-driven research, provide local governments with knowledge on new technologies and train local extension officials.

However, the decentralized system for the delivery of agricultural extension services in Tanzania has been criticized in public debate and local research. One of the cornerstones of the agricultural policy, that farmers, with the help of extension workers, articulate their needs and that extension programs are based on the input provided by farmers, does not seem to materialize. In practice, articulation does not take place systematically and even if farmers or farmers’ organizations do articulate their needs, the local programs do not reflect the preferences of the farmers. Moreover, the actual service delivery fails to take into account the specific local and individual circumstances, so that services are not rendered at the right time, at the right place or in the right form (JICA 2008: 84-85; Kyaruzi et al. 2010; Mngumi 2010; Mvuna 2010:120).

A second problem is that the link between local governments and research institutes does not seem to function well. The idea is that research institutes develop their research programs based on the input of local government; however, for reasons still to be uncovered, this does not seem to happen (Mngumi 2010). Moreover, the research institutes are supposed to transfer new knowledge and information acquired through the research they carry out
to local governments, so that local extension officers are equipped with up-to-date knowledge on agricultural technology. However, liaison units that were established as part of the research institutes to coordinate the flow of information between research institutes and extension offices, do not seem to fulfil this role adequately. Why this is the case, is not exactly clear (URT 2004; Mvuna 2010).

The existing research suggests that the goals of transferring the responsibilities of agricultural extension services to local government have not been achieved. To what extent this is the case and an explanation of the poor performance still needs to be established.

The discussion of the theory and practice of decentralization reported above suggests that in order to understand how decentralized systems of public administration function, how local governments decide on policies and deliver public services, it is first necessary to take different factors into account: the formal institutions, because they define what is expected of local government, formulate the rules it has to abide to; the available resources and other conditions, because they can severely constrain (or enhance) the possibilities for action of all parties involved; the informal institutions, because they determine how formal institutions are interpreted and guide the behavior of actors within the formal administrative setting.

These elements suggest a conceptual framework for research that is founded on the basic assumptions of sociological institutionalism (March & Olsen 1987; Powell & DiMaggio 1991; Hall & Taylor 1996). Central to this approach is the notion that institutions, i.e. systems of rules, norms, values and conventions structure the courses of actions of actors. Institutions demarcate the boundaries of behavior through the definition of roles, obligations and prohibitions. They define what is appropriate, permitted or forbidden. Institutions also give meaning to human action. Actors are assumed to pursue their interests, but the existing institutions shape the way actors define their interests and preferences. A key assumption underlying our framework is that actions and interactions of actors can be explained by the institutions in place.

Because we are especially interested in the way decentralized systems of public administration work and perform, we will distinguish between formal institutions, more specifically the formal system of administration, and informal institutions. The formal system of public administration includes elements such as the distribution of tasks and responsibilities between different levels of government, intergovernmental planning systems, arrangements for supervision and decision-making procedures. Informal institutions refer to social rules that guide the behavior of actors in a certain praxis, distinguishing between what is acceptable or unacceptable, a sensible or an inexpedient course of action in a certain situation (cf. the distinction made by Huizenga 1993: 89-98, 166-171).
Furthermore, we will also distinguish between institutions and the availability of resources. Although it is clear beforehand that the availability of resources in a certain policy field is at least partially related to the formal institutions in place, as these for example determine how the activities of local government are financed, our literature review shows that the availability of resources can directly influence the actions and interaction of local government and its officials, i.e. the process of decision-making and service delivery. Therefore, we will treat it as a separate factor in our framework.

This research focuses on how the three factors mentioned separately and in combination influence the quality of services delivered. To assess the quality of service we distinguish between a number of different dimensions: the democratic caliber, i.e. the extent to which the local population, directly or indirectly, i.e. through their representatives, participate in decision-making about extension services allocative efficiency, which focuses on the extent services reflect the preferences of the local population; cost efficiency, i.e. the extent to which services are rendered at the lowest costs possible; tailor made services, i.e. the extent to which services delivered are attuned to circumstances and conditions of the citizens; and the extent of coordination between different, but related services.

Figure 1.1 graphically represents the elements and relations included in our conceptual framework.

**Figure 1.1:** The conceptual framework for the research

1.4 **Problem definition and research question**

The goal of the research was to enhance our understanding of the performance of decentralized systems of public administration. We are puzzled by the fact that decentralization projects in countries like Tanzania, such as is the case for agricultural extension services, fail to result in high quality ser-
vice delivery. The literature offers pieces of the puzzle, such as the formal design of intergovernmental relations which can imply limited autonomy for local government to carry out the tasks transferred to them, and the fact that local governments are made responsible for the provision of services, but not provided with the corresponding financial and human resources. But it does not paint a picture of how the combination of different factors works out, nor does it integrate the role of informal institutions in the explanation of service delivery by local governments.

We are therefore convinced that research which uses the conceptual framework presented, will give a fuller understanding of how different factors, both separately and in combination, influence the process and outcome of service delivery, and can result in a contribution to the theory on decentralization. Research into the delivery of agricultural extension services in Tanzania is suitable for our goal. Decentralization attributes a central role to local government and the objectives of the transfer to another decision-making authority largely coincide with the positive effects the theory on decentralization predicts. Moreover, the administrative system has been in place for more than a decade, so we may assume that it has had time to settle and overcome its teething troubles. This leads to the following research question.

**How does the decentralized system of agricultural extension service delivery in Tanzania function and perform, and how can the formal system of public administration, informal institutions and the availability of resources explain the process of delivery and its output?**

To provide an answer to this question the following sub questions are subsequently dealt with:

a. What insights does the literature provide concerning the performance of decentralized systems of public administration?

b. What are the features of the formal system of public administration in Tanzania regarding the delivery of agricultural extension services?

c. How does the process of delivery of agricultural extension services in the Tanzanian local government take place?

d. To what extent does the delivery of extension services in Tanzania reflect the preferences of farmers, are services tailored to local and individual circumstances, are services coordinated, cost efficient and is decision-making democratic?

e. How can the formal administrative system; informal institutions; and the availability of resources explain the planning and actual delivery of extension services?

To answer the research question, a qualitative approach was adopted, which included a detailed study of the planning and delivery of extension services
by local government. The reason for this is that there is no theory available that allows for specific hypotheses about the way formal, informal institutions and the availability of resources determine the process and outcome of service delivery. To uncover the supposedly complex relationship between the different variables, it requires in depth research of administrative practices and of the interaction between different actors involved. Case study research was appropriate because it seeks to answer how and why questions (Yin 2009). A multiple-case design was preferable, since analytical conclusions are more powerful than those resulting from a single case (Shively 2006:344-346; Yin 2009:61). Two local governments were selected for the research: Morogoro Municipality in an urban area from the eastern zone, and Hai District Council in a rural area from the northern zone. We applied a variety of techniques to collect data: document analysis, interviews, focus group discussions and observations.

1.5 Organization of the book

This book is organized into eight chapters. Chapter two reports on the theory concerning decentralization. Chapter three contains an account of the research design, explains the selection of cases and presents the case-study protocol used in the research. Chapter four describes the formal institutions of public administration in Tanzania, both in general and concerning the delivery of agricultural extension services. Chapters five and six report the research carried out in two local governments, Morogoro Municipal Council and Hai District Council. Chapter seven contains a comparative analysis of the two case-studies and provides an answer to the research question. Chapter eight reflects on the contribution of the research to the theory on decentralization and presents a number of recommendations to improve the performance of decentralized systems of public administration.
Chapter 2

Theory on decentralization

2.1 Introduction

In the past two decades, many countries around the world have reformed their systems of public administration and have transferred decision-making authority from central government to regional and local government (Litvack 1998:1; Crook & Manor 1998:1). Some public administration scholars such as De Vries (2000:210) argue that decentralization (and centralization in other eras) is a matter of fashion, and not the outcome of rational deliberation. Others suggest that the preference for either centralized or decentralized systems relates to the weight attached to certain values. According to Fleurke and Hulst (2006) centralized systems are supposed to promote equity in the distribution of benefits and efficiency in public services through economies of scale. Decentralized systems create favorable conditions for citizen’s direct participation and tailor made service delivery, and they are not burdened by the costs of intergovernmental regulation, planning and supervision. Therefore, depending on the weight attributed to equity or citizen’s participation, countries will tend to centralize or decentralize.

The latter argument seems to hold for Western countries. Wilensky (1975:52-55) argues that with the rise of the Welfare State and the increasing amount of public expenditure for education, health care, public housing, culture and social provisions, it became paramount that these benefits be distributed in an equal way and that all citizens should enjoy equal rights. As a result, in a series of countries, existing competences were transferred from local to central government and new policies and services were organized in centralized administrative systems. Fleurke and Hulst (2006:37-38) suggest that in the 1970s and 80s, the centralized Welfare State machinery got into trouble. It became ever more difficult to coordinate between the different policy sectors and services, decision-making costs rose, local governments and citizens protested against the uniform rules and regulations imposed by central governments, and local democracy was said to be undermined. This was a catalyst for projects that transferred decision-making authority to regional and local governments and limit central rules and supervision. The vitality of local democracy, direct citizen participation, integrated and tailor made service delivery were the professed goals of decentralization.

Rondinelli and Cheema (1983:11) argue that for many of the developing countries centralized administrative systems were a colonial legacy. After
attaining independence, the former colonies initially retained the centralized systems which were deemed necessary as an instrument for nation building and the equitable distribution of public benefits. Moreover, international assistance agencies, which provided large amounts of capital during the 1950s and 60s, demanded that these resources be controlled by central government. Although centralized systems were expected to increase productivity and produce income for all, in fact they did not. As argued by Rondinelli et al. (1983:6-7) in the 1970s and 80s centralized planning and administration failed to deliver expected services because it proved difficult for governments to formulate policies that resulted in economic growth and income distribution to citizens from the center. Besides, governments were facing financial crises due to increasing prices for energy and import. In order to increase effectiveness in the use of these scarce resources, it was necessary for central government to decentralize decision-making authority to lower tiers of government. In addition, Rondinelli and Cheema (1983:13) and Jutting (2004:8) argue that over the past two decades international agencies such as the World Bank and the International Development Bank have been promoting decentralization as one of the elements of good governance, which has contributed to this development. According to Jutting (2004:8-9) decentralization was supposed to increase the proximity between citizens and government, and contribute to the responsiveness and accountability of local government. As a consequence, decentralization was assumed to result in policies and services that would reflect the preferences of local communities and were attuned to local circumstances. In line with these assumptions, empirical research from developing countries has disclosed some positive effects of decentralization on the quality of governance in general and service delivery in particular. For example, in their research on the performance of decentralization in India, Ghana and Côte d’Ivoire, Crook and Manor (2000) found that decentralization increased transparency and reduced corruption. Fiszbein (1997:7) building on his research in Latin America, found that decentralization leads to competition for political office which increases responsible and innovative leadership. Besides, Tidemand and Msami (2010:30), studying the impact of decentralization in Tanzania, found that decentralization had a positive impact on civic participation which increased trust in local government and financial accountability, and reduced corruption.

Others report on specific positive impacts relating to service delivery. For example, Bardhan and Mookherjee (2003) found that decentralization reduced poverty in West Bengal- India; and Habibi et al. (2001) and Eskel and Filmer (2002:20) found that decentralization increased access to education and health services in Argentina. Similarly, Faguet (2001:21) found that in Bolivia decentralization increased accessibility to services which were in line with local preferences. Reporting on their research on the impact of decentralization in Tanzania, Tidemand and Msami (2010:31) claimed that decen-
However, despite these positive impacts, the conventional empirical literature from developing countries has disclosed a series of disappointing results relating to the impact of decentralization both on the quality of governance and service delivery. For example, in their literature review Azfar (1999:1) and Gabral (2011) found that decentralization did not increase the quality of governance and that in more than half of the countries in Africa, it failed to increase the decision-making authority of local councils in the allocation of financial resources, given the fact that the expenditures of local government amounted to less than 5% of national public expenditures. Others like Jutting (2004) found that decentralization resulted in elite capture and corruption, and Tidemand and Msami (2010:VIII) established that in Tanzania, decentralization was associated with inequality in the competition for local leadership and that few people had access to local financial information.

Negative results were also reported concerning the delivery of services. For example, Conyers (2007) on reviewing the experiences with decentralization in sub-Saharan countries, Crook and Manor (1998:271 et passim) and Robinson (2007:2) reporting on countries in South Asia and West Africa, all found that decentralization did not improve service delivery and that the quality of public services either declined or remained unchanged. Similarly, others like Ahmad (2005) and the World Bank (2001) found that the impact of decentralization on service delivery was mixed and its benefits could not materialize because of the limited authority of local officials to adjust to local preferences. Tidemand and Msami (2010:IX) reported that in Tanzania more than three quarters of the citizens were unhappy with the quality of service delivery in various sectors such as local roads, markets, health clinics, water services, electricity supply and agricultural extension services. Overall, the performance of decentralized systems in developing countries seems to be poor. This justifies a quest for explanations. Why do decentralized administrative systems not deliver the quality of governance and service delivery that they should according to the main assumptions of the theory on decentralization? A systematic answer to this question requires a conceptual framework.

2.2 The conceptual framework

Sociological institutionalism figures as a starting point for our framework. Institutions are one of the key concepts in this approach. The use of the term institutions has become widespread in different academic disciplines such as political science (March & Olsen 1987; Immergut 1990; Hall & Taylor 1996), organization sciences (Powell & Dimaggio 1991; Meyer 2008) and economics (Williamson 1975; North 1990). There are quite different views on how institutions affect human behavior, depending on the scientific para-
digm in use (Hall & Taylor 1996). Scholars also differ in the way the concept is defined, ranging from ‘the rules of the game in society’ (North 1990:3) to complex social forms such as human language, family, governments and corporations (Gabral 2011). Nevertheless, many of the definitions share a core element that understands institutions as ‘collectively accepted systems of rules’ (Searle 2005:21), ‘systems of established and prevalent rules that structure social interaction’ (Hodgson 2006:2) or ‘man-made rules that govern human behavior’ (Keizer 2008:1). This will also be the way we will use the concept of institutions, i.e. as social rules that guide human behavior and structure interaction between different actors. Rules are understood as context specific prescriptions. They advise, tell or forbid us to act in a certain way in certain circumstances, or how to interpret a certain message, incident or behavior in a certain context (Huizenga 1993:99; Hodgson 2006).

Central to sociological institutionalism is the concept of the logic of appropriateness. The argument is that actors behave in a certain way because they strive to fulfil the expectations expressed in the social rules present in the context in which they find themselves (March & Olsen 1987). This does not mean that actors are not assumed to have goals or that their personal preferences or interests cannot explain behavior. In contrast with rational institutionalist approaches however, sociological institutionalism assumes that preferences are not given, but that institutions shape the way actors interpret situations, and define their interests and preferences (Van Erp 2002:30-32; Hulst & Van Montfort 2007:12-13). Consequently, in our research we will focus on the way institutions guide the actions and interactions of actors involved in the delivery of agricultural extension services either directly - prescribing or suggesting certain behavior – or indirectly – influencing the way actors give meaning to situations and define their preferences.

We will distinguish between formal institutions, or more specifically, the formal administrative system in place and informal institutions. Formal institutions are (sets of) rules that are created, communicated and enforced by an organization that is considered to have the authority to do so. Consequently, formal institutions are always made explicit and knowable (Huizenga 1993:136; Helmke & Levitsky 2004). For the purpose of our research we focus on the formal system of administration. This includes the rules that constitute public organizations and define their tasks and competence; the rules that regulate the relations between different government entities; procedures for decision-making; and also, the organizational rules that are established within the different government entities such as formal job descriptions and arrangements for supervision (Helmke & Levitsky 2004).

Informal rules are not created by actors with a particular authority to do so. They come into being as a result of interactions that create a common understanding of what is appropriate; or they are articulated by one actor and subsequently accepted by others. Informal rules are usually unwritten and frequently not made explicit. When actors explicitly refer to an informal rule,
they usually do so to justify their actions, for example because they feel criticized, or because a researcher asks them for their reasons of behaving in a certain way (Huizenga 1993:136, 189 et passim).

Although it is not unusual to distinguish between formal and informal institutions, some scholars are critical. Hodgson (2006:12-13) argues that if institutions by definition are prevalent systems of rules that structure human behavior, formal rules such as legislation cannot always be considered as institutions in place, because they are sometimes simply ignored: drivers break speed limits and restaurant visitors defy legal restrictions on smoking. This is a valid point. Nevertheless, we decided to maintain the distinction between formal and informal institutions. The main reason is that the formal administrative system for the delivery of agricultural extension services was designed to improve service delivery. Insight into which elements of the formal system actually guide the process and which elements do not, can contribute to the theory on decentralized systems of public administration, and can also provide clues for redesigning such systems.

Our conceptual framework includes a third explanatory factor: the availability of resources. The availability of resources cannot be considered a factor that is independent of the institutions in place. Obviously, the formal administrative system to a large extent determines the resources a local government can dispose of. Legislation allows or forbids to levy local taxes; it establishes systems of intergovernmental financial arrangements; it can include rules and regulations for the appointment of local staff. In the same vein, whether resources are scarce or not is also subject to informal rules. If informal rules prescribe that all heads of a local department must have an official car at their disposal for travel during working hours, chances are that official cars become a scarce good. And that department heads will not make their rounds of inspection required by formal procedures, even if they could also make these rounds by foot. Being aware of the possible relationship between institutions and the availability of resources, we decided to include the availability of resources as an independent factor in our model, because the literature review reported below, shows that it can directly influence the actions and interactions of actors involved in the process of service delivery.

Figure 2.1 sketches the conceptual framework for the research. Our key assumption is that the formal administrative system, the informal institutions and availability of resources both separately and in combination can explain how the process of service delivery takes place and determine the quality of the services provided. We will elaborate on the dependent variable further on in this chapter.
To make stock of the body of knowledge concerning factors that bear on the quality of service delivery in decentralized systems of public administration and using the conceptual framework presented above, we carried out a literature review. The review starts off with a discussion of the concept of decentralization and of different dimensions of decentralization. The rest of the review is organized around a number of key assumptions about the impact of decentralization on the quality of governance and service delivery.

### 2.3 The concept of decentralization

Scholars in public administration and organization theory define decentralization in different ways. Mintzberg (1979:181) speaks of centralization as decision-making power being invested in an organization or system concentrated at one single point; and decentralization as decision-making power being dispersed. Horizontal decentralization is in place when those who are formally authorized to make decisions share their power with experts and analysts who do not dispose of formal decision-making power, but who derive informal power from the fact that they collect information and serve as the advisors of formal decision makers. Vertical decentralization refers to the dispersal of formal decision-making authority to lower levels in the hierarchy of an organization (Mintzberg 1979:185). Since this study is about the transfer of decision-making power from central to local government, our discussion of the concept and theory of decentralization will refer to (different forms of) vertical decentralization.

Rondinelli et al. (1983:18-23) building on public administration literature concerning developing countries, distinguish between different variants of decentralization such as deconcentration, devolution, delegation and privati-
zation. They define deconcentration as the shift of authority to regional or district offices within the structure of central government. It relates to the transfer of responsibilities and decision-making authority from central ministries to regional branch offices or offices in the field. Deconcentration does not break the line of command: in the end the offices and officials are fully accountable to the central government ministry. By delegation Rondinelli et al. mean that central government grants new powers to semi-autonomous agencies. Devolution is conceived as granting local government full autonomy through the encompassing transfer of responsibilities for policy making and service delivery, authority for decision-making, finances and other resources to provide services. With respect to the last concept Cheema and Rondinelli (2007:3) specify that devolution includes not only granting municipalities the responsibility, authority and resources to provide public services, but also to formulate and implement local policies. Hossain (2010:4) takes the concept a step further and includes the authority to develop local political institutions. Privatization is understood as a shift of responsibilities and ownership from public to private entities.

These different concepts are widely used in the literature. Nevertheless, Peckham et al. argue that this conceptualization poses some problems, because the terms decentralization, delegation and devolution are used to describe administrative systems with the same features. Moreover, Rondinelli’s typology is sometimes confounded with a typology that distinguishes between different subjects that the transfer of responsibility and authority relates to: fiscal, administrative and political decentralization. For example, delegation is used to refer to administrative decentralization and devolution to political decentralization (Peckham et al. 2005:32).

In view of the above, we will not consider privatization as a form of decentralization, because it refers to a transfer of power from the government to society. Moreover, we will avoid the concepts of delegation and devolution, and will use the general concept of decentralization. A system of public administration will be considered decentralized to the extent which decision-making authority is attributed to lower levels of government. This implies that systems can differ in the degree of decentralization.

Using inductive and deductive approaches, scholars of public administration have tried to assess whether a system of public administration is centralized or decentralized, or more precisely, to assess the degree of decentralization in a system. For example, Fleurke and Willemse (2006:72) developed an inductive approach analyzing actual decision-making by local governments. Thereby, they used three criteria to assess the degree of decentralization. The first concerned the extent to which initiatives for decisions were actually taken by local government itself. The more local initiatives for local decisions were the result of legal obligations or otherwise enforced by central government, the more centralized the system was considered. The second
criterion involved the freedom of choice in local decisions, i.e. if local authorities could consider and choose between different alternatives in local policy decisions; a system was considered more centralized to the extent that central government restricted the policy alternatives of local government. The third criterion related to the dependency of local authorities on upper-level government authorities with respect to information, finances, personnel and permission. To the extent local authorities could not make decisions on their own, without securing resources controlled by upper-level governments, the system was considered to be more centralized.

A number of scholars use financial or economic indices to assess the degree of decentralization. Lijphart (1984), Castles (1999) and Vatter (2009) use the proportion of state and local tax revenue in total tax revenue, while Sharpe (1988) uses the proportion of state and local expenditures in total government expenditures to assess the degree of decentralization: the higher the proportion of local taxes, or the higher the proportion of local expenditures, the higher the degree of decentralization.

Although measuring decentralization on the basis of actual administrative practices has advantages (Fleurke & Willemse 2006), the most commonly used criteria for assessing the degree of decentralization are legal indices, i.e. the formal distribution of powers and the formal intergovernmental relations as laid down in legislation (Lijphart 1984; Page & Goldsmith 1987; Norton 1994; Loughlin 2001). As Smith (1979) and Schneider (2003) argue: legal indices such as the formal distribution of tasks among government tiers, the formal constitutional competency and protection of local government, the scope of inspection and supervision procedures determine the degree of local autonomy and thereby the degree of decentralization in a system of public administration.

In this study, we will follow the legal approach to assess the degree of decentralization, because we are especially interested in how specific elements of the formal system have their impact on service delivery. To that effect, we will look at legal stipulations with regard to the distribution of tasks and the constitutional competency of local government, at the existence of central rules and regulations, and of inspection and supervision procedures. Moreover, we will use the concepts of fiscal, administrative and political decentralization to refer to different issues and aspects of governance, i.e. to distinguish between different dimensions of decentralization.

2.4 Dimensions of decentralization

The formal distribution of power and the formal organization of intergovernmental relations can relate to different aspects, different issues of governance. The literature distinguishes between administrative decentralization, fiscal or financial decentralization and political decentralization (Litvack et al. 1998; Eaton & Schroeder 2010). Administrative decentralization refers to
the attribution of decision-making authority to lower levels of government with respect to public policies and the delivery of public services (Schneider 2003:37-38; Hossain 2010:3). Fiscal or financial decentralization concerns the attribution of decision-making authority with respect to taxation, revenue collection, expenditures, investment borrowing and the establishment of user charges (Adjei 2007:12-13; Hossain 2010:4). It includes the system of allocation of central government funds to local government. Political decentralization refers to the attribution of decision-making authority to lower levels of government with respect to political institutions. This includes the procedures and arrangements for elections, the presence and configuration of other local political institutions and the internal characteristics of political parties (Kauzya 2007:4; Hossain 2010; Eaton & Schroeder 2010:170). We will discuss each of these three dimensions of decentralization in more detail.

2.4.1 Administrative decentralization

With respect to administrative decentralization we can distinguish between a number of sub dimensions. The first relates to the domain of local government. The second concerns the amount and character of central rules and regulations local governments must abide to in their local policy making and service delivery. The third involves the presence of supervision and control of local policy making and service delivery by central government.

With respect to the first sub dimension, the local domain, the literature distinguishes between the general and specific competence of local government (Treisman 2002:3; Goldsmith 2002). General competence means that local government has the constitutional or legal right to fulfill any task, function and/or provide any service which suits its interests. Specific competence refers to a formal arrangement in which central government by law establishes which functions local government fulfills, i.e. what are the responsibilities of local government in policy making and service delivery. If the domain of local government is fully determined by national legislation, the so called ultra vires principle is in place (Martin 2002). Administrative systems in which local governments have a general competence are considered more decentralized than systems in which the local domain is established according to the ultra vires principle (Smith 1979).

However, with respect to the local domain, the proportion and the character of functions attributed to local government is also important. The more responsibilities or the bigger the proportion of functions assigned to local government the more decentralized a system of public administration is (Smith 1979:215). With regard to the character of functions, the control of resources, such as the authority to appoint personnel and fire government workers in all service sectors, deciding on minimum qualification and determine salary levels is considered important (Eaton & Schroeder 2010:168-169). Administrative systems in which the staff of local government are cen-
trally appointed are considered to be more centralized than administrative systems in which local government fulfills the function of recruiting and (and firing) its own personnel (Smith 1979:221).

The second sub dimension relates to the amount and character of central rules and regulations with respect to policies and services which are carried out by local government. In no administrative system is the autonomy of local government complete; some degree of central regulation of local government policy is always present. But central rules and regulation can be few and general in character or they can be extensive and detailed; they can relate to the content of local policies and services, or just establish certain decision-making procedures. It is argued that if central government establishes extensive and detailed central rules about the content of local policies or about the type and details of services delivered by local government, it implies centralization, while the presence of general or procedural rules, with discretion for local government to decide on local policies or deliver services according to their own preferences signals decentralization (King & Pierre 1990:30-31; Fleurke & Willemse 2006:72).

With respect to the third sub dimension, oversight, we can distinguish a number of different forms. The first is ex ante approval. This means that local decisions to establish policies and plans, or to provide services, need the approval of central government before they can be carried out. The goal of this type of oversight is to make sure that all local decisions comply with central regulations or decisions. The more local government authority is subject to ex ante approval the more centralized the administrative system (Norton 1994:121; Wollmann 2004; Khaile 2011:14). A second form of oversight involves ex post correction. It means that central government can reverse decisions after they have been taken by local government. One can assume that this type of oversight, as it is less systematic, leads to less centralization than ex ante approval. A third form of supervision involves ‘the after the fact’ inspection and auditing of the performance of local government, without a direct impact on local decisions (REPOA 2008:22). A fourth type of supervision relates to conflict solving mechanisms. If central government functions as a legal referee in administrative conflicts in local government, systems are considered more centralized that when such conflicts are to be resolved at the local level itself (Smith 1979:217). Overall, with respect to oversight, especially the presence of ex ante approval functions as an indicator for centralized administrative systems.

2.4.2 Fiscal and financial decentralization

Fiscal or financial decentralization refers to the distribution of decision-making authority about local income and expenditures. In the literature, if local government has the authority to decide on the levying of local taxes and has the authority to decide on how to spend the revenues of these taxes, it is
taken as an indication of a decentralized system (Smith 1979:216; Sharpe 1998; Schneider 2002: 16-17; Schneider 2003:38-39). If sub national governments are assigned local taxes without control over the rate and base of those taxes or the power to alter the taxes, the system is considered to be centralized (Eaton & Schroeder 2010:173-174). This implies that the presence of extensive and detailed central rules and regulations or of intensive forms of oversight with respect to taxes and loans would indicate a more centralized system of administration. Although this is not always specified in the literature, one may assume that the same goes for the local decision-making authority with respect to the borrowing of money and the investment of contracted loans.

In most cases, however, local government itself does not provide for all the income necessary to carry out its daily functions or for the financing of investments. Some type of funding of local activities by central government is always present. The features of the funding systems have a direct impact on the intergovernmental relations (Ebel & Yilmaz 2002; Shah 2006). Intergovernmental grants are classified as either for a general purpose or specific. Normally, local governments can use general-purpose grants like their own revenues. The grants may be allocated to local government based on either objective criteria or the central government’s discretion. Specific grants are earmarked for certain purposes and the spending of these grants can be subject to (general or detailed) conditions (Ebel & Yilmaz 2002:9). General grants without specification of purpose and without prior approval for spending these grants result in a decentralized system; earmarked grants with detailed conditions for spending and/or ex ante approval of expenditures result in centralized intergovernmental relations (Shah 2006:425-426).

2.4.3 Political decentralization

Political decentralization refers to the distribution of decision-making authority with respect to political institutional arrangements (Schneider 2003:39). These arrangements involve the institutions for representative government. This includes the authority to determine the organization of the local council and the executive government, to install committees or sub councils and to establish procedures for authoritative decision-making by the local council or sub councils.

The literature distinguishes between two main indicators used to assess the degree of political decentralization, which are the features of electoral rule, and the internal characteristics of political parties. With respect to the former, the system is considered to be more centralized if local government elections are conducted concurrently with national elections and that local governments are not allowed to set priorities that reflect their own electoral context. With respect to the latter, the system is considered to be centralized if party members at the local level are insufficiently independent from their
national level counterparts, and leaders at the national level decide on the nomination of candidates and the use of party labels (Eaton & Schroeder 2010:170-171). On the other hand, if local communities themselves can decide when to hold local elections, and if there are no formal impediments to the establishment of local political parties that want to focus on local issues, the system is considered more decentralized. However, if the national party interferes with the autonomy of local leaders who are also subordinate to the national leaders of their party, the system is considered to be more decentralized.

Overall, if decisions about these different political institutions are highly regulated by national legislation or national parties decide on selection and monitoring of local party members, the administrative system is considered to be centralized. If local government itself is authorized to decide on the features of the political institutions and if the local political party leaders decide on their local election, the administrative system is considered to be more decentralized (Schneider 2002:22-23; Kaiya 2007:4; Eaton & Schroeder 2010:170-171; Hossain 2010).

Table 2.1 summarizes the dimensions, sub dimensions and extreme scores with respect to the degree of decentralization in systems of public administration.

2.5 Key assumptions

Over the past decades, the World Bank, international development banks and other international institutions have urged developing countries to decentralize their systems of public administration (Cheema & Rondinelli 2007). These pleas are guided by the basic assumption that decentralization creates proximity between citizens and their representatives in government, which has a positive impact on the quality of governance in general and the quality of policy outcomes and service delivery in particular. The basic assumption draws on theoretical insights of political science, public administration and economics.

In the end, the ultimate criterion to evaluate systems of public administration is their outcome, i.e. the impact of policies and services on the social-economic and cultural well-being of the population. Are policies effective, do they reach their intended goals? Do the services rendered to citizens create satisfaction? However, the use of ‘effectiveness’ as an evaluation criterion meets with a number of obstacles. One is that it can be difficult or even almost impossible to quantify results (Mihaiu et al. 2010:138). A second obstacle is that it is very difficult to attribute certain social effects to a policy program or a service: causal relationships are hard to prove, because policy programs and services are just one factor out of many that cause social effects or create satisfaction. In view of this, we have chosen to limit our assessment of the impact of a decentralized system to a number of dimensions of the pro-
Table 2.1: The dimensions, sub dimensions and extreme scores with respect to the degree of decentralization of systems of public administration

<table>
<thead>
<tr>
<th>Dimensions of decentralization</th>
<th>Highly centralized</th>
<th>Degree of decentralization</th>
<th>Highly decentralized</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-The domain of local government is determined by national legislation</td>
<td>-Local government has constitutional or legal right to fulfil any task or function</td>
<td>-Local government has constitutional or legal right to fulfil any task or function</td>
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<tr>
<td></td>
<td>-Local government has a low proportion of tasks</td>
<td>-It has a high proportion of tasks assigned</td>
<td>-It has a high proportion of tasks assigned</td>
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<tr>
<td>Administrative</td>
<td>-It has to comply with extensive and detailed central rules on policy making and service delivery</td>
<td>-It follows general and procedural rules to deliver services</td>
<td>-It follows general and procedural rules to deliver services</td>
</tr>
<tr>
<td></td>
<td>-It is subject to extensive ex ante approval forms of oversight</td>
<td>-It is subject to limited and ex post correction forms of oversight</td>
<td>-It is subject to limited and ex post correction forms of oversight</td>
</tr>
<tr>
<td></td>
<td>-Resolution of local conflicts by central government</td>
<td>-Conflicts are resolved by local government itself</td>
<td>-Conflicts are resolved by local government itself</td>
</tr>
<tr>
<td></td>
<td>-Local government follows detailed central rules with respect to taxes, loans and expenditures; expenditures are subject to ex ante approval</td>
<td>-Local government only follows general and procedural rules on taxes, loans and expenditures; limited supervision</td>
<td>-Local government only follows general and procedural rules on taxes, loans and expenditures; limited supervision</td>
</tr>
<tr>
<td>Fiscal</td>
<td>-It receives earmarked grants with specific conditions for spending</td>
<td>-It receives general grants without specification of purpose and/or prior approval</td>
<td>-It receives general grants without specification of purpose and/or prior approval</td>
</tr>
<tr>
<td></td>
<td>Decisions with respect to the local political institutions and elections are highly regulated by national legislation and central government</td>
<td>Local government is authorized to decide on the features of local political institutions and elections</td>
<td>Local government is authorized to decide on the features of local political institutions and elections</td>
</tr>
<tr>
<td></td>
<td>-Partisans at the local level are insufficiently independent from their co partisans at the national level</td>
<td>-Sub national partisans are independent from their co partisans at the national level</td>
<td>-Sub national partisans are independent from their co partisans at the national level</td>
</tr>
<tr>
<td></td>
<td>-National party leaders decide on whom to include in the party list at the local level</td>
<td>-Subnational party leaders decide on candidate’s placement on the party list</td>
<td>-Subnational party leaders decide on candidate’s placement on the party list</td>
</tr>
<tr>
<td></td>
<td>-Subnational party leaders are subordinate to the national party leaders</td>
<td>-Subnational party leaders decide on their subnational electoral context</td>
<td>-Subnational party leaders decide on their subnational electoral context</td>
</tr>
</tbody>
</table>
cess and output that can be assumed to contribute to a positive outcome. We will subsequently discuss the theory and empirical findings concerning the relation between decentralization and a number of these dimensions.

Central to the theory on decentralization is the assumption that the proximity between citizens and government has a positive impact on the transparency of what government does and thereby on the accountability of government to citizens. Government is in a good position to inform itself about the preferences of the citizens, citizens can monitor government policies and services from nearby, and citizens are in a favorable position to influence decision-making. This is assumed to result in a vital democracy where active citizens articulate their needs and participate in politics, where elected politicians represent the interests of the community and where government is accountable for its activities to the people (Burns 1994; Litvak et al. 1998; Kaufmann 1999; Riesman 2002). In the next section, we will discuss whether decentralization actually has a positive impact on the caliber of local democracy, as a prime indicator for the quality of governance.

The closeness of citizens to government is not only assumed to improve the quality of governance as a process, it would, according to the literature, also have a positive impact on the policy outcomes in specific sectors and on the services rendered by government (Rondinelli 1999:4-5; Azfar et al. 2001:6; Riesman 2002). There are many different criteria that can serve to determine the quality of policies and services, but some of these are specific to certain policies or services. In this review, we will use a number of general criteria that appear in the literature on decentralization (Fleurke & Hulst 2006).

The first relates to responsiveness and social welfare. The quality of policies and services is considered high if they reflect the preferences of citizens and thereby create an optimum of social welfare. The second criterion involves the cost efficiency of services, an issue on which different theoretical arguments are available. The third criterion regards the question of coordination: if different services and policies are interdependent, does decentralization result in the coordination of decision-making so that they are provided for in a coherent way and therefore waste and inefficiency is avoided? The last criterion to be discussed relates to the question whether service delivery in a decentralized system provides for policies and services that take into account local circumstances and individual circumstances of citizens, in other words, whether policies and services are tailor-made.

In each of the next sections, we will start with the key assumptions about the relationship between decentralization and the quality of governance and service delivery. After that, for each of the aforementioned criteria, we will report on the insights from empirical research. The goal of the exercise is to gain a more systematic insight into the factors that can explain the success and failure of decentralization, especially for developing countries.
2.5.1 Local democracy

One of the key assumptions of both classic and modern decentralization theory is that decentralization has a positive impact on the active participation by citizens in decision-making on government policies and public services (Jones & Steward 1985; Young 1986; Burns et al. 1994:4; Crook & Manor 1998:1; Held 2006:29 et passim). It should thus lead to the realization of democracy as a value in itself, as opposed to the instrumental benefits of democracy (cf. Held 2006:125 et passim). If government is brought close to the people, if decision-making authority is transferred to local government, it is assumed to have a positive impact on the caliber of local democracy.

Democracy at the local level can be direct or representative. Direct democracy involves the direct engagement of citizens in decision-making by local government. This can take the form of engagement by citizens in the development of local plans and projects or the possibility to participate in referenda on local issues and policies. Representative democracy implies free elections in which a local council, executive board or mayor is elected by local citizens. The local council elected by local citizens receives a mandate from them to decide on their behalf, and is therefore accountable for its actions (UNDP 1997; Vedeld 2003: 159; Budge 2005).

The main stance of the theory about the positive impact of decentralization on local democracy is that, because the local council and/or executive board is empowered to decide on policies and services which directly affect the lives of members of the local community, this will stimulate citizens to become active politically. That is: encourage them to take part in local elections, to organize local public debates, to express their interests and participate in meetings to discuss the development of local plans and projects and to hold government officials accountable (Burns 1994:201; Litvack et al. 1998:6; Kaufmann 1999; Treisman 2000; Saito 2001:1; Mollel 2010:147).

While the theory assumes a positive relationship between decentralization and the quality of the local democracy, it suggests that the size of local government is a conditioning variable. Seminal work by Dahl and Tufte (1973) suggests that people in big local governments will be less motivated to participate, because a large population implies that their activities carry little weight. Secondly, it is assumed that a larger population can create a gap between citizens and their representatives, because it makes it difficult for citizens to gain access to their representatives. Moreover, big local governments imply large local bureaucracies and executive boards, reducing the possibilities for the local population to control policies and actions by local government (Nickson 2011:2). As a result, voter turnout in large local government elections is lower than in small local governments (Gaardsted Frandsen 2002; Geys 2006). In addition, a negative correlation exists between the size of local government and the trust of citizens in the local council (Denters
2002). In contrast, there is also evidence that big local governments create better conditions for local democracy, because of the higher density of civil society organizations and the presence of professionalized politicians, who are able to mobilize the population to be active in the local community (Kelleher & Lowery 2009).

Moreover, the literature suggests a number of factors that have a negative impact on the functioning of local democracy in a decentralized administrative system. In the first place, some formal administrative systems result in relatively weak links between representatives and their constituency. For example, Crook and Manor (1998:292-293) argue that in systems with directly elected and powerful mayors or chief executives on one hand and relatively weak local councils on the other - systems that are present in Bangladesh, Nigeria and several countries of Latin America - have a negative impact on accountability. The strong executives do not feel a need to account for their decisions to local councils and are not prone to consult the population between elections. Although the council is elected by the local population, it cannot impose its' preferences on the executive. This is also the case when electoral systems force voters to choose between complete sets of councilors, where the winner takes all and because of these proceedings, any opposition to the ruling party is absent. These are examples from Côte d’Ivoire and countries in Latin America (Crook & Manor 1998:294).

Secondly, the (local) political culture is an important factor. The literature suggests that it bears both on the functioning of representative democracy and on the direct participation of citizens in local planning and policymaking. With respect to representative democracy, it is noted that elections are often contested based on personalities and ethnicity rather than on clear manifestos; the choices presented to citizens are crude, bearing little relationship to policy and budgetary decisions. In the same vein, Johnson (2001) and Prud’homme (1995:208) argue that the reelection of mayors is determined by the dominant political party and is not based on performance. The procedures for the nomination of candidates are biased to marginalize groups like women and minorities (Devas & Grant 2003:307-308).

A culture of accountability, which allows for open information about policy decisions and the spending of budgets, is important, as it provides the opportunity for citizens to realize where officials make mistakes or violate codes; but it is often not present (Barnett et al. 1997:8-9; Devas & Grant 2003:307). Crook and Manor (1998:29-31) give an interesting account of the way elected local councilors in India were found to operate. They were legally obliged to organize meetings with villagers twice a year to account for their actions and identify the needs of local communities; but they found these meetings humiliating, abandoned the meetings or organized them at times when most villagers would be absent, at work or at the market.

With respect to the direct participation of citizens in local planning and policymaking, Azfar (1999:23) shows that certain norms and values limit the
accountability of officials in development projects. He gives the example of Pakistan and the role of the culture of Izzat, honor. Corrupt officials running irrigation projects were allowed to retain their function, in order to avoid dishonor that would fall upon their community (and out of fear that others would benefit from their removal). Maskey et al. (2005:270) argue that the presence of a culture based on gender and ethnicity limits the participation by some categories of citizens in decision-making. In this case, low-income individuals participate primarily in low-level activities and do not benefit like affluent, older and wealthier groups who are more likely to participate. According to Enserink et al. (2007:4) if the culture present involves a high-power distance and masculinity score, this is unfavorable for the participation of female citizens in planning.

In the third place, the absence of civil society organizations plays a role. The western literature on democracy already mentions the role of civil society (Putnam 1993); for developing countries, it seems even more important. Illiteracy, a lack of knowledge about legislation and civil rights and a lack of information constrain the poor in engaging in the political process. A well-organized system of civil society organizations and political parties is crucial for the connection between local governments and the poor (Johnson 2001; Jutting et al. 2005). In order to work with the poor section of the community, big efforts, time and resources are required (Devas & Grant 2003:310). Even if some form of civil society is present, a lack of resources to reach citizens and communicate with them hinders civic organizations in the mobilization of the poor (Barnett 1997; Johnson 2001:528; Vedeld 2003:103).

A last factor relates to the features of the decentralized system itself. Especially in developing countries, it is important for governments to promote decentralization, as financial sponsors like the World Bank consider it a feature of good governance. But while central governments officially commit themselves to transfer decision-making authority to lower levels of government, and legislation allows for local citizens to be involved in local decision-making, central governments often remain in control of key elements of local policies and services (Jutting et al. 2005:641; Crawford 2009:75-76). Central control over local expenditure, local tax rates and borrowing by local government, national priorities and national standards for service provision and oversight of local decisions are often present (Ndegwa 2002:13-14; Venugopal & Yilmaz 2010; Nickson 2011:1-2). In addition, local budgets are often unrealistically small in relation to the tasks and responsibilities of local government. These limitations of decentralization undermine the functioning of both representative democracy and the direct participation of citizens in local planning and policymaking. Citizens are discouraged to participate actively in local development planning, when they experience that they have little or no actual influence on the content of the plans, as these are eventually approved by central government and must conform to national priorities (Mollel 2010). However, the central government can promote rules to protect
the interests of minorities and disadvantaged groups and reduce the dominance of the majority. For example, in some decentralized settings, elected officials sometimes exercise their power on behalf of a narrow group of elites, and the underprivileged groups rubber stamp the decisions already reached by other interest groups. This makes it necessary for central government to make rules that can protect the interests of marginalized groups (Yilmaz et al. 2010:269-270).

2.5.2 Responsiveness and allocative efficiency

One of the key assumptions of the theory, many times repeated by those who promote decentralization, is that the proximity between government and citizens created by decentralization, will lead to local policies and services that reflect the preferences of the community, and thus maximize social welfare. In the literature about developing countries, scholars use the concept of responsiveness (for example Crook & Manor 1998:18-19). In the classic decentralization literature scholars use the concept of allocative efficiency (cf. Prud’homme 1995:207-208; Oates 1999; Azfar 2001:6; Kim 2008:9). The last concept stems from an economic analysis of public administration, but in essence it refers to the same effect and uses the same argument.

The assumption is that preferences of citizens are heterogeneous; that to maximize social welfare the heterogeneity must be reflected in the public goods and services offered; and that local governments are in a better position to incorporate the differentiated needs in their policies and services than central government. For example, Smoke (2003:9) argues that the fact that policies and services are decided on at the local level creates incentives for citizens to articulate their needs and priorities (also: Bergh 2004:781; Litvack et al. 1998:5). Therefore, Azfar (2001:6) claims that with decentralization the government gets better access to information about the preferences of citizens. If local governments dispose of the information about the preferences; if they have the authority to decide on the functions and services to offer; and if they can raise the necessary taxes or spend allocated budgets as they wish, it enables them to translate preferences into policies and services (Brueckner 2004:135). Local elections enable citizens to sanction representatives by voting them out of office; as a last resort, citizens can vote by their feet; all this creates pressures on local governments to actually take the preferences of local citizens seriously (Azfar 2001:7).

In sum, the theory assumes that decentralization will result in local political processes where citizens’ needs are articulated, considered and translated into policies and services that reflect the preferences of the community. However, the theory on decentralization itself formulates some restrictions to its validity. For example, Kim (2008:12) and Wilson (1999:272) building on Tiebout (1956) argue that efficient allocation will not take place when externalities play a role, i.e. when the effects of a policy or service go beyond the...
borders of the local community. As Slack (2007:10) explains, if the benefits of a road situated in one municipality spill over to a neighboring municipality, the former municipality will have only limited incentives to invest in the maintenance of that road. Because the costs involved do not correspond with the relative benefits for its own citizens; the citizens of the neighboring municipality enjoy the benefits, but do not pay for the maintenance of the road. These types of positive externalities distort the allocative efficiency in local communities, as it leads to under investments. Negative externalities occur when the costs attached to provisions in one municipality (such as pollution or heavy traffic) fall to another municipality. It will distort allocative efficiency, as it leads to over investment or over consumption. In sum, there is a negative relationship between decentralization and efficient allocation in the case of policies and services where substantial externalities are present.

Moreover, although fiscal decentralization may eliminate barriers for local government to be responsive and allocate resources efficiently, it can also lead to what is called tax competition. In order to attract capital and economic activity, local governments can decide to lower local taxes on business investments, thus reducing their local income base. If local governments fail to coordinate their policies, tax competition can provoke a race to the bottom and eventually result in the under provision of public services, i.e. distort allocative efficiency (Brueckner 2004:133-135).

Apart from these theoretical insights into the relationship between decentralization on one hand and responsiveness and allocative efficiency on the other, the literature reporting on research into the impact of decentralization suggests that a series of factors play a role.

One obvious impediment to local governments in developing countries being responsive to the needs and preferences of their community - which is mentioned throughout the literature on decentralization - is the general scarcity of resources. As Johnson (2001:524) argues, the poor in developing countries are a large group and it is difficult to meet their needs with the existing resources capacity. Even if central government provides resources that local governments can spend as they like, the resources are structurally insufficient to address the basic needs of the people. Similarly, Prud'homme (1995:208) argues that, even if local democracy functions by the book and the elected representatives would like to fulfill the citizen’s preferences, there is often a gross mismatch between available resources and necessary expenditures. However, this is not a problem that is specifically related to decentralization, and it does not actually address the issue of allocative efficiency. The question is, given a general scarcity of resources, what factors play a role when it comes to allocate these resources in a way that optimizes social welfare? We can distinguish a number of categories.

The first category of factors has to do with the design of the decentralized system, i.e. with the limitations to decentralization. Many of the systems of
public administration that are presented as decentralized in fact contain centralistic elements, which limit the discretion of local government to determine the mix of policies, services and their content. Actually, there is good reason to limit the degree of decentralization, particularly in developing countries. Apart from two classical reasons for centralization - the externalities discussed in the previous section and economies of scale, discussed in the next section - there is the issue of the capacity of local government authorities to deliver services. As argued by Smoke (2010:197-198) in developing countries many local governments lack the capacity to implement decentralization reforms. They do not have sufficient staff to carry out new tasks, and they lack the technical expertise to provide services and to manage local finances. Some degree of central regulation and oversight is often required to safeguard minimum standards of local governance. However, the limits to decentralization in developing countries often go much further than can be justified by the limited capacity of local governments. For example, in many developing countries financial decentralization is very limited, and central government remains in firm control of financial resources. Grants allocated to local governments are generally earmarked, and come with detailed conditions and national priorities, which reduces the possibility of local government to set their own priorities (Conyers 1999; Ribot 2003; Smoke 2003). In the same vein, Ahmad et al. (2005:1-2) and Faguet (2001:11) argue that unbalanced power relations between central and local government with respect to the allocation of resources have a negative impact on the responsiveness of local government.

For example, Azfar (2001:19) found that in Uganda education was funded through a program of different earmarked grants that included capitation grants, classroom construction grants and teacher salary grants. Restrictive grant conditions, specifying maximum and minimum expenditures resulted in a lack of flexibility in the use of resources at the local level, which sometimes meant that teachers worked for two years without pay. As-Saber et al. (2009:63) showed that in Bangladesh restrictions and ceilings imposed on local taxation severely limited the possibilities for local governments to initiate its own development programs.

In general, it is assumed that expenditure decentralization without fiscal decentralization limits the possibility of adjusting the services level to the local needs (Bardhan & Mookherjee 2006:6): local governments that are willing to raise taxes in order to finance activities that reflect the preferences of the community cannot do so because of restrictions established by central government.

The second category of factors relate to the norms, values and social rules that guide the behavior of actors within the realm of politics and administration. In the previous section, we highlighted some features of the political culture that have a negative impact on local democracy as a whole. The literature shows that existing values, norms and rules directly affect the alloca-
tion of resources. For example, there is ample evidence, from a series of different developing countries, that many instances a culture of corruption is in place which allows politicians and administrators to use the few resources available for their personal gain rather than for what is in the citizens interest. The long working relationships which are many times present between bureaucrats and local councilors due to personal, tribal and party loyalties give rise to unethical relationships, which are the basis for corruption (Prud’homme 1995:208; Oyugi 2000; Ribot, 2003; As-Ahmad et al. 2005; Lange 2008:1125; Saber 2009:56).

On a collective scale, there is the phenomenon of elite capture. Those who are in power at the local level resist the introduction of policies and services that favor the poor, as they perceive local politics as a zero-sum game in which the poor gain at the expense of the elites. They make sure that resources are allocated in a way that favors the existing elites (Luckham et al. 2000; Johnson 2001:524). In such a setting, it is unlikely that councilors or executives will be inclined to actively find out what the preferences of the poor or citizens are. If they are aware of the preferences, it is unlikely that they will take them into account when they decide on policies and services.

2.5.3 Cost efficiency

The production of a certain service is cost efficient if it takes place at the lowest possible cost. The theory on decentralization contains two different accounts about the relationship between decentralization and cost efficiency.

The first account assumes a positive relationship and makes use of some of the same arguments that are used to substantiate the assumption about a positive relationship between decentralization and local democracy, presented in a previous section. The fact that in a decentralized setting local government disposes of decision-making authority, provides an incentive for citizens to influence and control the management of local resources, and the proximity between the local government and the citizens also makes it possible for citizens to hold their representatives accountable. Increased accountability is assumed to have a positive impact on local officials, making them more cost-conscious, and make corruption less acceptable. It would lead to the introduction of management systems that increase the motivation and integrity of officials, and that would eventually reduce the costs of service delivery (Burns et al. 1994:87-88; Azfar 2001:7).

Kim (2008:12) introduces a somewhat different argument. He assumes that decentralization will stimulate local governments to emulate good practices of governance in order to compete with other local governments, thus attracting businesses and inhabitants to strengthen their tax base. The competition between local governments is assumed to stimulate cost-consciousness and reduce the costs of service delivery.
A last argument relates to the reduction of decision-making costs. In centralized systems, decision-making on investments and services by local government frequently implies extensive communication and negotiation between central and local government. Moreover, central government supervises and monitors local expenditures and local governments must report on and account for their expenditures. When decision-making authority is transferred to local government, this would reduce the costs of intergovernmental decision-making and supervision (Fleurke & Hulst 2006).

We have already discussed the empirical literature which shows that decentralization does not automatically result in actual local democracies and increased accountability of local officials. Elite capture and corruption do not only distort the allocation of resources. As Azfar (2001:29) and Balaguer-Coll (2010:579) argue, it also has a direct impact on the costs of services. For example, in the Philippines the costs of school textbooks and the construction of infrastructure inflated as a direct result of corruption (Azfar 2001:29).

The second account about the relationship between decentralization and cost efficiency introduces the concept of economies of scale. Decentralization of the production of public services to local governments can result in a scale of production with relatively high costs. Whether this will be the case depends on the features and production requirements of the service in question. In the case of capital-intensive production or production which requires the input of highly specialized personnel, large-scale production is necessary to achieve acceptable levels of cost efficiency. For small local governments, some investments are prohibitive, others are possible, but result in relatively high costs per unit of service (King 1984; Fleurke & Hulst 2006). In these cases, local governments can choose to share production with other local governments, but if they do not, decentralization will result in relatively high costs for service delivery (Balaguer-Coll 2010:578). The empirical literature about decentralization in developing countries provides support for this part of the theory. For example, Akin (2007:1419) shows that local governments, in the absence of local technical specialists, had to hire expensive expertise from central government or the private sector.

2.5.4 Coordination of service delivery

One of the problems in centralized systems of public administration is that they have difficulty coordinating different policies and services. Different central ministries decide on policies and services and as the role of government grows, the organization and policies at the central level tend to become more fragmented. Central ministries lack information about local issues and circumstances and are generally not aware when and where coordination of policies and services is required to reduce redundancy and waste or to increase their coherence and effectiveness. Moreover, policies and services provided by central government lack the flexibility for mutual adjustment at
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the local level. Therefore, one of the assumptions of decentralization theory is that the transfer of decision-making authority to local government is beneficial for the coordination of policies and services. Then, decision-making authority on different policies and services is in one’s disposal, that is the disposal of the local council or executive board, and whenever necessary these can provide for coordination between policies and services (Fleurke & Hulst 2006:40, 48).

However, the literature suggests that decentralization is a necessary, but not a sufficient condition for coordination. Organizational differentiation and fragmentation of policy making also occur at the local level, especially when local government bureaucracies grow. With organizational differentiation, self-interested department managers may fail to share information with other local managers, even sharing information with the central ministries in their policy sector. A bureaucratic culture which drives managers to focus on their own policy sector and disregard how their decisions affect the policies and services of other departments, constitutes an obstacle to coordinated service delivery and policy making (Alonso 2008:145-146). Also, coordination may be hindered if there is an unequal balance of power between different local departments or if there is no overall policy framework in place which supplies a set of common objectives in the different local departments or agencies (Van Langen & Dekkers 2001; Alonso 2008:145).

The literature suggests that powerful client systems can counter balance possible fragmentation in the local administration. For example, if double standards of regulations are imposed upon clients, and clients are organized to defend their interests and are aware of their rights, they can easily complain to the responsible authorities (Peters 1998:298). However, in many developing countries civil society organizations are weak or absent. Often complaining to the local authorities is not something individual citizens can do easily (Boadi 1996:123; Brown & Kalegaonkar 1999).

2.5.5 Tailor made service delivery

In a preceding section the relationship between decentralization and responsiveness was discussed. It concerns the allocation of resources resulting in a level and mix of public goods and services that optimizes social welfare. However, decisions about public goods and services do not only have to relate to the preferences of the community. When it comes to developing specific policies or services, local and individual circumstances can vary, from municipality to municipality or from person to person. And it may require different measures or activities in order to tailor a policy or service to these circumstances, to achieve the same level of public value: primary education, water distribution, public transport and health care imply quite different investments, measures and activities depending on whether they have to
be delivered in a scarcely populated rural area or in a densely-populated metropolis.

The general assumption is that centralized systems of public administration have difficulty in tailoring policies and services to local and even less to individual circumstances. They lack the capacity to collect and process the necessary information, and if they do, decision-making costs get out of hand. Central bureaucracies tend to produce standardized policies and services, or issue central rules and regulations which impede local governments from taking local and individual circumstances into account (Fleurke & Hulst 2006:43-44). Therefore, the assumption is that the transfer of decision-making authority to local governments will enable them to customize policies and services, taking into account the different features of individual or groups of citizens. In principle, local governments possess knowledge of the local circumstances and can collect information about the specific circumstances of individual citizens or groups; and – if given the authority – take appropriate measures and render services that fit these circumstances (Fleurke & Hulst 2006:44; Yılmaz et al. 2012:110).

However, research shows that the collection of information about local and individual circumstances by local government by no means happens as a matter of course. If local governments actively engage in finding out what specific circumstances are in place and instruct their departments and officials to take these into account, customization takes place. Van Langen and Dekkers (2001:371) provide the example of provision of education in the USA, where school districts actively collect and process information to determine specific policies and services policy for educating the disadvantaged, organizing the length and contents of projects and attributing the required personnel and materials.

Fleurke and Hulst (2006:44-45) report on municipalities that developed special decision-making programs to identify the specific needs of poor citizens and decide on differentiated individual allowances to meet these needs. In other municipalities, they used uniform norms allocating standardized allowances to citizens, irrespective of personal circumstance. The difference between the two was explained in terms of available resources - the development of special decision-making programs requires investments - and the absence or presence of a bureaucratic culture. Even if local government is willing to collect information about the specific circumstances of their citizens, it is argued that it sometimes has to overcome cultural barriers and win the citizens’ trust in order to communicate effectively and customize services (USIP 2011:1).

If local government itself is not inclined to customize policies and services, either because of a reigning bureaucratic culture or a lack of resources, active and competent individual citizens, organized interest groups and other civil society organizations can bring their special circumstances out into the open and make a case for tailor made policies or services. The active in-
volvement of citizens in local decision-making has been shown to result in the customization of public service delivery (Fleurke & Hulst 2006:44). As mentioned before, in developing countries civil society is often weak, individual citizens are not equipped to defend their interests, and cultural factors sometimes hamper effective communication between local government and the local community.

### 2.6 Conclusion

Over the last three decades, decentralization has been propagated as a means to improve the quality of governance in general and improve the delivery of public services in particular. Decentralization has become a trend in both developed and developing countries. As discussed in this chapter, there are some indications showing that decentralization has improved the quality of governance and service delivery. Nevertheless, despite the positive effects noted, with respect to the quality of governance and service delivery, decentralization reforms have disappointed. At least for many developing countries, the high expectations of decentralization have not been fulfilled. The review of the literature on the theory and practice of decentralization has disclosed a large series of factors explaining its relative failure. We will subsume them under the main elements of the conceptual framework presented at the beginning of this chapter.

It seems clear that the design of the formal administrative system can either create favorable conditions or hinder the realization of the professed goals by decentralization. The first involves the formal institutions, i.e. the formal administrative system. It concerns the distribution of responsibilities and decision-making authority amongst different layers of government and the design of intergovernmental relations. Two types of failures can occur. The first is that the design of the decentralized system does not take into account the specific features of the policy or service in question, such as the economies of scale of services or the externalities of policy decisions in certain sectors. In these cases, the transfer of responsibilities and decision-making authority to the lowest administrative level can result in a loss of cost efficiency (if minimum scales of production are not met) or in the suboptimal allocation of resources and harmful competition between local governments (if the system lacks arrangements for the regulation of externalities). In other words, for certain services or policy sectors a high degree of decentralization may undermine the quality of governance or service delivery (Smoke 2010).

The second type of failure concerns the opposite, i.e. a low degree of decentralization. Decentralization comes in different degrees and shapes, but even in highly decentralized systems some form of central regulation or oversight is present, and with good reasons. As discussed in this chapter, a certain degree of centralization is necessary particularly for developing countries.
where many local governments lack the capacity to operate autonomously. The literature suggests that administrative systems which are presented as highly decentralized by national governments of developing countries in fact often contain large bodies of central rules and regulations for local decision-making and service delivery, national guidelines and priorities for local planning, detailed central guidelines for spending budgets and grants, or arrangements for the supervision of local decisions by central government. There is ample evidence that excess of this kind of centralistic elements can undermine local democracy by promoting up-ward accountability of local government officials and discouraging the active participation of citizens in local decision-making; and that it can limit the responsiveness of local government, the efficient allocation of resources and tailor made service delivery.

The literature shows that different types of resources are relevant for a decentralized administrative system to be successful. Again, it is possible to distinguish between two categories of resources. The first concerns the resources of local government. A transfer of responsibilities and decision-making authority to local government presupposes the capacity of a local administration to fulfill tasks of general government adequately and to provide the services for which it is responsible. There is ample evidence to indicate that local governments in developing countries are poorly staffed and that the technical expertise and equipment to provide services are often not sufficient. In part this is due to the general scarcity of resources these countries have to deal with. However, it can also be the result of the design of the administrative system, when central governments attribute responsibilities and tasks to local government, but do not allocate the corresponding personnel and budgets. The second category of resources concerns the human and social capital of the local communities. The literature shows that illiteracy, low levels of education of the population, the absence of civil society organizations or their limited capacity for social mobilization hinder the emergence of active citizenship, and limit the possibilities for citizens to articulate their preferences and hold local governments accountable.

In general discussions on issues of centralization and decentralization, the role of informal institutions receives little attention. However, our review of empirical research shows that informal institutions can at least partly explain how local governments operate, how local councils decide on plans and policies, how local democracy functions, whether and how citizens participate (or are allowed to participate) in local decision-making and how civil society organizations interact with local governments. If there is no culture of accountability present, local councils will avoid meetings with citizens or show themselves immune to their criticism. If local officials value a strict application of administrative rules, they will tend to ignore citizen’s claims for tailor made services. Absenteeism, corruption and elite capture by officials and elected executives can only occur if they are up to a certain point considered as admissible practices. If social rules tell women to hold their tongue in the
presence of men, they will not voice their needs and complaints in council and villages meetings, thus frustrating the process of democratic decision-making.

Figure 2.2 summarizes the findings from our review of the literature. We have organized them according to the factors that were included in our conceptual framework. The elements mentioned in this elaborated model serve as points of interest to be taken into account when designing a protocol for the empirical research.
Figure 2.2: Factors influencing the process and output of service delivery

The formal administrative system:
- The distribution of responsibilities and decision-making authority
- National guidelines and priorities for local policies
- Guidelines for spending budgets and grants
- Central government supervision of local decisions

Informal institutions:
- The presence or absence of a culture of accountability
- The presence or absence of a bureaucratic culture
- The presence or absence of a culture of absenteeism, corruption and elite capture

Resources:
- Personnel capacity and technical expertise of the local administration
- Equipment to provide services
- Financial resources of local government
- Human and social capital of the local community

The process:
actions and interactions of public actors, citizens and societal organizations

Quality of the process and its output:
- Democratic caliber of local decision-making
- Allocative efficiency
- Cost efficiency
- Coordination
- Tailor made services
3.1 The research design

The goal of this research was to enhance our understanding of the performance of decentralized systems of public administration. In order to achieve this goal, we used a theoretical framework that combines different variables: the formal institutions which touch upon the policy sector or service in question; the resources that are relevant for the actors involved in order to fulfill their respective roles; and the informal institutions, i.e. the social norms, values and rules that give meaning to reality and guide the behavior and interaction of actors, and influence the process and outcome of service delivery.

Research into the delivery of agricultural extension services in Tanzania was suitable for our goal. Decentralization attributes a central role to local government and the objectives of the transfer of decision-making authority largely coincide with the positive effects predicted by the theory on decentralization. Moreover, the administrative system for the delivery of agricultural extension services has been in place for more than a decade, so we could assume that it had time to settle and overcome its teething troubles. Against this background, we formulated the following research question:

How does the decentralized system of agricultural extension service delivery in Tanzania function and perform, and how can the formal system of public administration, informal institutions and the availability of resources explain the process of delivery and its output?

There is no elaborate theory available that allows for specific hypotheses about the relationship between formal, informal institutions and the availability of resources on one hand and the quality of service delivery on the other. Therefore, the use of a qualitative approach was considered to be appropriate. To uncover the supposedly complex relationships between the different variables we conducted in depth research of the administrative practices on the planning and actual delivery of services by extension officials and their contact with farmers, NGOs and the agricultural research institutes. In order to achieve this objective, case study research was appropriate because it seeks to answer how and why questions, thus capturing what we are interested in answering (Yin 2009:28). Furthermore, in order to add analytical rigor, a
multiple-case design was preferable, since analytical conclusions would be more powerful than those resulting from a single case (Shively 2006:344-346; Yin 2009:61). In this research, two local government authorities were chosen: one urban local authority in the Eastern part of Tanzania, Morogoro Municipality, and one rural local government authority in the North, Hai District Council.

Since the actual service delivery by extension services and their contact with farmers take place at the level of wards, administrative sub units of local government, six subcases were included, three from Morogoro Municipality and three from Hai District Council.

3.1.1 Case selection strategy

Since the research aimed at uncovering the unknown relationship between decentralization and the quality of service, the selection of cases was based on the principle of maximum variety. A study of a variety of experiences is assumed to add to the depth of theory building (Flyvbjerg 2006). In our research, the unit of analysis was the delivery of agricultural extension services by a local government. Local government is the responsible entity for budget allocation, and the planning and management of its day-to-day business. The actual delivery of services is carried out at the lowest administrative level such as wards and villages from which officials interact with service recipients. Although extension services include more activities, we limited the research to key elements: the transfer of information, knowledge and technology to farmers, including training and advice.

In order to attain variety, two cases were selected. The local governments in question are entrusted with the same formal tasks and dispose of the same formal decision-making authority; they have to abide to the same formal rules and procedures. However, they differ substantially regarding the geographical setting, population density, the type of agriculture present, the importance of farming in the local economy, the agro-ecological conditions and farming systems applied. Our assumption is that these differences constitute different conditions for the delivery of agricultural extension services, that can influence the way resources are allocated and the way services are planned and delivered. In the same vein, our selection of subcases aimed to include a variety of conditions for the actual delivery of extension services to farmers.

3.1.2 Hai District Council

The Hai district is a rural area with a low population density, inhabited and governed by one people, the Chagga. The district is located in the northern zone of the country at the foot of Mount Kilimanjaro. The district has a population of 210,533 scattered over 14 wards; most of these are located in moun-
tainous areas. Most residents are engaged in agriculture and livestock, which is their main economic activity. The district produces an average of 36 million liters of milk per annum. (CIAT 2002). The district depends on the Selian Agricultural Research Institute in Arusha for support in agricultural research. Currently, farmers are especially facing problems of food shortage due to long periods of drought attributed to climate change. In all wards, farmers have formed groups that help them get support from the local extension office and the research institute. On the other hand, many farmers are reported to rely on traditional ways of growing crops; they do not have adequate knowledge concerning proper irrigation schemes, the storage of water or combating diseases (Ngallo & Mziray 2004:2-6).

Three wards were selected as subcases: Machame Kaskazini, Masama Kusini and Masama Rundugai. They share characteristics related to the formal administrative system, but differ in terms of sub ecological zones, types of farming and population. Machame Kaskazini is located in the highland zone and is administratively divided into 7 villages with a total population of 23,334. The farmers in this ward practice intercropping farming throughout the year. Animal husbandry is highly practiced: every household has at least one cow and some goats or sheep. Masama Kusini is located in the central zone and is administratively divided into three villages with a total population of 12,060. The farmers in this ward grow beans, maize and sunflower as their common crops. Masama Rundugai ward is located in the lowland zone and consists of four villages with a total population of 14,033. The farmers in this ward grow maize and paddy as their common crops, but they also practice traditional animal husbandry and keep zebu cattle, sheep and goats.

3.1.3 Morogoro Municipality

Morogoro Municipality is located in the eastern zone of Tanzania. It is divided into 29 wards characterized by a high population density and a mix of peoples. Among them are the Wapogoro, Wandamba, Wakwere and Wakaguru. The local extension office works with the Ilonga Agricultural Research Institute in Kilosa. Approximately 33% of the population is engaged in agriculture, but for many of them this is not the prime source of income. Some farmers keep livestock such as pigs and dairy, others keep poultry. The majority of farmers are smallholder farmers with less than three acres. They face problems of diseases, water shortage, unreliable rainfall and poor storage skills (Foeken et al. 2004:29-30).

Out of the 29 wards of the municipality, three were included in a detailed study of the actual delivery of extension services to farmers: Bigwa, Kilakala and Kichangani. The wards vary in terms of population, ecological zones, the type of agriculture and the setting. Bigwa ward, located in the periphery and rural areas of the municipality, is administratively divided into nine streets. Its’ population amounts to 9,439 people. The ward has big areas of fertile
land and a big number of people are engaged in agriculture and keeping livestock, but only 960 are registered as farmers, and 595 as livestock keepers (URT 2013a). Kilakala ward is a semi urban ward that is located at the foot of mount Uluguru. It consists of fourteen streets with a population of 10,291. Relatively few people are engaged in agriculture and livestock; still it has approximately 450 registered farmers (URT 2013a). Kichangani is part of the urban center of Morogoro Municipality. It is populated by 6000 households totaling 17,483 people and it has 550 registered crop farmers.

3.1.4 In search of causal relationships

We assume that the quality of services rendered to citizens is determined by the decisions and actions of those involved in service delivery. Collective actors such as a Municipal Council that decides on the allocation of resources to a project to improve marketing skills of farmers; and individual actors such as the extension officials who visit farmers’ groups to advise them on the quality of seeds or who organize a field school in a village to demonstrate a new method to fight crop diseases. The goal of our research is to understand and explain the patterns of planning and actual delivery of services. Our literature search showed that formal and informal institutions and the availability of resources are presented as factors that determine the way services are rendered. But how do we relate the patterns of service delivery we find in our case study research to specific elements of the formal institutions present (and not to others), or to a certain informal rule or to the scarcity of a certain tool? How can we show that certain causal relationships are in place?

The answer to this question starts with a basic assumption about human behavior: it is assumed to be rational in the sense that people have reasons to act in the way they do. Reasons include different categories: goals or interests of actors that result from their drive to fulfill certain needs; knowledge and rules that provide meaning to the world and indicate which behavior is allowed, appropriate or sensible in a certain situation; and conditions that create opportunities and constraints for behavior (March & Olsen 1987; Powell & Dimaggio 1991; Huizenga 1995; Hall & Taylor 1996; Hulst & Van Montfort 2007:12). In line with the sociological institutionalist tradition, our assumption is that the goals and interests of actors are not given by nature, but result from the expectations created by the formal and informal institutional context in which these actors operate.

From this perspective, we speak of causality if actors act in a certain way in order to conform to certain rules, to achieve certain goals that are given by the institutional context and/or to deal with conditions such as the scarcity of certain resources (Huizenga 1993:52-53). For the researcher, it means that to discover the causal relationship between behavior on the one hand, and formal and informal institutions and conditions on the other, it is necessary to reconstruct what is called the specific action theory of an actor.
An action theory is the representation of all the reasons an actor has to behave or to decide in a certain way (Huizenga 1993:27-28). In order to reconstruct the action theory of an actor, we collected and analyzed the participant’s account of their behavior and decisions. As a first preliminary step, a content analysis was carried out of the relevant documents such as policy documents of central and local government, guidelines for planning and decision-making, workweek schedules and monthly reports of extension officials. The review of documents provided a provisional account of the formal and informal rules that were candidates to function as reasons in specific action theories. It also provided a first rough picture of the patterns of planning and delivery of extension services.

After reviewing the documents, interviews were conducted with elected members of the councils, district and village agricultural extension officials, and officials from the research institutes, farmers, organizations of farmers and representatives of NGO’s active in the field. We also observed council meetings and accompanied extension officials on their field trips. These research activities fulfilled two functions. First, they allowed for the reconstruction of patterns in the planning and delivery of services, and for the assessment of the quality of the services. Second, they provided the opportunity to question the actors systematically about the reasons for their behavior, and for the patterns of action found. ‘Why’ was the guiding question to collect the elements necessary for the reconstruction of the action theory in question. An example how action theories were reconstructed.

Concerning the planning of extension services, a review of documents showed that every year local councils must establish a District Agricultural Development Plan (DADP). With the establishment of the plan the council decides on the allocation of financial resources (provided through central government grants) to special projects involving the training of farmers’ groups, the establishment of field schools or other forms of support to groups of farmers. The formal procedures and guidelines imply that the draft of the DADP is developed by district officials based on the input by farmers, that council committees discuss the draft and that the full council takes a final decision. Beforehand we assumed that – given the general opinion that financial resources are structurally scarce - the council would especially focus on the allocation of resources to extension projects. A councilor is elected by and represents the population of a specific ward, and it is important for him to show that he is able to secure financial resources for the development of his ward. Surprisingly, the observation of a number of council meetings and a study of the minutes from

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1. Some authors like Harmon use the term ‘motives’ as the encompassing concept, which includes individual and collective goals; rules that give meaning to the world and guide behavior; and conditions (Harmon 1981: 24, 54).
the meetings showed that neither council committees nor the full council dedicated a single word to the selection of projects suggested in the draft of the DADP. Interviews with councilors and officials confirmed that this was the general pattern. When asked for an explanation, the respondents articulated a number of formal and informal rules that guided their behavior: the fact that the draft had been developed by officials taking into account central government priorities and that the program was subject to approval by central government implied that there was very little or no room for councils to change the selection of projects. Under the circumstances, councilors abided by the rule that even questioning priorities was not sensible or appropriate. In the end, we concluded that the council did not fulfill its representative function due to the presence of central government policies in combination with the social rule that these policies can or should not be questioned by local politicians.

3.2 Case study protocol

The collection of data was guided by the theoretical framework presented in the previous chapter. For each of the variables of the framework a number of topics and questions were developed, to be answered using different techniques and sources. The process of the delivery of extension services was divided into three elements:
- the establishment of local plans, programs and budgets, which provide the policy framework for the local departments responsible for the actual delivery of services
- the actual delivery of services to farmers by the local departments for Agriculture and Livestock;
- and the activities of the research institutes, who must provide the local governments with the necessary knowledge and expertise.

3.2.1 The formal administrative system

The research started with an inventory and analysis of all rules and regulations which provide the formal context for service delivery. It involved the formal distribution of responsibilities between different levels of government; the legal provisions for planning, programming, budgeting and actual delivery of the services; central government policy guidelines; and the formal rules and procedures established by the two local governments included in the research.

*Techniques and sources:* content analysis of legislation and policy documents; interviews with key policy officials.
3.2.2 Resources and informal institutions

For the local governments and research institutes involved in the research we made an inventory of the budgets and staff available for the delivery of extension services. No attempt was made to construct a comprehensive picture of all relevant resources. Instead, we used the reconstructed action theories of actors to find out if the availability or lack of certain types of resources could explain certain patterns in the planning and delivery of services.

In the same vein, we did not attempt to construct a comprehensive picture of all informal rules present in the practices of service delivery, but identified relevant rules through the reconstruction of actors’ action theories.

Techniques and sources: content analysis of policy documents and reports; interviews with councilors, policy officials, field workers and farmers; focus group discussions and observations.

3.2.3 The establishment of plans, programs and budgets for the delivery of extension services

A key element of the research involved a detailed description of the patterns of decision-making with respect to the establishment of local plans and programs for service delivery and the allocation of the available budget and personnel resources to different types of services. This included the way farmers and farmers’ organizations were involved in the processes, the role of field workers and policy officials of the extension agency, of the local executive and the local council; and of central government. The reconstruction of decision-making on the most recent plans was used to assess to what extent farmers’ preferences were reflected in the plan, and what the role of the council was.

Techniques and sources: content analysis of policy documents and minutes of meetings; interviews with key officials of extension agencies, executives and council members; interviews with representatives of farmers’ organizations; focus group interviews with farmers; observations of council meetings and meetings at the ward and village level and observations of field work activities by extension officers.

3.2.4 The delivery of services to farmers

A third element was a detailed description of the patterns of implementation of the local plans and programs, i.e. the way services were delivered to farmers. It included the management of field workers by the extension agency; the planning and organization of field trips; the activities of the field workers in place; the participation of farmers in these activities; an inventory of problems of tailoring services to specific local and individual circumstances; and the coordination between extension activities of local government and the services of other service providers.
Techniques and sources: interviews with key officials of extension agencies; interviews with field extension officers and representatives of farmer’s organizations; observation of fieldwork activities; focus group discussions with farmers.

3.2.5 The role of research institutes

A fourth element concerned the activities of the research institutes, who have the task of supporting local governments in the delivery of extension services by conducting research, the transfer of knowledge to and training of local extension officials. Data were collected about the way in which research institutes decide on the allocation of the budget to research projects and the way institutes communicate with local governments and farmers’ organizations about research topics and priorities. Moreover, stock was made of the way institutes diffuse knowledge amongst local governments and farmers; and of the role the liaison units of the institutes play in the coordination of the different research activities and information streams in the area.

Techniques and sources: content analysis of policy documents and research programs; interviews with directors, scientists and liaison officers of the institutes; interviews with extension officials and representatives of farmers’ organizations; observation of research committee meetings.

3.2.6 Measuring the quality of service delivery

In the previous chapter a number of different dimensions were distinguished, representing different aspects of the quality of the decision-making process and of the services as delivered to the local community.

The first dimension concerned the level of democracy in decision-making. Two criteria were used to assess this dimension. The first related to representative democracy, i.e. the role of the elected council in the planning of services, the allocation of budgets and supervision of the delivery of services. Decision-making can be assumed to be democratic if elected councilors take informed decisions on policies, plans and programs; and if they supervise and evaluate the way implementation takes place. The second criterion is related to direct democracy, i.e. to the role of the farmers in the development of policies and plans that were finally established by the local council. Direct democracy can be taken to be present if those directly affected by a policy have the opportunity to present their claims and preferences, and if these receive serious consideration by those entrusted with the formal authority to decide. To assess how democratic decision-making is, in the description of the process of planning and budget allocation special attention was given to the respective roles of the council at the district level and of farmers at the village and street level.
Allocative efficiency was the second dimension of quality taken into account. Allocative efficiency refers to the degree in which a given amount of resources is allocated in a way that maximum social welfare is produced. In other words, an allocation of available resources that reflects the preferences or needs of the population best. It is technically nearly impossible to measure allocative efficiency in a direct and valid way. It would assume that the preferences for specific services of every member of the population could be documented and attached a weight, and consequently compared with the actual services offered and consumed by all. To assess whether the decentralized system of service delivery produced allocative efficiency, indirect and contra indicators were used. These included whether explicit preferences of stakeholders were reflected in the policies, plans, programs and actual services rendered, and whether services that were rendered in an obvious way did not coincide with the preferences of stakeholders.

The third dimension of quality concerned the degree to which services were tailor made. It does not relate to the type of service rendered, but to the extent to which services are customized to the conditions and circumstances of the farmers involved. Amongst other aspects, it relates to the adequacy of the timing, location, means of communication, etc. given local and individual conditions and features. To assess whether services were tailor made, we established if field extension officers offered standard training modules and lessons or if they adjusted their didactical method and the content of their program to the level of knowledge or literacy of their audience.

Cost efficiency was the fourth dimension of quality measured. As was the case with allocative efficiency, data collection to produce a precise picture of the costs involved in service delivery and an assessment of how these related to best practices was not a realistic option. Two general indicators were used. The first concerned the ratio between headquarter officials and field workers, assuming that the higher this ratio the less cost efficient service delivery is. The second indicator was the ratio between actual hours spent by extension officials visiting farmers and delivering services and the standard working hours officials were supposed to spend. The lower this ratio, the less cost efficient the service is.

The last dimension concerned the coordination of services between the local government extension services and other service providers. Coordination can either prevent overlap, which implies a waste of scarce resources, or create synergy, which implies that the joint effort of different service providers creates more value than the sum of their separate efforts. To assess whether coordination between the local government extension services and other providers took place, data were collected concerning procedures, agreements and the actual interactions between the local government and other providers.
3.2.7 Data collection techniques: overview

In order to sketch the actual processes of the planning and actual delivery of extension services a number of research techniques were used. Annex 1 contains an overview of all the policy documents, plans, programs, reports and minutes that were analyzed. Table 3.1 contains an overview of the in-depth interviews, observations and focus group discussions, specifying the type and number of respondents and organizations involved. Annex 2 lists all the names of the respondents and people involved in focus group discussions, as well as the dates on which research activities were carried out. Annex 1 contains detailed interview protocols that were used for the different categories of respondents.

Some of the interviews with field extension officials and individual farmers took place during field trips, which we undertook to observe how field workers actually operate. The focus group discussions took place in groups that varied between 3 to 6 members. Most of the times, the participants in these discussions were members of a specific farmers group.

Table 3.1: Data collection tools and activities

<table>
<thead>
<tr>
<th>Technique</th>
<th>Number &amp; type of respondents</th>
<th>Total number of interviews, observations etc.</th>
<th>Type of Organization</th>
<th>Level of organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interview</td>
<td>8 Agricultural and livestock officers</td>
<td>16</td>
<td>Municipal and district government</td>
<td>Head quarter</td>
</tr>
<tr>
<td></td>
<td>10 Agricultural and livestock officers</td>
<td>20</td>
<td>Ward and village government</td>
<td>Ward and village level</td>
</tr>
<tr>
<td></td>
<td>13 Individual farmers</td>
<td>13</td>
<td>Farmers</td>
<td>Village and street level</td>
</tr>
<tr>
<td></td>
<td>Branch director and 2 Agricultural and livestock officers</td>
<td>4</td>
<td>NGO</td>
<td>BRAC-branch level</td>
</tr>
<tr>
<td></td>
<td>2 Research Institute directors</td>
<td>4</td>
<td>Agricultural research institute</td>
<td>Head office</td>
</tr>
<tr>
<td></td>
<td>6 research scientists</td>
<td>10</td>
<td>Agricultural research institute</td>
<td>Head office</td>
</tr>
<tr>
<td></td>
<td>2 Liaison officers</td>
<td>2</td>
<td>Agricultural research institute</td>
<td>Head office</td>
</tr>
</tbody>
</table>
### 3.3 Issues of reliability and validity

#### 3.3.1 Reliability

Reliability in case study research can be ensured through a number of techniques. One technique is the development of an elaborated case study protocol (Yin 2009; Shenton 2004:72). In this research, the case study protocol presented in the preceding section was used to delineate different steps of data collection, define for each step which topics and questions had to be addressed, and which sources had to be used to collect certain data. A second technique used was interactive questioning of the same respondents and probing (Shenton 2004:67). To that effect, the researcher not only organized interviews with field workers, but also accompanied them into the field. This way he had the opportunity to question field workers a number of times on the same issues, but at different times and in a more relaxed and informal way. The field trips also served as a means to probe whether the practice of service delivery was in line with the accounts officials gave. Moreover, the trips revealed practices that did not come up in the interviews and informal
conversations, such as the fact that farmers feel obliged to serve extension officers a lunch at noon or pay for the services rendered.

3.3.2 Validity

In case study research, triangulation is considered a key method to realize internal validity, i.e. to make sure that causal inferences that are constructed by the researcher hold (Shenton 2004:66; Silverman 2006; Yin 2009). In this project, the researcher used a series of different sources and techniques to collect data on the same phenomena: content analysis of policy documents, plans, programs, reports and minutes of meetings, all that was relevant and available from the different public entities and private organizations; in depth interviews with different actors such as councilors, district head quarter officials, field workers, farmers, representatives of farmers’ organizations, executive staff and scientists from the research institutes; focus group discussions with farmers; field trips with extension officers and observation of meetings. In many of the interviews, focus group discussions and observations data were collected on the same issues, which provided ample opportunity to compare different accounts on the practices and explanations concerning the planning and actual delivery of services. For example, the review of policy documents and formal legislation provided the data on how planning is supposed to be done, the problems of the farmers, the participation of farmers in village meetings, different types of grants transferred to local government for agricultural services delivery and the role of the local council in the planning and budgeting process. The information collected from the documents was tested in interviews with extension officials and farmers, but also through the observation of the contact with extension officials and farmers. In addition, focus group discussions with farmers were used to test the picture of the actual delivery of services that was constructed based on documents and interviews with extension officials.

The literature suggests that a check on the correct description and the causal inferences by members of the practice that was subject of the research can enhance the reliability and validity of the case study (Creswell & Miller 2000:125; Riege 2003:78-79; Shenton 2004:68-69). The researcher did not use a member check. We feared that respondents would react negatively to the research findings and would try to paint a much brighter, but untrue picture of the practices we reported (cf. Silverman 2006). Instead, we repeated the interviews with the same officials to test our understanding of the data. Some officials we interviewed two times, others three times. Lastly, the researcher also relied on frequent informal contacts, lunches and evening drinks with policy officials and field workers, which provided the opportunity to confront respondents with provisional interpretations and test their solidity.
Chapter 4

The organization and policies for agricultural extension services

4.1 Introduction

In the late 1990s, the government of Tanzania adopted decentralization by devolution as a vehicle for reforming governance and improving the quality of service delivery at the local level. The reforms also included the decentralization of agricultural extension services delivery to local government, which took place in 1999. Before 1999, the services were rendered by field offices of central government. Following the failure of the centralized system of service delivery, it was then decentralized to local government. The main goal of this chapter is to provide an insight into the organizational setup, policies and procedures that are relevant for the delivery of agricultural extension services. We start with a discussion of what agricultural extension services are and how they evolved over time. Then we sketch the history and general features of decentralized government in Tanzania. After that we focus on the Tanzanian agricultural sector: its features, agricultural policies and the place of extension services in these policies. We also discuss the formal arrangements with respect to agricultural extension services, the roles and responsibilities of local government and other institutions; the organization of extension services by local government; the procedures for planning and budgeting and the role of the agricultural research institutes.

4.2 The origin and evolution of agricultural extension services

The delivery of agricultural extension services is conceived as a system of assistance to farmers by teaching them to improve their farming methods and techniques, and to analyze their production problems, in order to increase production efficiency (Adams 1982; Okorley 2007:15 citing Maunda 1973). The system used to transfer technologies to farmers has evolved over time, particularly in developing countries (Marfo et al. 1994; Borlaug 1995; Okorley 2007:17-18 citing Carr 1989). Its evolution followed a general trend in the views on development and development practices, and on the role of state in service delivery (Anderson 2007:1).

In Europe, organized agricultural extension services grew up between 1300 and 1700, when European societies transformed from medieval feudal into modern social systems. In the mid eighteenth century, progressive land owners and their agents and similarly minded farmers, together with men of
science, formed agricultural clubs or societies where they exchanged information and discussed about the improvement of farming (Jones & Garforth 1997). In developing countries, extension services can be traced back to the colonial period, when the colonial system put more emphasis on formal education, that would provide agricultural professionals that could serve the colonial administrative system (Davis 2008:36). In addition, agricultural societies were formed to promote modern agricultural techniques. More research, education and extension institutions were set up to benefit colonial families and their government (Birmingham 1999:19). In most developing countries after the colonial era, agricultural policies continued to focus on export crops and so did the extension services. Gradually, the newly independent countries shifted their attention to the production of food crops and extension services followed. They evolved into a general support of farmers’ activities such as community work, credit, input supplies, nutrition and family planning (Anderson et al. 2006:4).

Following that, in the late 1960s and 1970s more emphasis was placed on the diffusion of technology. New varieties of staple foods that were developed by international research centers were adapted by national research centers (Anderson et al. 2006:11). This coincided with the birth of the so-called Training and Visit method of transferring information to farmers, which was developed in Turkey and India in the early 1970s. The system implied that a large cadre of extension workers at the village level, under a single line of command, would visit a fixed list of contact farmers every two weeks. The contact farmers were supposed to disseminate information further to other farmers in their community. In order to empower field workers, regular training must be provided to them by supervisors and subject matter specialists. The extension organization and its field workers would only be involved in the transfer of information, not in the distribution of agricultural input or the application of loans. The focus of the service must be on the production of important crop varieties and low cost practices (Anderson et al. 2006:11-13). Between 1974 and 1999, close to 50 developing countries adopted the Training and Visit approach in the delivery of extension services (Anderson et al. 2006:16).

However, the approach was criticized for failing to deliver the expected results. Firstly, the design of the system was criticized by Howell (1982) because it contained little incentives for interaction between research and extension services, and showed little consideration for the qualification of personnel. Secondly, the approach was criticized by Anderson et al. (2006:12-13) for the low accountability of field workers to farmers. This was attributed to the hierarchical structure, which motivated field workers to report to extension management instead of to farmers and their organizations. As a result, the farmers did not have control over the quality of services provided to them. The field workers provided repetitive advice and did not have an incentive to interact with and learn from the farmers. Thirdly, Anderson
(2006) pointed to the high costs caused by the large number of clients who had to receive services from field officers. The big number of clients not only led to high recurring costs for financing vehicles and motorcycles for field workers, it also required investments in the organization, more mid-level managers and technical experts. The problem of high cost concurred with reduced sources of revenue. For example, in the late 1980s and early 1990s, foreign-funded programs dried up and the ongoing programs ran out of funds. Given this fact, the extension systems had to rely on limited national budgets, reducing the capacity of field workers to serve farmers in different farming systems and to deal with a variety of crops and livestock. Actual large-scale contact between farmers and extension agents became unrealistic. As a result, the field workers focused only on larger, better-resourced and innovative farmers. They did not hold regular training sessions or abide to visiting schedules (Anderson et al. 2006:17-19, citing Moore 1984).

In response to these problems, countries modified their approach. For example, in Sudan, the extension agents were changed to be supervisors for the irrigation system. In the Comoros, extension agents handled input supply functions because of the lack of a reliable private supply system. In some countries, extension officers were involved in non-extension duties such as the collection of statistics and supply of input. Still, other countries introduced higher ratios of farmers to extension agents. The standard of 1 officer per 800 farmers, which was preferred by Training and Visit designers, was neglected and the ratio between extension agents and farmers was distorted. Cote d’Ivoire, Kenya, Nigeria and Senegal increased the use of mass media as a complementary channel of technology diffusion, along with the Training and Visit effort. Lastly, some countries changed the approach from ‘contact farmers’ to ‘contact groups’ as a method for interactions between extension agents and the farmers (Anderson 2006: 20).

Although the World Bank ceased to promote the Training and Visit system actively, development scholars introduced new concepts to deal with the problems mentioned. One concerned the idea of a farmer’s field school, reflecting a more participatory approach to involve farmers themselves in the development of technology and thus tailor services to their needs (Van den Ban & Hawkins 1996; Okorley 2007). A farmer’s field school was conceived as an adult education method, in which farmers develop their own innovations, and learn by doing, with support by extension officials. It was first introduced in Asia, to develop integrated pest management techniques in a group of about 25 farmers meeting during cropping season. Later on, the approach spread to sub Saharan Africa (Davis 2006: 92). However, the farmer’s field school experienced problems that were similar to the problems earlier approaches faced. These included the high cost associated with running field schools such as the preparation of plots, the provision of inputs and the need of experts to support the farmers (Coldevin 2001; Okorley 2007,
citing Coutts et al. 1995). A lack of human and financial capital made it difficult to scale up experiments to nation-wide strategies and effective farmer to farmer transfer of knowledge did not take place systematically (Davis 2006:93-94).

Recently, there is debate about privatizing agricultural extension services. Some researchers argue that the capacity to deliver services in developing countries has been vanishing due to the withdrawal of donor support. The result is that countries charge for public extension services; they shift the burden of associated costs to private organizations or completely privatize the services (Saliu & Age 2009:162-65). Others argue that attaching monetary value to extension services may result in inappropriate pricing. In addition, most farmers in developing countries are engaged in subsistence farming with a low capital outlay and yield in crops and animals. The need for profit may force private extension workers to focus on larger scale farmers because they have the resources to pay for the services (Ajieh et al. 2008:345).

Despite the problems extension services face and the recent debate about the need for public extension services, in many developing countries public extension services still exist and are considered an important means to improve the productivity of agriculture such as in African countries, Latin America and Asia.

### 4.3 The history of decentralization in Tanzania

In Tanzania, local government as an institution was established seven years after the beginning of British colonial rule in 1919. The 1926 Native authorities’ ordinance empowered chiefs to exercise substantial executive, judicial and administrative power. It also provided for the establishment of British district government officers who were appointed to advise the chiefs (Max 1991:11-12). In 1953 the British government introduced a limited form of local democracy. Ordinary citizens could be appointed in the district council by the district commissioner, by the recommendation of chiefs (Max 1991:14). Although local government was given new responsibilities, such as the providing of health care, primary education, or the power to raise local taxes, the district commissioner maintained tight control over the native authorities. Moreover, native authorities were only present in rural areas (Max 1991:15; Tidemand et al. 2010). Apart from these, in urban areas a small number of Municipalities and town councils were established.

At the time of independence, Tanzania inherited the local government system left by British (Mollel 2010). The political goal of government at that point was to promote independence, unity and equality through a nationalist movement. The nationalist ideology was implemented through the modernization of the economy. The state took itself as an actor and agent for the modernization process with the aim to promote socio economic growth and the provision of basic needs (Havnevik & Isinika 2010:21). The local gov-
ernment was used as a vehicle for improving the provision of basic services. To that effect, it was necessary to establish an overall local government system (Max 1991). First, the government abolished the native authorities and established district councils throughout the country. Their composition varied from sixteen to sixty members depending on the size of the population and the area (Shivji & Peter 2003:8). Second, the government replaced general administrative officers, who previously headed provinces and districts, with political appointees who were the District and Regional Commissioners. Third, it introduced central government transfers to local government authorities (Tidemand et al. 2010:3).

Despite the introduction of a local government system, the gap between the government and the people widened and the vision of social equality and justice which were embedded in the nationalist movement was threatened (Havnevik & Isinika 2010:6-8). Following that, from 1964 centralization was strengthened and the channels for citizens’ participation were closed (Havnevik & Isinika 2010:29-30). Authoritarian government gained foot and the economic activities were also centralized (Havnevik & Isinika 2010:24-27). In 1972, when service delivery by local government, due to a lack of capacity in finance and human resources proved to be inefficient and not responsive to local needs, the delivery of services was also centralized.

In the first place, central government and regional deconcentrated agencies became the main providers of services (Ngwilizi, 2002:2). Secondly, institutions for service delivery like local boards and local government service commissions were abolished (Mniwasa & Shauri 2001; Ngwilizi 2002:2; Olsen 2007). Decision-making power was concentrated at the center and local government was perceived as an implementing agency of central government rather than as representative body (Shivji & Peter 2003; Mollel 2010). The role of the elected local councils was taken over by senior central government staff that was then transferred to local government; consultative forums at regional and district levels were abolished and Regional commissioners were conferred a ministerial status (Tidemand et al. 2010:4). As a result, the district councils rapidly became bureaucratic organizations dominated by central government officials (Max 1991:88).

From 1979, the country experienced an economic crisis. Agricultural production stagnated because of a weak demand for export crops; terms of trade worsened and foreign aid was reduced. The main cause of the crisis was associated with bad policies and the internal economic structure. Researchers argued that the crisis could be solved by reforming the institutions and democratizing the society: external advisers such as IMF and the World Bank advised for less state and more market. Consequently, in 1982 the government adopted reforms that reintroduced local government as the main vehicle for service delivery and development. To increase democratic participation in
decision-making and implementation, local governments were entrusted with substantial formal authority. The elected councils were empowered to collect revenues, enact by-laws and determine local budgets and plans (Eriksen et al. 1999:59; Tidemand et al. 2010:5).

However, the inherited structure hindered local government playing the role attributed to it, because resources like manpower, expertise and equipment were retained at the regional level. Central government continued to control local government through the legal framework, policies and guidelines on local taxation and budget ceilings (Mollel 2010:37; Olsen 2007). Consequently, the regional administration undertook the larger part of local development activities and controlled most of the local funding (Tidemand et al. 2010:5).

Following the poor performance of the reformed system and the pressure from the World Bank and other donors, the government introduced Decentralization by Devolution and put it forward in the local government reform agenda of 1996 and the 1998 policy paper. The aim of these reforms was to give the local council power over all local affairs such as the power to levy taxes and provide services to local population. The reforms included the obligation of central government to supply adequate unconditional grants and allow the local council to pass budget plans that reflected their priorities. In addition, the reforms promised to delink local staff from their respective ministries and to transfer responsibility as to establish the payroll and recruitment of the local staff to local government. The role of central government would be limited to general policymaking, providing support and capacity building (Tidemand et al. 2010:6). However, as said above, the idea of the reforms did not originate from the government; above all, it was the opinion of the donors that decentralization was necessary (Shivji & Peter 2003).

Despite the high expectations of the reforms, recent evaluations show that service delivery does not meet the standards and expectations set at the beginning of the decentralization process. A number of factors seem to play a role. According to the official account, the administrative system is characterized by devolution: the main responsibility for service delivery and development lies with local government which is governed by elected councils; the role of central government and regional agencies of central government is merely to facilitate and support local government policies. But in reality, the role of central government leaves little discretion for local government; there is extensive central regulation of local policies and there is tight supervision; the recruitment and appointment of the local staff is predominantly in the hands of central government agencies; central government funding is insufficient to cover the costs of service delivery; local authorities lack the capacity to collect taxes; managerial and leadership skills at the local level are low, as is the level of civic education Mjwahuzi, 2005; Tidemand et al. 2010:51).
4.4 The agricultural sector in Tanzania

The agricultural sector in Tanzania is composed of crop production, livestock keeping and natural resources management. The production of crop accounts for 55% of the agricultural Gross Domestic Product, while livestock keeping accounts for 30% and natural resources management for 15%. The main export crops include sugar, coffee, cotton, tobacco and tea; staple food crops include maize, cassava, rice, sorghum and millet. The choice of crops for agriculture in the different regions is influenced by a number of factors such as soil quality, water availability, marketability, seeds prices, crop yield and pest resistance.

Apart from the factors related to crops themselves, the scarcity of land for agriculture also plays a role. The increasing scarcity of land for agriculture has forced farmers to think about using land more efficiently. For example, some farmers change from growing millet or cotton to mixed cassava and maize. Of these, maize, mixed cassava and pigeon pea are common in semi-arid regions due to their deeper rooting and slower initial growth (Derksen-Schrock et al. 2011).

Furthermore, the size of the farm varies and is related to population. The average farm size is 2.4 hectares. Scarcely populated Ruvuma records the highest which is 2.47 hectares and densely populated Kilimanjaro 1.08 hectares (Derksen-Schrock et al. 2011:1-4). The overall contribution of the sector to the economy and GDP has relatively decreased over a number of years due to the factors discussed in the following section.

Table 4.1: The contribution of the agricultural sector (crops and livestock) to the national economy from 2002 - 2011, in percentages

<table>
<thead>
<tr>
<th>Years</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crop</td>
<td>21.4</td>
<td>21.8</td>
<td>22.4</td>
<td>20.5</td>
<td>19.2</td>
<td>19.0</td>
<td>19.0</td>
<td>18.4</td>
<td>17.8</td>
<td>17.4</td>
</tr>
<tr>
<td>Livestock</td>
<td>4.8</td>
<td>4.7</td>
<td>4.8</td>
<td>5.0</td>
<td>4.8</td>
<td>4.7</td>
<td>4.7</td>
<td>4.0</td>
<td>3.8</td>
<td>3.7</td>
</tr>
</tbody>
</table>

Source: URT 2012b.

4.4.1 The development of agricultural sector policies

Since independence, the role of government in agriculture has gone through a number of changes related to changes in the economic climate and to changes in the dominant political ideology. This section presents the major changes with respect to agricultural policies in general and to agricultural extension services in particular.
4.4.2 The agricultural sector policy after independence

During British colonial rule, the agricultural production in Tanzania – as in other colonies – focused on export crops. After independence, and in line with Nyerere’s socialist view on economic development, central government took control over the agricultural sector. It acted as a manager, investor and entrepreneur. It established settlement schemes to create farmers’ cooperatives and stimulate large-scale production with the use of modern production techniques. It also setup structures to provide credits and organize the marketing of crops. It put more emphasis on the production of food crops (Rutaora & Mattee 2001:157; URT 2013b). With respect to the delivery of extension services, the government retained the approach introduced under British rule; demonstration plots and training centers were used to educate and encourage selected farmers to use better farming methods. The settlement schemes would make it easier for extension officers to deliver their services because they would bring groups together.

However, the strategy to create farmers’ cooperatives was not successful. Farmers were reluctant to join cooperatives, because they did not have a culture of farming together and were not interested in the production of surplus. Moreover, the settlement schemes involved high costs (URT 2008a; Mvena et al. 2010). In the late 1980s, the settlement schemes were abandoned. For the delivery of extension services, it meant that it was only partially possible to use a group approach. However, the services also experienced other problems: there was a lack of coordination between extension officers resulting in fragmented and overlapping services to farmers; extension officers lacked working tools and were unmotivated; there was a lack of supervision. Together, this resulted in services of a poor quality (URT 1997:10).

4.4.3 Liberalizing agricultural policies

As mentioned above, the economic crisis of the 1970s and pressures from financial sponsors, forced the government of Tanzania to introduce reforms, which would imply more market and less state involvement in the economy. With respect to agriculture, the reforms involved the gradual withdrawal of the government from the direct provision of goods and services. The monopoly of state trading companies and cooperative unions on the export of agricultural products was abolished, and the involvement of the private sector in the production, processing and marketing of these products was encouraged. As a consequence, the agricultural market became dominated by local and international players with a varying degree of competition (Rutaora & Mattee 2001:157; Sanga 2013:43).

With respect to the extension services, as has been explained before, from the mid-1970s on, the World Bank promoted the Training and Visit ap-
proach. Supported by the World Bank agriculture and livestock rehabilitation project, the government of Tanzania introduced this approach using a centralized administrative system. Extension officers employed by central government, working on the direct instruction of regional commissioners and the ministry of agriculture worked at the village level to offer training to farmers and transfer the knowledge that resulted from agricultural research (Benor & Baxter 1984). In line with liberalization policies, the government officials did not have a monopoly on the provision of extension services. NGO’s were allowed and even encouraged to supplement the gaps left by the public extension officials. However, no deliberate efforts were made by the government to coordinate objectives, strategies and activities of the public and private providers of extension services (URT/MAC 1997).

Overall, liberalization had a more negative impact on the production and marketing of agricultural products than a positive one. First, the liberalization caused deterioration in the quality of coffee and cotton production due to inadequate government regulations, and a lack of experience and knowledge. The inadequate regulations created chaotic operation of the market which permitted the abuse of the free market by private companies. The companies determined the price of cash crops, hence forcing farmers to sell their crops at a price which was lower than the cost of production (Amani 2005:5).

Second, although the liberalization increased the internal maize market by allowing private traders to trade freely for food crops, the private traders were not able to trade the agricultural products from the areas of surplus due to poor road infrastructure. Apart from the poor infrastructure, the return to farmers was subsequently hit by a fall in price and the increased cost of farm inputs, caused by the removal of subsidies from the early 1980s (Cooksey 2011:61-62). In the case of tobacco, the liberalization caused a lack of credit for cooperative unions. As a result, the unions turned into a collection point for private companies which provided advance payment and commission to cooperatives. Some primary societies agreed to sell to cooperatives, but the cooperatives failed to enforce the contracts. All this resulted in an increase of subsistence farming and rural poverty (Wangwe 1996:8; Cooksey 2011:64).

4.4.4 Renewed government intervention: establishing cooperative boards

Following the failure of liberalization policies, the government intervened in the delivery of agricultural services. The intervention involved making policies to empower the crop boards which could tax traders, exports and regulate the market. However, that power was abused by the boards. They oppressed the farmers through high taxation and proliferation of strategies that favored the state as an initiator and not facilitator (Cooksey 2011:62). Second, these institutions were encouraged to formulate projects that paid attention to the political administrative class rather than to poor farmers (Cooksey 2011:58). Therefore, the government took the initiative to make cooperatives
more autonomous and member controlled organizations that operate voluntarily, independently and economically viable. The cooperatives were also expected to function as a center for agricultural input, technologies and information dissemination (URT/MAC 1997).

4.4.5 The decentralization of agricultural extension services

With respect to the delivery of agricultural extension services, in 1999 the government engaged in a decentralization project. The centralized system was subject to criticism, because it was supply driven and failed to respond to the needs of farmers. It was not able to make farmers feel they were the owner of the service. This was one of the reasons that the idea of farmers themselves would act as disseminators of technology failed to produce (Matee 1994:180). The decentralization implied that local government, i.e. districts in rural areas and municipalities in urban areas, became responsible for the delivery of agricultural extension services.

The main goal of the decentralization project was to promote demand driven agricultural services and link smallholder farmers with the market for their agricultural produce. A second goal was to streamline the planning for the agricultural sector and establish a bottom up planning procedure in which the farmers participate in making plans that reflect their own needs (URT 2001).

The actual responsibilities of local government in the field of agriculture include the formulation of policies and regulations for the local level, the planning and budgeting of the services, and the actual provision of the services. Although formally the local extension officers are appointed by local government, the selection and allocation of staff to the local governments is done by central government. Central government allocates budgets to local government and the ministry for agriculture must approve the local plans. Otherwise, the role of the ministry is limited to the provision of technical support to local government. The technical support is in fact to be provided by regional offices of the ministry and by directors who coordinate district and municipalities (Rutorora & Mattee 2001:158; URT 2004).

While the local government extension offices thus have a key role to play, there is a role for others too. First, there are the farmers and their organizations. According to the philosophy behind decentralization reform, the farmers themselves must articulate their needs for instruction, training and support and these should serve as the input for the programs of local government (Agbanmu 2000:1-2). Second, there are the agricultural research institutes which are active in the field. Much of the knowledge on issues of livestock, crop enhancement and protection, and marketing issues is developed by these institutes. The local government extension offices depend on the institutes for the training and instruction of their personnel and for the development of new extension programs. They are supposed to communicate their needs for train-
ing and instruction and suggest topics for research to the research institutes. Topics can also be suggested by farmers’ organizations. In order to promote the cooperation between the different actors involved, the ministry established regional liaison units (Rutorora & Mattee 2001:159).

4.5 The planning system for agricultural development

As a nation, Tanzania has been working to bring development to its people. In 2011 the government approved a national five-year strategic plan for 2011/12 to 2015/16. The plan reflects the countries’ agenda embedded in the development vision 2025 which includes economic growth and the reduction of poverty. The plan considers agriculture as an instrument for the realization of these objectives. With respect to agriculture, the plan sets out to increase food self-sufficiency and raise the production of export crops. In order to achieve this, the focus is on the development of irrigation particularly in selected agricultural corridors, and high value crops including horticulture, floriculture, spices and vineyards (URT 2012c).

In line with this, the government has formulated an Agricultural Sector Development Strategy. The strategy sets the framework for achieving the sector’s objectives and targets which are developed by the five ministries that are considered to be leading for that sector. The Development Strategy sets the framework for the local agricultural development plans, which are to be developed and carried out by local government authorities.

4.5.1 District agricultural sector strategic and annual development plans

Every five years, the districts have to develop a general strategic plan that covers all policy sectors. The strategic plan is supposed to guide the development of the annual development plan of which the agricultural development plan is part.

With respect to the annual plan, the planning process is required to follow a bottom up planning procedure prescribed by central government. In this procedure, the community members have to articulate their preferences and develop a plan that reflects their wishes. The process has to begin at the village level by means of a village assembly. The village assembly must identify focus groups to conduct a participatory situational analysis in order to articulate opportunities and obstacles to development and formulate a village plan. In doing this, the ward facilitation team is responsible. The team is constituted by Ward Executive Officer, a Ward Agricultural Extension Officer (crops and livestock), a Natural Resources officer and a Ward Community Development Officer. The role of this team is to assist the farmers in articulating their preferences which serve as an input to the village development plan.
In the end, it is the village through its planning and finance committee in collaboration with a Ward Facilitation Team which writes a village agricultural development plan. This plan must contain a community action plan, identify production constraints, analyze their causes and suggest possible mitigation measures. Eventually, the plan should be presented to the village assembly for approval.

After incorporating the input of all beneficiaries, the village plans have to be submitted to Ward Development Committees. Its constitution includes all village council chairpersons, a ward executive officer as secretary; Ward councilor as chair and other invited members (URT 2000a). The role of the committee is to deliberate and compile the village development plans. Nevertheless, practically, the same Ward Facilitation Team that assisted its development at the village level also compiles it into the ward development plan. The team may add inter village activities after seeking consensus from the community members.

The ward development plans are then compiled into a district development plan by the district executive director and his team consisting of the heads of department. The director must make sure that the plan is in line with planning and budgeting guidelines provided by central government (URT 2006b). The draft plan is then scrutinized by the Regional Secretariat in order to establish that local sector policies conform to planning guidelines. Finally, the drafted plan has to be submitted to the full council of the local government where it has to be discussed and approved at least a month before the beginning of the financial year (REPOA 2004).

With respect to the district plan, the council has to play two roles: first is to approve it. To prepare for decision-making in the council, the plan has to be discussed in standing committees of the council. After the plan has been scrutinized by the regional secretariat representing central government, and finally approved by the council, the council is responsible for the implementation of the plan to ensure that they are eventually carried out efficiently and effectively in order to realize the intended objectives (REPOA 2008:28). See figure 4.1 for the planning process.
4.5.2 Budgeting of the plan

The establishment of the agricultural development plan also involves the allocation of a budget to finance the activities and investments included in the plan. All projected expenditures must fit within the budget, as it has been established under the procedures of the budget cycle or be covered by grants provided by central government. The cycle begins with budget preparation guided by national planning and budget guidelines issued in December each year. The guidelines provide a review of the performance during the previous
financial year which informs the ministries, government department and local government about government priorities on funding in service sectors. The ministry responsible for local government both at the national and regional levels clarifies the issues which are relevant to local government authorities and provides guidance on how the local government should treat them in their plans and budgets. For example, in agriculture, the plan is required to include basic training and support activities for livestock keepers and farmers. In addition, the plan must reflect the community priorities identified such as roads, small irrigation schemes, productive investment and supply of agricultural input on basis of cost sharing with community (URT 2012c).

In this process, the local council is required to take into account the levels of funding contained in the guidelines and establish indicative planning figures which have to be used by lower levels of government such as villages and streets in preparing their plans. The indicative levels of funding are important to villages and streets to enable them to prepare realistic plans and budgets at sub-council levels (REPOA 2004).

4.5.3 Financing agricultural extension services

To finance agricultural extension services a series of resources is (in principle) available. First, there are four conditional grants for development activities related to agriculture: the District agricultural development grant (DADG), the Extension block grant (EBG), the Agricultural capacity building grant (A-CBG) and the District irrigation development fund (DIDF). Second, local governments can use resources from the general Other sources grant or from local revenues. Third, on occasion activities can be financed out of contributions from Community Based Organizations, NGOs, farmers’ groups and processors (URT 2006b).

Each of the four agricultural grants is allocated for specific activities. For example, the DADG must be used to finance agricultural investments while the A-CBG is meant to finance the training of agricultural extension officials and the EBG must be used to finance extension services such as teaching kits, raincoats, boots and transport.

The grants are provided in two parts: a standard or basic grant funded by government which Local Government authorities receive irrespective of performance and the additional funds or top ups grants financed through basket funding and which Local Government Authorities receive based on improved performance.

4.5.4 Basic and top-up grants and their conditions

The basic grant is government funded and the amount for a local authority is entitled to receive is calculated based number of criteria which vary in percentages for consideration. For example, the number of villages as a criteria
accounts for 80% in the calculation while the rural population accounts for 10% and the rainfall index for 10%. All local government authorities are entitled to receive this type of grant, but their expenditure is earmarked by central government as shown in table 4.2.

Apart from basic grants, the local government authorities are also entitled to additional top-up grants, which also flow from basket funding. These grants are provided to all local government authorities who meet a number of additional criteria. First, for the local authority to receive this grant it must qualify for a capital development grant based on an annual assessment report. Second, the respective local authority must have hired a District Agricultural and Livestock Development Officer. Third, it must have prepared the District Agricultural Development Plan and must prove its commitment to the reform of agricultural extension services. The amount to be paid to each local government authority is based on performance which is measured annually (URT 2006b:17).

Table 4.2: The different types of grants and their uses

<table>
<thead>
<tr>
<th>Type of grant</th>
<th>DADG</th>
<th>EBG</th>
<th>A-CBG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic</td>
<td>Financing infrastructure and productive assets</td>
<td>Financing the operating costs of public extension staff of LGAs</td>
<td>Financing training and capacity building of LGAs</td>
</tr>
<tr>
<td>Top-up</td>
<td>Same as above</td>
<td>Financing the costs of contracting agricultural service providers</td>
<td>Financing farmers’ empowerment and capacity building for potential private sector service providers</td>
</tr>
</tbody>
</table>

Source: URT 2006b:16.

4.6 The contribution and roles of different actors to the development and implementation of DADPs

So far, we have discussed the procedures for the development of the main policy framework on extensions services, the DADPs. In this section, we shall discuss the roles different actors at different levels are supposed to play: starting with the national level: providing policy frameworks and support; the regional level: support and supervision; the local government level: development and implementation of the plan; ward level and the village level: contribution to the development and implementation of the plan.
4.6.1 The national level

The national government normally plays a number of roles concerning the development of DADPs. The first role concerns policy formulation and development. With respect to this, the inter-ministerial coordinating committee is responsible as it forms policies and provides a planning framework for local governments. The second role is to orient District Facilitation Teams on planning and disseminate information concerning planning for District Agricultural Development. The third role concerns the formation of an Agricultural Service Facilitation Team (ASFT). The team is formed by the Lead Ministries of central government (the Ministry of Agriculture, Food Security and Cooperatives (MAFC); the Ministry of Livestock Development (MLD); and the Ministry of Industry, Trade and Marketing (MITM). In particular, the team has a role to assist LGAs to prepare themselves for the assessment by supporting and guiding them on the preparation and implementation of extension reforms (URT 2006b).

The fourth role concerns the allocation of funds. The actor responsible here is a steering committee which is formed by government representatives and donor representatives under the coordination of the Director of Policy and Planning of the Ministry of Agriculture, Food Security and Cooperatives. The government representatives who form the committee include representatives from the Ministry of Finance and the Ministry of Planning and Economic Empowerment. This committee must meet prior to each financial year. In this meeting, the government and the development partners confirm their financial commitment to the ASDP basket fund. After their confirmation, the funding levels agreed upon are supposed to be sent to local government and ministries for the preparation of the budget. The committee must also oversee the basket funds which cover the district and national level and then makes a decision about the contribution of development partners and the government (URT 2006a).

The fifth role concerns the administration of the ASDP fund. The main actor here is the Director of Policy and Planning from the MAFC. In collaboration with the Permanent Secretaries and Directors of the Agricultural Sector Lead Ministries (ASLM), the director has to consolidate work plans and budgets, quarterly and annual physical and financial reports, progress reports, and requests for funds on behalf of the implementing agencies.

The last role of central government concerns monitoring the implementation of DADPs. In doing this, there are many actors responsible. These include the Permanent Secretaries and Directors of the Agricultural Sector Lead Ministries (ASLM) which are mentioned in the previous section. These actors together have a role to provide technical input for the implementation of DADPs (URT 2006b).
4.6.2 The regional level

The regional level plays a role in coordinating and supervising the local government authorities that are responsible for implementation. At this level, the regional secretariat is the main actor who does the following:

- Assessing the drafts of district Agricultural development plans including verification of information provided by the districts
- Assisting the preparation and the development of quality plan which is in line with national policies
- Support local councils to prepare quarterly and annual reports (URT 2006b).

4.6.3 The local government level

With respect to this level, there are three main actors responsible: the local council and the District Executive Director (DED). The local council has a role to approve the plan and to supervise its implementation at the village level (URT 2006a), while the district executive director has a role to supervise the development and review of the DADPs before submitting it to the full council for approval (URT 2006b).

In practice, the DED appoint the District Facilitation Team (DFT) to assist him. With respect to agriculture, the District facilitation team works under the District Agricultural and Livestock Development Officer and it is coordinated by the Planning officer of the council. Other members of the team include the Cooperative officer, the Natural resources officer, Research officers and other stakeholders such as private sector organizations and NGOs. In a nutshell, this team is in charge of:

- Providing training to Ward Facilitation Teams on a number of subjects including participatory planning, group formation and agricultural development planning, financial related matters and monitoring and evaluation.
- Support the WFTs to analyze the existing opportunities and obstacles and the optional technology for agriculture development
- Conducting a needs assessment and develop the required support services for the implementation of village agricultural development plans

In the end, the Council is responsible for the implementation of the plan. To that effect, it must supervise the activities of the administration. The guidelines attribute a number of tasks to the DED that are related to the implementation of the plan. The first is to monitor and report the activities of plan implementation to the respective ministry through the regional secretariat. Second, the DED must supervise and coordinate the delivery of support services, such as the extension services, the dissemination of agricultural information
and animal health services. Third, he is responsible for the disbursement of resources for activities that are included in the DADP. Specifically, he has to facilitate timely disbursement of grant funds to communities and groups. He must thereby ensure compliance of agricultural development activities with district and national development priorities.

4.6.4 The Ward level

With respect to this level, there is one main actor – the Ward development committees which were introduced in the previous section on planning. As said earlier the main role of this level is to compile the plans developed at the village level. Practically, it is Ward Facilitation Teams (WFT) appointed by District Executive Director which play this role. In nutshell, the team has a role to;

- Guide the village participatory planning process and the development of inter-village activities
- Back up the writing of a ward agricultural development plan by compiling development plans from different villages and the inter-village activities.
- Assist farmers to articulate their needs and establish contacts with private or public service providers (URT 2006b).

4.6.5 The village level

There are two main actors responsible at this level: the village assembly and the village agricultural extension officer. The village is an institution at the lowest level which has a role to manage agricultural development. With respect to development of Village Agricultural Development Plan, the village assembly is responsible to review and analyze the available opportunities and obstacles to development. Finally, it must analyze the possible options based on these opportunities. With respect to implementation, it has a role to mobilize resources from different stakeholders which includes the community, NGOs, CBOs and others but also seeking technical support from these stakeholders (URT 2006b).

The village agricultural extension officer is the lowest agricultural official who is charge of linking farmers with extension services. Specifically, this officer has to;

- Support farmers and their groups through training and maintaining their network
- Support farmers in writing proposals for service contracts
- Support up-scaling of successful activities and ensuring the dissemination of successful stories and facilitate farmer access to and dissemination of agricultural information
• Assist the farmers to carry out the trials in collaboration with research institutes (URT 2006b).

4.7 Agricultural research

4.7.1 Organization of the research

The agricultural research is organized by the Department of research and development under the Ministry of Agriculture, Food security and Cooperatives. The department supervises 16 agricultural research institutes located across the country. The second largest agricultural research agency is the department of research, training and extension under the Ministry of Livestock and Fisheries (Flaherty & Lwezaura 2010:2). Agricultural research can be traced back to colonial rule in Tanzania when the Germans created a research station at Amani near the Tanga region. The station was maintained by British rule. At the time of independence, a network of research institutes had spread over the country and USAID funded the construction of an agricultural college in Morogoro, which is now the Sokoine University of Agriculture (Coulson & Diyamett 2012:5). In the 1970s, this was followed by the establishment of the Uyole research Institute in Mbeya, as a center for crop research in the southern highlands. Since then, the agricultural research in different stations is organized according to four specializations: crop research; special programs such as soil protection, mechanization and agro forestry; farming systems and agro economics; and information and linkages (Coulson & Diyamett 2012:6).

From the 1980s, the agricultural research fell under the Tanzanian agricultural research organization from the Ministry of Agriculture; in 1989 the research was decentralized to the zonal level and organized under seven zones and research institutes (Coulson & Diyamett 2012:5). This also included a change in the respective roles of government and the private sector. The research on tea, coffee and tobacco was transferred to the private sector; other agricultural research remained the responsibility of the public zonal research institutes (Coulson & Diyamett 2012:5; Gavian 2001:14). This new arrangement was associated with increased demand driven research in which the beneficiaries determine the allocation of funding for the research (Gavian 2001:14).

Formally, the research institutes are responsible to bring the agricultural research close to farming communities. To that effect, they have to provide support services to farmers through research, training and through information transfer to farmers in different farming systems. The goal of research services is to increase the adoption of new technologies by farmers (URT 2000b).
4.7.2 The financing of agricultural research

The agricultural research carried out by the Zonal Agricultural Research and Development Institutes (ZARDIs) is financed through different channels. In the first place, The Ministry of Agriculture and Food Security directly allocates a yearly budget. The second channel is the Zonal Agricultural Research and Development Fund (ZARDEF). This fund relies on contributions from the government and other sponsors and is allocated through a system of competitive tendering; both the ZARDI’s, other public institutions and private organizations can submit proposals and compete for funds. The fund is supposed to be managed by independent committees that have to ensure farmers are represented. In each zone, a technical committee establishes recommendations about the priorities for research (URT 2006a).

Thirdly, on occasion international organizations provide funds that are directly allocated to the zonal research institutes. Examples of international sponsors are the Alliance for a Green Revolution in Africa (AGRA), the Association for Agricultural Research in East and Central Africa, main office in Uganda (ASARECA) and the Consultative Group on International Agricultural Research (CGIAR), the Food and Agricultural Organization (FAO), UNDP, the International Fund for Agricultural Development, and the World Bank (Coulson and Diyamett 2012:6). For example, in 1998, the World Bank renewed its support for Tanzanian agricultural research with the Tanzania agricultural research project (TARP II, 1998/99-2002/03). Specific budgets were allocated to each zonal institute.

Although the government time and time again has promised to increase funds for agricultural research, the actual funds made available fall short of these promises and projections. For example, when the Agricultural Strategic Development Plan 2006/7 was initiated, the overall budget for seven competitive Zonal Agricultural Research and Development Funds (ZARDEF) was estimated at Tsh. 2.25 billion annually for the first 7 years. However, actual payments did not match these pledges, standing at an average of Tsh. 1.35 billion.

Moreover, it frequently occurs that budgets which have been approved are not actually disbursed. For example, the governments allocation of funds to ZARDEF has been reduced from 1.4 billion in 2010 to 0.6 billion in 2012. This is because the funding for ZARDEF and ZARDI is donor dependent and the donors can withdraw from financing (Lwezaura 2011:11; ESAFF 2013:18).

4.8 Conclusion

This chapter has made stock of the formal arrangements for delivery of agricultural extension services, as far as it relates to the roles of different levels of government and the procedures that regulate planning, financing and deci-
sion-making. Agricultural extension services have been decentralized to local government. The review of the formal arrangements makes clear however that extension services by no means have become the responsibility of local government alone. Central government and its regional branches are still very much involved. There are extensive guidelines for the planning of agricultural development activities and the roles of different actors are described in detail; strategic and annual plans are subject to supervision by central government and must conform to national priorities; local governments depend heavily on conditional grants for expenditures regarding extension services. The degree of administrative and fiscal decentralization is at best limited. How this works out in practice and how – in combination with other factors – this affects the quality of service delivery is a matter of empirical research.
5.1 Morogoro Municipality: general features

5.1.1 Geography

Morogoro Municipality is the oldest town in Tanzania and was founded in the 18th century. It has a population of 315,886 in 2012 of which 151,700 were male and 164,166 female. The data suggest that between 2002 and 2012 the population increased by 38%. Urbanization accounted for little over a third of the increase and was related to the establishment of small and medium industries, agricultural activities and social services. The municipality is located 195 kilometers west of Dar es Salaam and it covers 0.8% of the total area of the Morogoro region. It is situated at an altitude of 1600 meters above sea level and covers an area of 531.6 square km, with Mount Uluguru in the west, Mindu in the southeast and Morogoro District in the east (URT 2013a). Administratively, the municipality is divided into 29 wards; the wards are divided into a total of 272 streets.

Politically, the municipality is led by the municipal council, presided over by the Mayor. It consists of 29 elected councilors from 29 wards, ten councilors in special seats and three members of parliament. The Mayor is elected from amongst the ward councilors. Among the 29 elected councilors, there are five female councilors. There are five permanent committees composed of council members: the Finance and Administration Committee; the Economic Affairs, Health and Education Committee; the Town Planning and Environment Committee; the HIV/AIDS Prevention and Control Committee; and the Ethical/code of conduct Committee (MMC Strategic Plan 2012).
The Municipal director is the head of the municipal administration. The director in place (2014) is a planning officer by profession and holds a masters’ degree in the field of economic planning; he has served the municipality for more than five years in the position of Municipal director. The administrative organization consists of thirteen departments and six units. The departments include: Human Resources and Administration; Finance and Trade; Health; Environment and Sanitation; Water; Works and Fire Brigade Services; Agriculture, Irrigation and Co-operatives; Planning, Statistics and Monitoring; Livestock and Fisheries; Land and Town Planning; Community Development, Social Welfare and Youth; Primary Education; and Secondary Education. The units include: Legal; Internal Audit; Election; Procurement; Information, Communication Technology and Public Relations; and Bee Keeping (MMC Strategic Plan 2012).
5.1.2 Agriculture in Morogoro Municipality: general features

Within the boundaries of Morogoro Municipality, at least 33% of the population, which is estimated to be equal to 25,425 households, are engaged in farming and livestock keeping. Of these only 15,000 farmers are registered. The crop production is considered important in the Municipality. Out of 15,000 registered farmers, 12,500 are engaged in agriculture and 2,500 are engaged in keeping livestock. Small scale farms (up to two acres) dominate and constitute 67% of the total number of farms, while medium scale farms (between two and ten acres) account for 33%. Some Morogoro inhabitants own large scale farms (more than 10 acres), but their farms are located outside the municipality (Interview HoD of Agriculture, MMC Strategic Plan 2012).

Of the farmers and livestock keepers, 33% are engaged in agriculture and keeping livestock as their main occupation, while for the rest agriculture serves as their secondary source of income. Farming is largely carried out in the outskirts of Morogoro Municipality, and in Mvomero and Morogoro district council where maize, rice, bananas, fruits and vegetables are grown. The livestock sector makes a substantial contribution to the local economy of the municipality. Keeping cattle, dairy goats, beef cattle, pigs and poultry
brings money through selling the animals themselves; their meat, hide and skin; and their products like milk and eggs (MMC Strategic Plan 2012). Most of the livestock are kept indoors. Data from the abattoir show that between 80-100 cattle are slaughtered daily, while about 35-45 are auctioned at Nane Nane auction market. The livestock production in the municipality ranks highest for poultry and lowest for horses.

Agricultural input subsidies have contributed to an increase in production. For example, for maize it rose from an average of 3 bags per acre in 2004 to an average of 12 bags per acre in 2012 (Interview MAO). The major diseases farmers have to deal with are maize stake, rice yellow mottle for crops and fowl typhoid, new castle diseases and east costal fever that affects livestock.

An increasing demand for land has resulted in land shortage; due to this, there is a rising demand for land outside the municipality.

5.1.3 The Municipal budget

The municipality approves a budget for expenditures in different policy sectors every year. However, it is unlikely that it can be carried out as programmed because a big portion of the budget depends on central government grants which are often transferred late to local governments. In addition, the municipalities own sources of revenue are insufficient to finance the budget. On average its own sources account for less than 10% of the overall budget. Apart from that, the available own sources are primarily used to finance temporary employment and allowances for officials and politicians (Interviews Human resource officers; Municipal budget and cash flow 2011-2013).

Table 5.1: The programmed budget from the financial year 2010/2011 to 2012/2013

<table>
<thead>
<tr>
<th>Year 2010/2011</th>
<th>Annual budget</th>
<th>Percent of total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenues</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Own sources</td>
<td>2,950,284,000</td>
<td>12</td>
</tr>
<tr>
<td>Intergovernmental transfers</td>
<td>21,948,485,818</td>
<td>88</td>
</tr>
<tr>
<td><strong>Expenditure</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Development expenditure</td>
<td>5,944,336,197</td>
<td>25</td>
</tr>
<tr>
<td>Recurrent expenditure</td>
<td>17,821,911,181</td>
<td>75</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>23,766,297,378</td>
<td>100</td>
</tr>
</tbody>
</table>
### Year 2011/2012

<table>
<thead>
<tr>
<th>Source</th>
<th>Annual Budget</th>
<th>Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Own sources</td>
<td>4,032,670,097</td>
<td>13</td>
</tr>
<tr>
<td>Intergovernmental transfers</td>
<td>26,780,045,000</td>
<td>87</td>
</tr>
<tr>
<td>Expenditure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Development expenditure</td>
<td>9,403,359,122</td>
<td>27</td>
</tr>
<tr>
<td>Recurrent expenditure</td>
<td>25,416,652,048</td>
<td>73</td>
</tr>
<tr>
<td>Total</td>
<td>34,820,011,170</td>
<td>100</td>
</tr>
</tbody>
</table>

### Year 2012/2013

<table>
<thead>
<tr>
<th>Source</th>
<th>Annual Budget</th>
<th>Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Own sources</td>
<td>3,758,257,700</td>
<td>9</td>
</tr>
<tr>
<td>Intergovernmental transfers</td>
<td>40,129,443,000</td>
<td>91</td>
</tr>
<tr>
<td>Expenditure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Development expenditure</td>
<td>15,544,602,231</td>
<td>33</td>
</tr>
<tr>
<td>Recurrent expenditure</td>
<td>31,039,536,154</td>
<td>67</td>
</tr>
<tr>
<td>Total</td>
<td>46,584,138,385</td>
<td>100</td>
</tr>
</tbody>
</table>


### 5.1.4 The organization of agricultural extension services

In the municipal administration, the department of Agriculture and Livestock is responsible for the planning and delivery of agricultural extension services. The district Agricultural and Livestock officer is the head of the department. Professionally, the present officer is an expert in livestock production and holds a master’s degree in the field of animal science. He is relatively new, as he came to Morogoro Municipality in 2010. Before that, he was serving in the northern region Manyara.

At the headquarters, the department of agriculture and livestock is staffed by a total of 20 extension officers who serve as policy officers and administrators. In collaboration with facilitation teams, they support the planning process for Agricultural Development Plans, which begins at the village level and results in District (or Municipal) Agricultural Development Plans; they advise on the development and implementation of special projects, develop schedules for the actual delivery of extensions services, supervise field officers and process their reports.

The actual extension services are delivered to farmers in the form of information, advice and training by 58 field officers, operating from offices at ward level. As a result of the organization review of 2012, the municipality has undergone some structural changes which aimed to bring government
closer to the people. This involved splitting big wards into smaller, separate wards. As a result, ten new wards were established resulting in the current number of 29 wards (MMC Strategic Plan-Administration department 2012:7-8). The reform also implied an increase in the number of staff in the department of Agriculture and Livestock from 52 extension officers before the reform to 78 extension officers at the ward and municipal level at present. New functions created at the municipal level included an extension officer responsible for slaughtering and meat inspection and another one responsible for teaching at the community development institute within the municipality. Out of these extension officers, 58 are dedicated for agriculture and livestock. All together, these officers serve more than 25,425 households engaged in farming but only 15000 farmers are registered (Extension officers staff records 2013; interviews MAEO and HoD A & LD). The data show that a big number of field officers have a diploma in crop production, general agriculture or horticulture.

Table 5.2: The agriculture and livestock extension staff in Morogoro Municipality

<table>
<thead>
<tr>
<th>Department</th>
<th>Education qualification</th>
<th>Work station</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Msc</td>
<td>Bachelor degree</td>
<td>Diploma</td>
</tr>
<tr>
<td>Agriculture</td>
<td>5</td>
<td>16</td>
<td>19</td>
</tr>
<tr>
<td>Livestock</td>
<td>4</td>
<td>7</td>
<td>18</td>
</tr>
<tr>
<td>Total</td>
<td>9</td>
<td>23</td>
<td>37</td>
</tr>
</tbody>
</table>

Extension officers for the selected wards

<table>
<thead>
<tr>
<th>Ward</th>
<th>Msc</th>
<th>Bachelor degree</th>
<th>Diploma</th>
<th>Certificate</th>
<th>HQ</th>
<th>Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bigwa</td>
<td>-</td>
<td>-</td>
<td>3</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Kilakala</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Kichangani</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: MMC staff records 2014.

5.1.5 Three wards included in the research

Our research into the practice of planning at the lowest level of government and the actual delivery of services to farmers was carried out in three wards: Kichangani, Bigwa and Kilakala.

Kichangani is part of the urban center of Morogoro Municipality. The ward is populated by 6000 households totaling 17,483 people. The ward has a total number of 550 crop farmers. The common crops they grow are maize, rice, vegetables, banana, coconuts, yams, cassava, sugarcane, sunflower, mango and oranges. The farmers face a series of diseases affecting their crop

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1. Horticulture is a branch of agriculture dealing with growing of plants such as fruits, vegetables, seeds, sprouts, mushrooms and others. In this case, it refers to intensive cultivation of vegetables, fruits or flowers.
such as aphids, fungal diseases, maize strike, maize stall bore, cassava mosaic, rogor, pad rust, yellow rice and mottling. Of the 550 crop growers 441 have part of their farms outside the municipality, while 109 farmers have their farms within the ward. There are also 55 big and 20 small livestock keepers, who mainly keep cows, goats, pigs and poultry. Common diseases for livestock are coccidiosis, coryza, trypanosomiasis, mastitis, and salmonellosis.

The land available for agriculture within the ward is not enough to satisfy the demand. In 2013 alone, 84 farmers applied for land outside the municipality (Interview Kichangani WAEO; farmer’s records).

All wards have a similar governance structure, although the number of officials may vary depending on the population. At the lowest administrative level Kichangani ward is divided into eleven streets. The Ward Executive Officer (WEO) is the head of the ward administrative office. The WEO also functions as the secretary of the Ward Development Committees (WDC) and thus plays an important role in the development of plans and projects (Observation WDC and interview Kichangani WEO). The Kichangani ward office is also the seed of four street executive officers, one Health officer, one Community Development Officer, one Revenue Collector and one Education Officer. In Kichangani ward there is one Agricultural Extension Officer to service the total of 625 farmers and livestock keepers. The Ward Councilor is elected by the citizens of the ward to represent them in the municipal council; he does not have formal competencies over the ward officials, but he has office at the ward level, where he attends to the citizens of his ward. In Kichangani ward, the Ward Councilor is male and member of the ruling party CCM.

**Bigwa ward** is located in the periphery of Morogoro Municipality and is divided into nine streets. It has a population of 9,439 people, constituted by 4520 males and 4919 females (URT 2013a). The staff of the Bigwa Ward office consists of a Ward Executive Officer, two street executive officers, two education coordinators, one health officer and one community development officer. There are three agricultural extension officers to service the 960 farmers and 595 livestock keepers in the ward. The Ward Councilor is female and a member of the ruling party CCM (Interview Bigwa WAEO). The ward has 938 small-scale farmers with less than two acres and 22 medium scale farmers with two to ten acres.

The common crops that the farmers grow in the ward include fruits and vegetables, cassava, yams, beans and pigeon pea, sunflower and sugar cane. Livestock includes poultry, pigs, goats, sheep, hare and cows. Also here, livestock keepers have to deal with a large series of diseases: tryps, anaplasmosis (tick born diseases) for cattle, sheep and goats; new castle, fowl cholera, fowl typhoid, saltmothelosis for poultry; worms infection and mange for pigs (Interview WAEO; Farmers Records 2012)
Kilakala ward consists of fourteen streets; the number of households amounts to 4,816, totaling a population of 10,291; of which 4,840 are male and 5,451 are female (URT 2013a). Although the farmers’ records indicate that there are only 60 registered farmers, in fact the ward has a total of more than 450 farmers (Interview WAEO). Of these 90% are small-scale farmers with less than two acres; 8% have medium scale farms. These farmers grow maize, watermelon, rice, banana, mango, cassava, beans, vegetables and onions. The common crops are maize and rice. Some farmers grow crops outside the municipality in the pangawe village of Morogoro District Council. Livestock activities include poultry and keeping pigs.

The ward office consists of the Ward Executive Officer, five street executive officers, two health officers, one community development officer, two ward education coordinators, one revenue collector, one office attendant and one security guard. The 450 farmers of the ward are serviced by two female extension officers. The Ward Councilor is male and is from the ruling party (Interview Kilakala WAEO; Kilakala ward Farmers Records).

5.1.6 Methods and channels for the delivery of agricultural extension services

The transfer of information and agricultural technology, providing advice and support to farmers constitute the core of extension services. It is possible to distinguish a number of methods and channels for the provision of extension services.

First, there are the home visits to individual farmers. In the concept of Training and Visit as introduced by the World Bank in the early 1970s, a fixed schedule of visits to a defined list of contact farmers in specific villages within an extension officers working area formed a key part. The contact farmers are expected to disseminate information further to other farmers within the community (Anderson et al. 2006: 11). In Morogoro Municipality, the extension officers are provided with a farmer’s record book which provides the list of registered farmers to be visited within a certain time frame. In addition, they have to collect additional information about farmers in cooperation with the street chairperson. This is important in order to update the records and include new farmers in the list (Interview Bigwa WAEO). In the case of agriculture, a calendar describes the type of advice and support extension officers are supposed to offer in a particular period of time.

Second, extension services are also provided on a collective basis, to different groups of farmers. Here, we can distinguish between training, farmer field schools and the assistance given to specific projects. Training refers to the transfer of knowledge with respect to specific topics such as the proper use of fertilizer for growing sunflowers or the construction of water storage schemes. It usually takes place in a school like setting (a room in the ward office or primary school), where farmers are invited to attend one or more scheduled classes taught by extension officers. In farmer field schools the
transfer of knowledge takes place on the spot: farmers gather at the plot of
one of their neighbors, where the extension officer shows new techniques and
farmers learn by doing. It is based on the idea that farmers learn optimally
from field observation and experimentation (Van den Berg 2004: 4). Training
and field schools can also form part of a special project. In the Tanzanian
context, projects are characterized by specific goals and targets (such as crop
enhancement or the reduction of livestock morbidity) and a number of activi-
ties and/or investments, for which funds are made available.

5.2 Local plans, programs and budgets

5.2.1 The Morogoro Municipality strategic plan

The national guidelines imply that the actual provision of extension services
must take place within the framework of national and local agricultural plans.
Local governments develop a five-year strategic development plan. The local
plan is guided by the National Strategy for Economic Growth and Reduction
of Poverty which spells out three major clusters that a council must abide to
in order to reduce poverty. These include economic growth and income pov-
erty reduction; improved quality of life and social well-being; good govern-
ance and accountability.

The local strategic plan contains one section on agriculture, based on the
information from a SWOT analysis by the department of agriculture and
livestock. The analysis identifies some key strengths and weaknesses which
must be addressed by the five-year strategic plan. The identification of
strengths and weaknesses is conducted by the technical staff of departments
who must take stock of citizen’s problems at the ward level and other stake-
holders like private sector and civil society organizations; they must include
them in the plan and submit the draft to council committees and the full
council. Nevertheless, the selection of what to include in the plan is guided
by national plans. This implies that the plan must reflect national policies
including the Strategy for poverty reduction and economic growth (Inter-
views Bigwa and Kichangani WCs)

The current plan was approved by the Morogoro municipal council in
March 2011. It constitutes an agricultural sector development plan for the
period 2011-2016 which identifies the targets to be reached in the year 2016
and strategies to be used. For example, one of the areas addressed by this
strategy is crop production. In the first place, the municipality intends to
increase maize production from 2.8 tons per hectare to 3.2 in the year 2016
through the use of improved technology, provision of extension services,
subsidized agricultural input and the procurement of agricultural implements.
Secondly, the municipality intends to improve paddy production through the
use of improved agricultural technologies, traditional irrigation schemes,
subsidized agriculture input, extension services and training farmers on im-
proved agriculture technology. With respect to livestock, the municipality objective is that the number of slaughtered animals at the abattoir increases from 36,000 to 43,200 by the year 2016. This must be made possible through the construction of a modern abattoir, new slaughter slabs, a modern livestock auction market and the recruitment of meat inspectors. Moreover, the municipality intends to increase milk production from 8,593,200 to 12,453,200 liters by the year 2016 through the establishment of an artificial insemination center, increasing the capacity of livestock keepers, the procurement of improved breeding bulls and the training staff on artificial insemination technology (MMC strategic plan 2011).

Although the Municipality is empowered to develop its strategic plan through SWOT analysis, the plan which was developed in 2011 was rather general and the analysis it was based on did not reflect the specific problems of farmers. For example, according to the SWOT analysis, the farmers face a problem of a lack of access to advice and agricultural information, due to a lack of incentives and inadequate working facilities for the extension officials to transfer such information to them. Apart from that, the farmers face the problem of a lack of modern farm implements and consequently, they rely on traditional tools such as a hand hoe. In addition, they do not have adequate transportation facilities to transport their crops to markets. In the same vein, the strategies developed to face these issues and increase production are very general. They focus on general aspects such as improving agricultural technologies, improving extension services and subsidizing agricultural input but they do not show specifically how that can materialize. The lack of incentives and working facilities that the extension officers face does not feature explicitly in the plan (MMC strategic plan 2011: 98).

In contrast, the targets to increase production are formulated in very precise percentages. Our research suggests that this increase in percentage was taken from the national government plan that is sent to Local Government Authorities as a guideline for planning (Interviews HoD A & LO; LO). This is also explained by the fact that the planning process must conform to the guiding manual for strategic planning and budgeting (MMC strategic plan 2011:2) and that the technical backstopping of the plan was facilitated by the Regional Secretariat which provided guidelines for writing the plan.

On the other hand, the plan was supposed to incorporate the opinions of different stakeholders. Some stakeholders such as farmers’ groups were indeed consulted, but their input was not considered. For example, their idea was to get subsidized agricultural input and to get enough extension officers to provide advice and information on modern technology to farmers. NGOs suggested that they should be involved in the planning of agricultural related services by the government and get access to credit facilities, especially for those whose sponsors have withdrawn from providing funds. However, the plan did not mention or reflect these specific interests of NGOs and the farmers’ organizations (Interviews DPO and DALO).
Table 5.3: The targets and strategies for agriculture and livestock

<table>
<thead>
<tr>
<th>Targets</th>
<th>Strategies</th>
</tr>
</thead>
</table>
| Maize production increased from 2.8 tons per hectare to 3.2 tons per hectare by year 2016. | Use of improved agricultural technologies  
Use of improved agricultural technologies  
Use of subsidized Agriculture inputs through a voucher system  
Procurements of Agriculture implements through Agriculture inputs loan. |
| Paddy production increased from 2.8 tons per hectare to 3.2 tons per hectare by year 2016. | Use of improved agricultural technologies  
Use of improved traditional irrigation scheme  
Use of subsidized Agriculture inputs through voucher system.  
Improvement of Extension services.  
Training farmers on improved agriculture technology. |
| Sunflower production increased from 0.7 tons to 1.5 tons per hectare by the year 2016. | Use of improved agricultural technologies  
Value adding of the produced crop.  
Construction of warehouses.  
Training farmers on business entrepreneurship. |
| Horticulture crops production increased from 2.2 tons per hectare to 3.0 tons per hectare by year 2016. | Use of improved agricultural technologies  
Use of improved extension services.  
Training farmers on Agro-processing technology.  
Facilitate procurement of horticultural equipment. |
| Number of slaughtered animals at the abattoir increased from 36,000 to 43,200 by year 2016. | Construction of modern abattoir  
Construction of new slaughter slabs.  
Construction of modern livestock auction market.  
Recruitment of Meat Inspectors. |
| Milk production increased from 8,593,200 to 12,453,200 liters by year 2016. | Establishment of Artificial Insemination center.  
Capacity building to live stock keepers  
Procurement of improved breeding bulls.  
Training staff on artificial insemination Technology |
| Number of milk collection centers increased from 1 to 3 by year 2016. | Secure land for building.  
Facilitate procurement of milk collection and processing facilities.  
Conduct training to livestock keepers on adding value and entrepreneurship.  
Recruit staffs on milk technology. |
| Number of modern butchers increased from 15 to 56 by year 2016. | Facilitate procurement of meat cutting saws.  
Conduct training to butchers on meat hygiene and business entrepreneurship. |

Source: MMC strategic plan 2011.

Largely, the content of the plan reflected central government priorities produced by local officials based on their long working experience as heads of
department (Interviews MPO, MALO; A & LDBO and MHO). Table 5.3 shows the key targets and strategies included in the plan.

5.2.2 The role of the council in developing the strategic plan

The strategic plan developed by officials of Morogoro Municipality in 2011 was submitted to the full council for approval. The council received a draft of the plan but did not discuss or amend it. The plan was finally approved as it stood. The research suggests that the pattern of decision-making about the plan is a derivative of the councilors' behavior. In the first place, they explain themselves as having insufficient skills and knowledge to discuss the plan which is technically developed. Secondly, they think that it is a job of officials to develop the plan because they know much more about central government guidelines, which guide them for its development. Thirdly, they believe that the plan was prepared based on the input of low-level officials who work directly with farmers. Lastly, they believe that the plan reflects the instructions from central government which provides funds for implementation and therefore they should respect them (Interviews WCs Bigwa and Kichangani Wards; A & LDBO). The fact that Municipal Strategic Plan is developed based on national government priorities is also supported by the Mayor’s statement which shows that the plan must be consistent with the national government plan as indicated below.

*Morogoro Municipal Council has been at the forefront in developing its own plans and implementing them successfully. Such plans have been drawn in line with national plans and programs especially those which foster equitable and sustainable development. One of the national strategies which the Council has strongly embarked on is the National strategy for economic Growth and Reduction of Poverty (Statement by the Mayor in the Morogoro Municipality Strategic Plan 2011:VI).*

Overall, the role of the council in developing a strategic plan is limited. The councilors do not feel equipped to incorporate local priorities in the plan. They feel that they cannot and should not alter plans that are developed by the technical staff of the department, also taking into account central government priorities and guidelines.

5.2.3 The District Agricultural Development Plan

Next to the strategic plan is the annual plan. In order to implement the five-year strategic plan, the district must prepare agricultural development plans every year. While the strategic plan is supposed to be based on national guidelines and a local SWOT analysis, the agricultural development plans must be developed according to the formal procedure set out in the Opportu-
The Delivery of Agricultural Extension Services in Morogoro Municipal Council

opportunities & Obstacles to Development framework as was explained in chapter four. As stated in the district agricultural planning guidelines, the planning process is supposed to be handled by District Facilitation Teams which are oriented by the Ministry of Regional Administration and local government (URT 2006). In the Morogoro region, all the District Facilitation Teams have been trained to apply a bottom up planning procedure. The facilitation team of Morogoro Municipality in particular was trained on this subject in 2008 (Interview MAO).

In line with the guidelines, the process of planning agricultural services in Morogoro Municipality begins at the lowest administrative level, the street level. Once a year and upon instruction of the Municipal Director, every street organizes a special meeting for citizens to deliberate on what they feel are agricultural priorities. The process of planning and the development of projects is supposed to proceed bottom up and serve to articulate the problems and priorities of farmers. In practice, extension officers are in the lead. Extension officers present the ideas for a project to farmers for them to discuss. If the farmers launch ideas for the improvement of production or marketing, the extension officer informs them about the costs and benefits involved in the realization of such ideas and whether it will be possible to obtain funds. Both the initiatives of the extension officer and his advice concerning suggestions done by farmers are based on what he thinks conforms to central government priorities.

Examples of extension officers taking initiative and trying to interest farmers in accepting certain ideas concerned a marketing project and a dairy farming project that covered three wards, Kilakala, Bigwa and Kichangani.

*We normally use different techniques like tapes and TV to demonstrate new knowledge to farmers and convince them. For example, through this, the farmers accepted to form a diary project which covers three wards namely Kilakala, Bigwa and Kichangani (Interviews WEO and WAEO Bigwa).*

This shows that although the process of planning and the development of projects is supposed to proceed bottom up to address farmer’s problems and priorities, the extension officers play a leading role and serve as the voice of central government.

Apart from special meetings about agricultural development plans, the citizens hold street meetings which take place every two months to discuss general development issues including agriculture. These meetings are general in character and meant as a platform to discuss and raise issues with respect to all public services, including agricultural issues. A typical example was a meeting in Lukuyu Street in the Bigwa ward. The meeting was attended by 60 members of the community. With respect to agriculture, it discussed the
shortage of rainfall and the fact that the government supplied inappropriate fertilizers. Other issues raised in the meeting were the supply of agricultural input and diseases affecting the germination of seeds (Observation 02/02/2013).

Agriculture does not always prominently figure on the agenda of these meetings, as a number of street meetings in the Kichangani ward indicated. They were dominated by other issues like the construction of ward offices, health centers, and the construction of classrooms; agricultural issues were not raised (Documents of street meetings of 02/10/12, 06/10/12 and 06/01/13; observation of WDC meeting 07/03/13). An explanation for this is that in Kichangani ward, part of the urban center of Morogoro Municipality, most citizens are not engaged in agriculture; and those who are, are also engaged in other activities like business or have formal employment. The majority of people who farm, do so outside the municipality. This may also explain that the attendance of the street meetings in Kichangani is relatively low, ranging from 22 to 60 in the three meetings mentioned (Documents of street meetings of 02/10/12, 06/10/12 and 06/01/13). Another explanation is that although extension officers are supposed to attend street meetings and respond to questions raised when there are agricultural issues on the agenda, the data show that extension officers do not attend. The reason for this is that the meetings take place over the weekend and during the evening after working hours. As a result, the extension officers must rely on information provided by the street executive officers (Interview Lukuyu SEO Bigwa Ward).

On the other hand, the planning of agricultural extension services faces a problem of resource scarcity. The amount of financial resources allocated for the recurrent budget such as Personnel Emoluments and Other Charges, and for Development budgets for Agriculture in urban local authorities like Morogoro, is low compared to rural local authorities. Morogoro is an urban local authority that does not qualify for large amounts of grants for agriculture, because the allocation considers criteria like the size of the farming population and the rural or village setting (Interviews MAEO; URT 2006b). Table 5.4. gives an overview for the period 2010-2013.
Table 5.4: The amount of fund allocated for development and the recurrent expenditure for extension services between 2010/2013

<table>
<thead>
<tr>
<th>Code</th>
<th>Year</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2010/2011</td>
<td></td>
</tr>
<tr>
<td>PE</td>
<td></td>
<td>469,654,000</td>
</tr>
<tr>
<td>OC</td>
<td></td>
<td>15,865,000</td>
</tr>
<tr>
<td>DEVELOPMENT</td>
<td></td>
<td>123,118,818</td>
</tr>
<tr>
<td></td>
<td>2011/2012</td>
<td></td>
</tr>
<tr>
<td>PE</td>
<td></td>
<td>649,099,000</td>
</tr>
<tr>
<td>OC</td>
<td></td>
<td>15,065,000</td>
</tr>
<tr>
<td>DEVELOPMENT</td>
<td></td>
<td>153,560,000</td>
</tr>
<tr>
<td></td>
<td>2012/2013</td>
<td></td>
</tr>
<tr>
<td>PE</td>
<td></td>
<td>728,884,500</td>
</tr>
<tr>
<td>OC</td>
<td></td>
<td>191,32,072</td>
</tr>
<tr>
<td>DEVELOPMENT</td>
<td></td>
<td>79,990,496</td>
</tr>
</tbody>
</table>


5.2.4 The Ward level

At the ward level, the plans and projects that emerge from the street meetings are submitted to the Ward Development Committee for discussion. The committee consists of a Ward Councilor who is a chair, the chairmen of all village councils within a ward, any person who is a member of a district council, other members invited and the Ward Executive Officer who is a secretary (URT 2000:31; cf. chapter 4). It is the formal role of the WADC to advise citizens to revise or drop projects, and coordinate projects developed in different streets, if necessary. In practice, the Ward Facilitation Team fulfills this role. Based on the advice of the officials, representatives of citizens from different streets eventually vote for projects to be included in the plan.

The citizens plan through their street meetings and we receive their projects but we cannot implement all. We explain to them and they make a decision on projects to be included in the plan based on their priorities (interview WAEO Bigwa).

The ward facilitation teams in the three wards included in the research are constituted by the ward executive officer, the ward agricultural extension officers and the community development officer. Apart from facilitating the voting, the teams are also responsible for helping farmers formulate projects and write project proposals in such a way that they meet the criteria for fund-

2. PE = Personal Emoluments; OC = Other Charges.
ing. In the end, the teams are responsible to compile the different project proposals into a ward plan.

In case of an inter-ward project, the ward extension officer makes a proposal in the ward development committees after discussing with farmers from respective wards. For example, the diary project was first suggested in Bigwa ward, but the Bigwa ward extension officer convinced the WFT that it would be a good idea to extend the project to other wards so that farmers’ groups in Kilakala and Kichangani ward could also benefit from the funds and extension activities (Bigwa WFT 2011 report & interview WAEO)

At the municipal level, the plans are compiled by the District Facilitation Team under the coordination of the planning officer. The team consists of the heads of departments. The officials select the projects to be included in the district agricultural development plan. The selection of projects follows the guidelines for planning and budgeting issued by the Ministry of Finance and the President’s Office Regional Administration and Local Government Authorities. These guidelines include a budget ceiling and the central government priorities that the district must abide to in the formulation of the plan. Such guidelines exist for every policy sector. There are general guidelines for agriculture, for example the requirement that the planning must include basic training, give support to farmers and aid coordination with stakeholders to implement the national Agriculture First Initiative (*Kilimo Kwanza*). They are also specific, for example plans must include the provision of small irrigation schemes; they must focus on productive investments; or that only projects for crops can be financed that add to the value chain (URT 2012c:3; Interview MHO).

*When we have many projects, we decide what to do. We go in every ward and select the projects proposed by the community but also consistent to guidelines (interviews MAEO and HoD–Agriculture and livestock).*

Recently, central government has instructed the district to use a new criterion for the selection of projects. The criterion is that projects must focus on a limited number of crops and wards. District officials can only include the projects that address the crops and the wards selected. In Morogoro, the district crops that were selected are sunflower and maize and the wards that are currently selected to be included in the plan are *Kilakala, Bigwa* and *Kichangani* (Interview HoD A and LD).

*About planning, we normally allow the farmers to plan but we concentrate resources in few wards for better results. Other ward’s plan can wait for another time because resources are scarce (Interview MAEO).*
After compilation of the Municipal Development Plan of which the Agricultural Development Plan is part, the plan is submitted to the Regional secretariat for review and advice. The Regional secretariat has to make sure that the plan abides to the guidelines provided by central government including the budget ceiling. The ceiling provides the indicative figures for the available budget (Interviews MLO and MHO).

5.2.5 The role of the council in the development of the annual plan

After the review by the regional secretariat, the district council must approve the draft of the plan. Before the plan is discussed in the full council, the draft is first submitted to council committees for discussion and deliberation on the content. The Planning and Administration Committee is primarily responsible for advising the full council; it coordinates and discusses the input from other sectoral committees. After discussion, the plan is submitted to the full council for approval. However, in the meetings where the draft plans are tabled, there is hardly any discussion about their content, the projects that are included or the allocation of the budget to these projects. Instead, the committee meetings are preoccupied by the discussion on other items like revenue collection and cash flow issues. The following contains a report on the subjects discussed in a series of committee meetings, in which the agricultural plans were tabled.

*The first is the budget meeting of 06/04/2011 with 6 members and 24 officials with an agenda to discuss about irrigation project for Mzinga ward, but the members concentrated on income and expenditure for the education sector and thereafter approved the budget as it is. Another example is the meeting of 16/04/2014 with 11 members and 20 officials and another on 20/05/2014 with 10 members and 23 officials, which indicated that the agendas of these meetings were dominated by the discussion on income and expenditure concerning market construction projects.*

Another example is the Finance and administration committee meeting of 17/02/2014 with 10 members and 24 officials and another on 13/02/2014 with 12 members and 26 officials in which the plan for a market was discussed, but largely the discussion was dominated by budget and cash flow problems. The discussion concerning cash flow in these meetings indicated that the municipality received less than half of the budget that was programmed in the financial year 2014.

The practice observed in the council committees is repeated in the meetings of the full council. Although you might expect that councilors who are elected by citizens in a specific ward, would want to defend the interests of their ward and claim part of the budget for projects in their ward, this does not occur. The council is not inclined to discuss the content of development pro-
jects or the allocation of the budget between different sectors or projects. An explanation for this is that the councilors feel that they have no influence in changing the budget because the budget grants are earmarked by central government and the budget is tabled based on central government priorities. The municipalities’ own sources are insufficient and they think that the only thing to do is to accept what central government proposes. Apart from that, the councilors believe that the plans contain the priorities of their national party manifesto (CCM) which they are implementing at the local level and therefore it would not be appropriate to question it. In fact, the realization of the party manifesto is important for their future political career, for example for their nomination to stand as a candidate in future elections (Interviews Kichangani and Bigwa WC; the MM; A & LDBO; Observation Council meeting).

*As you can see, we are here to implement our party manifesto. It is the party manifesto that determines our career in politics (Interviews Kichangani WC).*

Once the plans and budgets have been established by the full council, they are submitted to central government for approval. In practice, the regional secretariats are the supervisors. Over the past years, all annual Agricultural Development Plans that form part of the integrated Municipal Plan were approved straight out. Given the tight involvement of the secretariat in the process of the development of the plans and the role local officials play, that comes as no surprise.

5.2.6 Projects and funds: examples

The Agricultural Development Plan for the fiscal year 2010/2011; 2011/2012 and 2012/2013 contained different projects and the activities to be carried out for each project. These included a marketing project, dairy farming, a sunflower project and a fishing project. In order to improve the marketing of agricultural products, the municipality approved a budget of 74,850,500 Tsh. The project entailed the construction of a market at Bigwa for agricultural products like maize, banana, cassava, sweet potatoes, tomatoes, carrots and vegetables. The fund for the project was meant for the payment of: meeting expenses (allowances and refreshment); the opening of the project account; the preparation of bills of quantity; and training of the members appointed to form a construction committee.

Second, in order to improve dairy farming, the municipality approved a budget of 22,600,000 Tsh. for a dairy farming project, which is being carried out by *UWAMAMO* dairy cooperative at Bigwa ward. The idea of this project was developed in 2009 but the actual project was funded in 2011. The activi-
ties entailed the preparation of the design and tender; buying land for constructing an office, the actual construction and the organization of meetings.

Third, in 2011 the municipality approved a budget of 3,040,000 Tsh. to be used for increasing the production of fish through the use of improved varieties. The activities for the project included: the construction of ponds; building a canal; the preparation of a design, the area and tools for the construction; the organization of a tender and procurement of the improved variety of fish. This project is being implemented by a fishing farmers group, which is formed by 45 farmers of Lukuyu Street in Bigwa ward. The group members constructed four fishponds with an average of 100,000 to 120,000 fish per pond (MMC- Agricultural Development Plan 2011).

In 2012, the municipality approved a budget of 2,295,600 Tsh. to carry out a sunflower value chain project in Kingolwira ward. The budget was used for the construction of sheds, payment of electricity; training on processing and storage of crops and organization of a farmer’s field day. The project was carried out by UWAKINGO, the farmers’ union with more than 7,792 group members.

Table 5.5: A summary of some approved projects and their funding

<table>
<thead>
<tr>
<th>Year</th>
<th>Project title</th>
<th>Activity</th>
<th>Funds allocated (in Tsh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010/2011</td>
<td>Marketing project</td>
<td>Improve the marketing of agricultural products</td>
<td>74,850,500</td>
</tr>
<tr>
<td>2011/2012</td>
<td>Dairy farming project</td>
<td>Improving dairy farming</td>
<td>22,600,000</td>
</tr>
<tr>
<td></td>
<td>Fishing project</td>
<td>Increase the production of fish</td>
<td>3,040,000</td>
</tr>
<tr>
<td>2012/2013</td>
<td>Sunflower project</td>
<td>Increase the value chain of sunflower production</td>
<td>2,295,600</td>
</tr>
</tbody>
</table>

In total, between 2011 and 2013 the Municipality received 268,596,818 Tsh. for development and 1,893,633,000 Tsh. for recurrent expenditures. Most projects were located in the Bigwa and Kingolwira Wards, which are the rural part of the Municipality where there are many farming communities. The budget for the projects ranged from 2 to 74 million. It is remarkable that part of the money was allocated for meeting expenses, for sitting allowances and refreshments. The participants, who are the ones that benefit from the projects, could also have financed these. Some projects like the dairy farming were delayed due to a scarcity of funds.

5.2.7 The implementation of the projects: actual funding

The allocation of budgets to projects is just one step to be taken. Our research shows that the approval of a budget does not guarantee that funds are actually
made available at the time when the implementation is planned to take place. Funds from the development grants are supposed to flow in quarters, but the records from the local government information system and interviews with local officials show that in the past three years the budgeted cash did not flow as programmed (cf. Table 5.6).

Table 5.6: The trend of cash flow in quarters for the agricultural sector development budget

<table>
<thead>
<tr>
<th></th>
<th>Total allocated (in Tsh)</th>
<th>Quarter</th>
<th>Paid cumulative (in Tsh)</th>
<th>Paid cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010/2011</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Development</td>
<td>123,118,818</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>95,075,000</td>
<td>77.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3</td>
<td>95,075,000</td>
<td>77.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4</td>
<td>112,348,790</td>
<td>91.3</td>
</tr>
<tr>
<td>2011/2012</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Development</td>
<td>81,455,000</td>
<td>1</td>
<td>12,978,600</td>
<td>15.9</td>
</tr>
<tr>
<td></td>
<td>1,025,128,616^3</td>
<td>2</td>
<td>445,851,616</td>
<td>43.5</td>
</tr>
<tr>
<td></td>
<td>81,455,000</td>
<td>3</td>
<td>82,284,248</td>
<td>101.0</td>
</tr>
<tr>
<td></td>
<td>81,455,000</td>
<td>4</td>
<td>81,455,316</td>
<td>100.0</td>
</tr>
<tr>
<td>2012/2013</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Development</td>
<td>64,023,000</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3</td>
<td>6,313,000</td>
<td>9.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4</td>
<td>241,832,152</td>
<td>451.1</td>
</tr>
</tbody>
</table>


The delay of the grants from central government seems to be caused by two circumstances. First, the national tax collection is inadequate and revenues fall short of the expectations. Second, funds promised by international donors through basket funding do not come on time and in a required amount. Because of the irregular cash flow, projects are sometimes carried over to a next fiscal year (Interviews MAEO, HoD A & LD).

5.2.8 Supervision on the implementation of plans

Above we reported that the council approved strategic and annual development plans and decided on the allocation of budgets without deliberation or discussion, rubber-stamping the proposals tabled by the officials. In contrast, the council, i.e. the council committees showed themselves to be quite active

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3. The data from the information system show that the original budget was revised in the second quarter but surprisingly, the remaining two quarters use the same original budget. According to municipal officials the inconsistency of these figures is caused by the fluctuation of funds which come from donors.
in the supervision of implementation of plans and projects. The committees meet quarterly to discuss implementation reports dawn up by the officials and inspect the implementation of projects on the spot.

An example was the meeting of 15/01/2013 of planning finance and administration committee, which was attended by 13 members with the purpose of reviewing the implementation of different projects approved by the council in the preceding year. The meeting discussed the education project on the purchase of a mobile laboratory for Sokkone University of Agriculture secondary school, which cost 24 million Tsh. In their discussion, the members discovered that the overhead projector, which was purchased by the school, was second hand and they instructed the head teacher to return the used overhead project and procure a new one. Besides, the members accused the council officials for the misuse of school funds. Consequently, they rejected the report presented by the officials and instructed the district executive director to conduct an investigation and prepare another report which would answer the internal audit queries of 2012 (Minutes of the MMC Finance and administration committee meetings 2012-2014).

Furthermore, the councilors supervise on the progress of implementation on projects at hand. The following examples illustrate this practice.

In their meeting of 21/05/2013 with 12 members and 27 officials the Finance and administration committee inspected the dairy project carried out by three wards, Bigwa, Kichangani and Kilakala. The councilors congratulated the UWAMAMO – an association of dairy farmers from the three wards - for performing well on the production of milk and the supply to citizens.

In their meeting of 17/07/2014 with 10 members and 25 officials, the committee paid a visit to Gezaulole market and was satisfied with the progress of the construction (Minutes of the MMC Finance and administration committee meetings 2012-2014).

5.2.9 Conclusion

The Morogoro Municipality plans for its activities on two levels. The first level is the mandatory five-year strategic plan. Officials of the departments prepare the plan, taking into account central government policies and guidelines. The SWOT analysis, on which it is based, is general in character and so are the strategies to improve production. The growth targets, on the other hand, are precise and derived from central government policies. The second level is the annual plan. Citizens are involved in its development, but the selection of projects is guided by officials who themselves are guided by
central government priorities. Both plans are finally approved by the local council. In practice, this takes place without debate or amendments to the plans. The explanation for this is that the plans are considered to conform to central government priorities, reflecting its preferences for the allocation of resources to different policy sectors and projects. In the perception of councilors, trying to change the allocation is of no use, because the plans would not be approved. Nor is it considered appropriate to challenge the priorities derived from central government policies, because councilors feel they must respect these policies in general and their national party manifesto in particular not only as an unwritten rule, but also in the interest of their political career. While the local council is passive in articulating local needs and priorities, it is quite active at the phase of implementation of development projects.

5.3 Farmers’ groups

As was explained earlier, extension services in the form of training sessions, field schools and assistance to special projects are provided to groups of farmers. To obtain funds for a project, it is a formal requirement that farmers are organized in a group. Therefore, if farmers in street meetings bring forward certain problems or needs and if extension services can somehow help to overcome these, the extension officer advises the farmers to set up a group and develop a project. He also advises them on how to set up a farmers’ group. More in general, one of the roles of extension officers is to stimulate farmers to form groups as these constitute an important link with extension services and provide accessibility to funds for extension projects (Interview WAEO). Therefore, it is relevant to take stock of the farmers’ groups in the municipality and the wards included in the research, as they represent a resource for the delivery of extension services.

The data suggest we can distinguish between three types of farmers’ groups in the municipality. The first are cooperatives. These are organizations with a formal legal status, which enables them to act as a corporate person in economic transactions and legal procedures. In Morogoro Municipality, there are 134 cooperatives (2012 data). Most of the cooperatives (98) have as their main objective to provide savings and credit services to their members, which enables farmers to buy agricultural input. A small number (8) are production cooperatives and they also provide extension services to their members. Two cooperatives are engaged in the production of livestock (see table 5.7).
Table 5.7: Cooperatives societies and their members

<table>
<thead>
<tr>
<th>Type of society</th>
<th>Number of Societies</th>
<th>Total members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saving and credit SACCOS</td>
<td>98</td>
<td>8,263</td>
</tr>
<tr>
<td>Agric/crops-Amcoss</td>
<td>8</td>
<td>367</td>
</tr>
<tr>
<td>Industries cooperatives</td>
<td>3</td>
<td>84</td>
</tr>
<tr>
<td>Livestock keepers</td>
<td>2</td>
<td>74</td>
</tr>
<tr>
<td>Construction and housing</td>
<td>2</td>
<td>74</td>
</tr>
<tr>
<td>Cooperative shops</td>
<td>2</td>
<td>180</td>
</tr>
<tr>
<td>Minerals</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Transportation</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Others</td>
<td>17</td>
<td>307</td>
</tr>
<tr>
<td>Total</td>
<td>134</td>
<td>9,639</td>
</tr>
</tbody>
</table>

Although the cooperatives are important for farmers to obtain access to finances and agricultural input, they are less so as a link to agricultural extension services. Other groups are. There are 13 farmers’ groups that are formally registered as such and meet the requirements to obtain and manage funds allocated by local government for extension projects. These include 9 groups for crops production, 3 livestock keeping groups and one fishing group. There are also 59 groups without a formal status. These include 22 groups for crops production, 14 groups engaged in processing of crops, 18 livestock keeping groups, 4 marketing groups and 1 fishing group (POMORAL, MMC, Quarterly report for ward and village Agricultural Development Plan 2011/2012).

Table 5.8: Registered and informal farmers’ groups and their members

<table>
<thead>
<tr>
<th>Registered farmers’ groups</th>
<th>Number</th>
<th>Total members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crops production</td>
<td>9</td>
<td>100</td>
</tr>
<tr>
<td>Livestock keeping</td>
<td>3</td>
<td>90</td>
</tr>
<tr>
<td>Fishing</td>
<td>1</td>
<td>45</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Informal groups</th>
<th>Number</th>
<th>Total members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crops production</td>
<td>22</td>
<td>323</td>
</tr>
<tr>
<td>Livestock keeping</td>
<td>18</td>
<td>200</td>
</tr>
<tr>
<td>Processing</td>
<td>14</td>
<td>109</td>
</tr>
<tr>
<td>Marketing</td>
<td>4</td>
<td>165</td>
</tr>
<tr>
<td>Fishing</td>
<td>1</td>
<td>15</td>
</tr>
<tr>
<td>Total</td>
<td>72</td>
<td>1047</td>
</tr>
</tbody>
</table>

Compared to the number of farmers, estimated to include around 25,000 households, the number of farmers organized in groups that can serve as a link with extension services is low, around 4%. The same goes for the three wards that were included in the research. Bigwa ward has 4 cooperatives and
4 other groups, 3 for livestock keeping production, processing and marketing and one fishing group. Of the other groups, only two groups are registered. Kichangani ward has 5 cooperatives, of which one is crops production and one for marketing; the others are savings and credit societies. In 2013/2014 Kilakala ward experienced the formation of a number of new farmers’ groups which include poultry groups, cooperatives for maize production and farmers’ groups for environment and entrepreneurship (Interview Kilakala WAEO). Notwithstanding some new initiatives, the groups represent a small number of total farmers in the three wards.

Table 5.9: Farmers’ groups and their members for the three wards included in the research

<table>
<thead>
<tr>
<th>Types of farmers’ groups</th>
<th>Bigwa Groups</th>
<th>Kilakala Groups</th>
<th>Kichangani Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Formal groups</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cooperatives for production, processing and Marketing</td>
<td>3</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Fishing</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Others (Horticultural and environment)</td>
<td>2</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>8</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Note: The dairy farming cooperatives discussed below is not included in the table because it covers the three wards.

To understand how the farmers’ groups are set up and function, we provide a number of examples of groups that are present in the three wards included in the research.

The *Umoja poultry group* in Bigwa ward is a small group with a limited function. It engages in keeping local chickens. The group has a total of 20 members, the majority of which are women. Poultry keeping is typically an activity that can be done in the yard of the house and can be combined with housekeeping. The group was set up in a field school format and the project implied that they would receive training by extension officers to learn how to raise local chicken; it included knowledge on incubation, on the feeding of chicken, on the treatment of their diseases and on marketing. The group meets in one of their members’ houses, which serves as a place for the field school (Interview Umoja poultry group).
Also small, but with some characteristics of a cooperative, is the horticulture group in Kichangani ward. It has around 20 members, mostly men. The group was established in 1987 and it acquired full registration in 2003. The group exploits an area in the outskirts of Kichangani ward. Each group member is given a small piece of land to till and grow vegetables and/or maize. The group has a small office covered with grass; obsolete tires of cars serve as chairs. The members share an irrigation pump, which is paid for by the group fund. If a new member wants to join them, he/she must pay the subscription fee of not less than 250,000 Tsh. (Bigwa WFT, 2011; focus group discussion Kichangani horticulture group).

In contrast to the two groups mentioned above, the dairy group is big. It encompasses a total number of 102 members from three wards namely Bigwa, Kilakala and Kichangani. Dairy farmers from the Bigwa ward initially formed the group; later it was joined by dairy farmers from the other two wards. The dairy group also has characteristics of a cooperative. The main activity of the group is dairy farming. Apart from the number of members, there are two substantial differences compared to the two other groups. First, the group disposes of a well-constructed office, which is well ventilated and covered with iron sheets. Second, it consists of highly educated officers like retired veterinary officers with diplomas and degrees. Their knowledge on dairy farming is very good compared with other farmers. It is fair to say that the leaders of the group sometimes have more knowledge than extension officers have, and that they feel the officers have nothing new to offer. Despite this, the group has contacts with extension officials and research institutes on a regular basis. This is because they want to keep abreast with changes in technology. The group complains about the feedback from the research institute. Although the group has contacts with researchers from the Sokoine University of Agriculture, the researchers often do not give them feedback when they conduct research on their cattle. According to the group, this is because in most cases the University conducts academic research and researchers are not interested in giving feedback, but in earning their degrees (Focus group discussion with the dairy cooperative).

In order to be considered eligible for funding, a group has to meet a number of requirements. The members must elect a chairperson, a secretary and a treasurer, who together form the executive board of the group, manage the group funds and represent the group members in contacts with extension officers, research institutes and NGO’s. All groups discussed above have a chairperson, a secretary and a treasurer.

A special category of farmers’ groups consists of farmers who live in Morogoro Municipality, but have their farms outside the municipal jurisdiction. Due to the scarcity of land in the municipality for a large number of years, farmers have applied for and been granted land outside the municipali-
ty in an area not falling under any other jurisdiction. In order to get access to extension services and agricultural input, these farmers have formed their own groups. However, the status of these groups is ambiguous. According to central government regulations, local governments can only allocate resources for extension projects carried out in the municipality itself, and project proposals have been rejected for this reason. This was the case for a project on crop enhancement proposed by Kichangani farmers group (Interview BO- Agriculture and Livestock department). On the other hand, the fact that these farmers have their farm outside the municipality proved to be no obstacle for farmers to apply for and get agricultural input (Interviews A & LDBO and Kichangani WAO).

The groups with a cooperative character, those that provide some kind of service to the members and dispose of some of their own funds seem to be sustainable. For example, the Kichangani horticulture group functions since 1987 and is registered in 2003. If members leave the group there is sufficient interest from other farmers to become a member, despite the entrance fee they have to pay (Focus group discussion with Kichangani farmers’ group).

On the other hand, survival seems to be more difficult for groups that are set up to organize a field school. If funds allocated for transport, teaching kits, seeds and medicine run out, and if the group has not organized some form of collective income through member ship fees or otherwise to finance the field schools, extension services tend to run dry. This in turn threatens the continued existence of the group, as members lose interest. This is what happened to the Umoja poultry group in Bigwa: project funds have run out, the group has not arranged to make itself sustainable, contacts with the extension officers have become scarce and group activities have been reduced (Focus group discussion Poultry farmers group at Bigwa).

As the focus of service delivery is shifting from individual farmers to groups of farmers, it becomes more and more important for them to organize themselves into groups. However, large numbers of farmers are not organized and do not take part in group activities. There are a number of reasons for the relatively low degree of organization.

The first is that sometimes farmers lack the knowledge and support to establish a group; they need the support of extension officers, but extension officers rarely visit remote areas; without support, they are not able to organize themselves (Interviews and focus group discussion with unorganized farmers at Bigwa and Kichangani Wards).

The second is that opportunities for groups are sometimes targeted at special categories of farmers; for example, a certain NGO provided funds for training and field schools for young people, which meant that it did not make sense for older farmers to establish a group, nor could they join the group of young farmers (Focus group discussion with Bigwa farmers and observation at Bigwa ward).
Third, there are different types of obstacles for farmers to join existing groups: some groups have a limited membership because of physical limitations (the plots available); others are formed by members of the same family clan and do not want to admit outsiders; still others ask for entrance fees that new members cannot afford.

Fourth, there is a category of farmers who are simply not interested in joining groups or in extension services; they rely on traditional principles of farming and do not trust modern methods of agriculture (Interview Kichangani horticulture farmers and focus group discussion with Bigwa farmers).

Conclusively, there are different types of farmers’ groups that link farmers with credit and extension services. Some of these groups are cooperatives with a legal status; but most of these operate as savings and credit societies. Of the groups engaged in crop production, livestock keeping and marketing most had an informal character and did not meet the requirements to become registered as a group that qualifies for funding. The cooperatives seem to be more sustainable than the other groups. Leadership problems, the running out of funds and diminishing extension services threaten their existence. Although farmers are advised to set up or join groups in order to get link with extension services, the overall organization degree is low. Some farmers do not join the groups because they do not have knowledge and cannot organize themselves while others fail to join the group because of physical limitations; others prefer to still rely on their traditional knowledge.

5.4 The actual service delivery

5.4.1 General features

As explained in chapter four, extension officers have a role advising farmers and keepers of livestock on agricultural information and new technologies, disease and pest control measures; they must sensitize and enroll farmers in training programs; mobilize farmers to form groups and assist in group strengthening. Apart from these activities that imply the direct delivery of services to farmers, extension officers at ward level must also contribute to the development of agricultural plans and liaise with NGO’s and CBO’s that provide agricultural assistance and training within the ward.

In order to guide extension officers, there is an annual calendar, which describes the type of extension services that are supposed to be delivered to farmers in a particular period. For example, the annual calendar indicates that in November and December, the extension officers have to advise the farmers on the early preparation of farms, on the proper use of farm equipment and on how to use modern principles of planting.
Table 5.10: The annual calendar for agriculture and livestock activities

<table>
<thead>
<tr>
<th>Activity</th>
<th>Month</th>
<th>Advice needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farm preparation for paddy</td>
<td>J F M A M J J A S O N D</td>
<td>Farm preparation and application of agricultural input</td>
</tr>
<tr>
<td>Planting</td>
<td></td>
<td>Use of modern techniques of planting</td>
</tr>
<tr>
<td>Farm preparation for maize planting</td>
<td></td>
<td>Early farm preparation</td>
</tr>
<tr>
<td>Planting</td>
<td></td>
<td>Panting hybrid seeds and their accessibility</td>
</tr>
<tr>
<td>Early farm preparation for maize planting</td>
<td></td>
<td>Early weeding</td>
</tr>
<tr>
<td>Weeding for paddy planting</td>
<td></td>
<td>Weeding and fertilizer application</td>
</tr>
<tr>
<td>Weeding for maize and fertilizer application</td>
<td></td>
<td>Modern techniques for sunflower planting</td>
</tr>
<tr>
<td>Beans and sunflower planting</td>
<td></td>
<td>Insecticides</td>
</tr>
<tr>
<td>Controlling insects</td>
<td></td>
<td>Harvesting</td>
</tr>
<tr>
<td>Harvesting</td>
<td></td>
<td>Harvest storage</td>
</tr>
<tr>
<td>Storage</td>
<td></td>
<td>Preparation of nurseries</td>
</tr>
<tr>
<td>Nursery for horticulture</td>
<td></td>
<td>Immunization</td>
</tr>
<tr>
<td>Immunity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dogs treatment and good livestock keeping</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DADPs preparation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Follow up of DADPs projects</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: MMC – the calendar for agriculture and livestock activities 2009.

From January to April, the extension officers have to advise farmers on the accessibility of seeds and planting. In February and March, they have to advise the farmers on weeding while in April, May and June advice must be provided on plant protection; in May, June and July their activities must relate to harvesting. Services on poultry fever immunization must be provided throughout the year.
The annual calendar is a standard format developed by central government. In Morogoro Municipality, extension officers are supposed to follow the standard calendar but they are also allowed to adjust it to reflect local realities (Interview HoD Agriculture). In mountainous areas, especially in the rural part of the municipality or in the areas that are suitable for irrigation, farmers grow vegetables; the extension officers adjust the calendar to fit them (Interviews –Bigwa and Kichangani WAEOs).

In planning for their activities, the extension officials are supposed to construct their working schedule from the annual calendar. In doing that, they have to cooperate with ward executive officers. The schedule they develop shows the breakdown of activities and respective areas and time, when and where the officers have to visit. The content of the schedule shows that it is not a binding document and it can change at any time depending on the instruction from supervisors and the urgent needs of citizens (Interview Bigwa WAEO and weekly schedule 2012). Table 5.11 shows the typical schedule of a ward agricultural extension officer.

Table 5.11: Working schedule of extension officer in Bigwa Ward

<table>
<thead>
<tr>
<th>Day</th>
<th>Street /area for visit</th>
<th>Goal for visit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>Misongeni streets</td>
<td>Field school and home visits</td>
</tr>
<tr>
<td>Tuesday</td>
<td>Bigwa and Lukuyu streets</td>
<td>Field school and home visits</td>
</tr>
<tr>
<td>Wednesday</td>
<td>Mgolole and Vituli streets</td>
<td>Clinic Mgolole on information about rainfall and home visits</td>
</tr>
<tr>
<td>Thursday</td>
<td>General</td>
<td>Home visits and visits to groups</td>
</tr>
<tr>
<td>Friday</td>
<td>Ward office</td>
<td>Report writing</td>
</tr>
</tbody>
</table>

The extension officers themselves decide on when to visit individual farmers and farmers’ groups, provide training, and organize a field school, and which farmers or groups they visit or provide services to. Subsequently we will describe how the different activities are carried out.

5.4.2 Home visits to individual farmers

The working schedules imply that each extension official every month makes home visits to farmers to advise and support them. In practice, these visits are not carried out as programmed. Extension officials dedicate a substantial part of their time to farmers who call upon them to treat cattle and fight crop diseases. These services are not rendered for free. Extension officials charge for their services and claim that the money is needed to pay for the transport, as the municipality does not provide them with a fuel allowance. Farmers also pay for the medicine (and insecticides) the extension officials use when treating cattle and controlling crop diseases. As a rule, farmers who call upon extension officials for assistance and are willing to pay for the services are given priority over other farmers. Extension officials label these calls as
‘emergencies’, which justifies that they do not keep to the original working schedule. The researcher found a series of examples of this practice during his fieldwork.

In Kilakala ward, he observed that the extension official had a number of farmers waiting at her office who came for advice. When she received a call from two farming sisters asking her to provide mango immunization, she told the farmers in her office that an emergency had come up and she left to provide the requested mango immunization, for which she was paid. After that, she visited a farmer whose pigs were reported to be ill. She diagnosed the disease, provided treatment and asked the farmer a payment of 15,000 Tsh., which he willingly paid (Observation and interview Kilakala WAEO).

In Kichangani ward, farmers who call upon extension officials for treatment of their cattle, have to pay a transport allowance up to 2000 Tsh., depending on the distance; they also have to pay for the treatment itself, the amount depending on the type of disease. The tariffs are established by the extension officer depending on the cost of transport, which is accepted in the community (Observation and interview Kichangani WAEO).

Home visits to farmers who do not actively call upon extension officers for paid assistance, only take place if the farmers live nearby the office or home of the extension officer. Even then, extension officers expect something in return for their services. If they think farmers can or will not give them anything, they try to avoid visiting them. As one extension officer explained to the researcher: ‘You must understand that I cannot go to visit a farmer to advise him on the growth of his maize, if he is not willing to give me a ripe corn as thanks for my service.’

In fact, with respect to individual farmers, the overall picture is that extension officers operate as small entrepreneurs, who buy fuel and medicine themselves – as the municipal government does not – to service paying farmers. Some, as a second job, even exploit a shop where they sell agricultural input. The consequence of this practice is that extension officers dedicate much time to service keepers of livestock: they experience many problems related to the delivery and breeding of cattle, and, at least part of them, have incomes that enable them to pay for the extension services. Farmers who dedicate themselves to agriculture and farmers who live at great distance from the extension offices, as a rule are not provided with extension services on an individual basis (Interview Bigwa WAEO; observation field trips of WAEOs).

Although extension officers are supposed to support all the farmers in their area, part of the farmers are never reached. As part of his fieldwork, the researcher visited a number of non-organized farmers in Bigwa ward and
other wards. These farmers told him that they had heard of the existence of extension officers – one farmer even knew the name of the ward extension officer – but that they had never seen him and that he had never visited them to inform himself about their problems or offer advice (Interviews individual farmers in Bigwa ward).

The lack of support to individual farmers, especially crop growers, could be solved if systematic farmer-to-farmer transfer of knowledge would take place, through which farmers who do not have direct access to extension services are advised by farmers who do. In our research, we found the example of horticulture farmers in Kichangani ward who approached farmers who had attended field schools and learned from them how to prepare farms, grow crops, sow seeds and apply manure. However, this practice of farmer-to-farmer transfer of knowledge is not widespread, and only takes place when individual farmers take the initiative themselves (Focus group discussion Kichangani ward farmers). Alternatively, farmers use the traditional knowledge they acquired from their parents to grow crops. In case of diseases, they often uproot the affected plants. According to modern insights for planting, the distance between one pit to another should be 60 cm. However, farmers find it difficult and laborious to measure the distance between one pit and another, so they just guess the distance (Interviews unorganized farmers in Bigwa ward).

Apart from the fact that non-paying farmers are largely ignored by the extension officers, the practice raises issues of transparency and accountability, and the proper use of public funds. There is no register of the payments and there are no fixed tariffs for the treatment of diseases or medicines. Extension officers are remunerated based on the public services regulations that provide for the standard working hours of 45 hours in a given week. During working hours, the extension officers are required to provide training, to advise farmers or treat ill livestock. The government has made efforts to address the problem of inadequate pay by improving the salaries of extension officers in different levels. Nevertheless, the extension officers use a substantial part of their working time to provide services for which they receive payments from farmers, payments that surpass the expenses extension officers incur for resources that are not provided by the municipality.

Apart from the obvious lack of resources, especially for transport to remote areas, two circumstances seem to contribute to the practices we found. First, the supervision on extension officers is very general. Every month, extension officers must report their activities to the ward executive officer and the municipal department of A & L. The reports show the type and number of farmers visited but there are no rules binding officers to visit certain type of farmers.
### Table 5.12: The pay scale for senior, middle and lower cadre field workers in Tsh. a month (2012).

<table>
<thead>
<tr>
<th>Salary scale</th>
<th>Title</th>
<th>Amount in Tsh.</th>
</tr>
</thead>
<tbody>
<tr>
<td>TGS I 4</td>
<td>Principal livestock officer</td>
<td>1,824,970</td>
</tr>
<tr>
<td>TGS G4</td>
<td>Livestock officer I</td>
<td>938,300</td>
</tr>
<tr>
<td>TGS 5</td>
<td>Principal agricultural field officer</td>
<td>957,760</td>
</tr>
<tr>
<td>TGS F1</td>
<td>Principal agricultural field officer</td>
<td>679,730</td>
</tr>
<tr>
<td>TGS E1</td>
<td>Agricultural field officer</td>
<td>527,040</td>
</tr>
<tr>
<td>TGS F1 II</td>
<td>Principal agricultural field officer II</td>
<td>679,730</td>
</tr>
<tr>
<td>TGS-C1</td>
<td>Agricultural field officer II</td>
<td>272,530</td>
</tr>
<tr>
<td>TGS C-1</td>
<td>Livestock field officer II</td>
<td>272,530</td>
</tr>
</tbody>
</table>

Source: Staff records 2012.

In addition, there is no supervision with respect to the implementation of priorities included in the working schedule, as long as the extension officer can show that he or she was active during working hours. This creates leeway for extension officers to focus on service delivery to paying farmers and ignore non-paying farmers.

Second, although the farmers have a right to report an extension officer to the ward administration or municipality if they are denied access to services, they do not do so because they believe that justice will not be done (Focus group discussions Kichangani and Bigwa Wards farmers).

#### 5.4.3 Visits to groups of farmers

As was mentioned earlier, the delivery of extension services to groups of farmers is considered more efficient than home visits to individual farmers. Consequently, extension officers have been encouraged to stimulate farmers to form groups. We have already established that the organization degree in Morogoro Municipality is relatively low. However, the number of groups has increased over the past years. This was especially the case in Kilakala. Notwithstanding the priority groups have in the municipal approach, the groups in place are only partially serviced. Extension officers claim that they lack the time and transport means to visit all the groups in their area. For example, the Bigwa ward extension officer claimed that in the past there was just one group, but that now he has to service more than ten groups. As a result, groups invoke the assistance of the extension officer, but meet with a refusal.

*We always ask them to visit us but they do not come and when we meet they say, they do not have time to visit us (Focus group discussion with the Umoja poultry group in Bigwa ward).*

Looking at the typical week schedule of an extension officer, it seems to leave ample room to service a number of groups each week and more than
ten each month. However, if extension officers give priority to ‘emergencies’, i.e. non-scheduled assistance to paying farmers, this can explain that their working schedule does not leave time for visits to groups. Moreover, the lack of resources seems to play a role. Typically, the services rendered by the extension officer to the Umoja farmers’ group were reduced when the funds allocated to them as part of a project ran out (Focus group discussion with Umoja Poultry group of Bigwa ward). The instructions extension officers receive from the department do not contain any targets in terms of the number of group visits, training sessions or field schools. Extension officers have to account for the number of groups visited, but are not in any way sanctioned if this number is low, as long as they can make it plausible they have been active during working hours (Interviews Bigwa, Kichangani and Kilakala WAEOs).

Overall, in terms of quantity, visits to groups do not meet the demand of farmers in the municipality. Apart from assistance in terms of advice or support on specific issues, service delivery takes place through training and field schools. We will subsequently sketch how training sessions and field schools that are organized take place.

5.4.4 Training to farmers

One of the methods to transfer knowledge and information to farmers is to arrange training sessions: meetings in classroom like settings in which an extension officer explains new production or marketing methods. Training sessions can be organized on the initiative of extension officers or on the initiative of farmers’ groups. If the former is the case, extension officers confer with the chairperson of a street and inform him or her about the topic; the chairperson in turn informs the farmers about the time, place and topic. If farmers’ groups take the initiative, they usually ask for training on specific issues; the chairperson of a group then contacts the extension officer.

The number of training sessions held over a year is quite modest. For example, in 2012/2013 in Bigwa ward the extension officers organized four training sessions.

The first session was about the theory and practice of modern agriculture and was offered to 23 males and 12 females. The second training was on improving goat keeping and was offered to 9 males and 14 females. It concerned a workshop organized by Swiss contact, an NGO that also organized a workshop on poultry keeping, in which 11 males and 17 females participated. The last session was a training on plant protection and took place in the field. To show how to fight APHDS diseases for beans through organic farming an area of 1.5 hectare of three households was covered with mwarobaini tree leaves (POMORAL, Quarterly report for ward and village agricultural development plan 2011/2012).
In Kilakala, there were even less training sessions, one in 2011/2012, and one in 2012/2013.

In 2011/2012, the training was on fighting APHDS diseases for beans. It covered 0.25 hectare, which belonged to one household and was delivered by Tushikamane Institute (POMORAL, Quarterly report for ward and village agricultural development plan 2011/2012).

In 2012/2013, there was no training for organized farmers’ groups, but one training was delivered to farmers who were gathered by street chairperson. This training focused on modern farming principles and was delivered to pig keepers and farmers engaged in agriculture for food crops (Interview Kilakala WAEO).

In Kichangani, there were no administrative records on training sessions, but according to the ward extension officer every year training on agricultural input and modern farming techniques were delivered. This includes a training for the immunization of cattle which is supported by the World Bank. In addition, every year the extension officer trains farmers during a local exhibition, called Nane Nane; in 2012/2013 15 farmers participated in this training (Interview Kichangani WAEO).

Apart from the training sessions organized within the wards, farmers sometimes receive training outside the municipality.

For example, 9 livestock keepers attended training on milk collection in 2008/2009 at Muheza; 20 farmers attended a training on horticulture and processing in 2012/2013 in Lushoto; and 12 farmers attended a training on processing of sunflower in 2012/2013 in Dodoma (MMC, department of Agriculture and livestock, List of extension officers and farmers who attended training 2006-2013).

Two observations can be made. One is that, even taking into account the training received from outside the municipality, the number of farmers reached by training sessions is very low in relation to the total number of farmers in the three wards. A second observation is that part of the (limited number of) training sessions is not provided by the extension officers, but by NGOs and/or with the support of financial sponsors.

With respect to the way training is offered and the participation of farmers, a number of observations can be made.

First, training sessions are usually organized over the weekend. This is at the request of farmers, because they do not have time during weekdays (Interviews Kilakala and Bigwa WAEOs). Such was the case with training that took place at the initiative of the horticulture group in Bigwa ward, which
took place over the weekend in the ward office and in which knowledge was transferred on issues related to the growing of crops and vegetables (Observation field trip and interview Bigwa WAEO).

Second, there are differences between the didactical approach extension officers use. In Bigwa ward, we saw that the extension officer takes the age of the participants into consideration to decide on how to transfer knowledge. For the aged farmers, the extension officer uses less time, about 45 minutes, and an oral examination to test their understanding. For the youth, he uses a maximum of two hours for training and takes a written exam to test their understanding (Interview Bigwa WAEO). In contrast to Bigwa, in Kilakala and Kichangani the extension officers do not care much about the characteristics of the group. They deliver a standard theoretical and general lecture without considering the age or level of education of the farmers (Interviews Kilakala and Kichangani WAEOs; observation Kilakala and Kichangani street meetings and training sessions).

A third observation concerns the participation of the farmers. Training sessions that are organized on the initiative of extension officers are not well attended and participants come unprepared. An example is a training session held in Kilakala ward.

The training was organized on the initiative of the ward extension officer and was meant to inform farmers about the modern agriculture and livestock keeping. It was held on a Saturday in one of the nursery school buildings of the ward at Kilakala. The attendance of farmers was disappointing: only four farmers of a certain age took part in the session. The farmers came late and were not prepared; they did not bring notebooks or pens. The extension officer had to lend them writing tools. In addition, the participants were not able to take notes and did not have chairs to sit on. The participants claim that young men are engaged in other economic activities, because agriculture does not pay like other business (Observation Kilakala training session; interview and focus group discussion with Kilakala ward training participants).

Conclusively, although there are training sessions organized by extension officers and NGOs, training is scarce and only reaches a fraction of all the farmers in the municipality. If we compare the three wards included in the research, the Bigwa ward is somewhat more active. A possible explanation is that Bigwa ward is a rural part of the municipality where many people are engaged in farming as their primary source of income.

The timing of the training session is geared to the preferences of the farmers, and in some cases, extension officers adjust their didactics according to the age of the participants; characteristics such as the level of literacy of the farmers are not taken into account. Overall, the transfer of knowledge is general in character with the use of traditional lectures. It must be said that
the local government does not support extension officers who want to be creative and use new methods.

An example is Bigwa ward extension officer in Morogoro who received training from abroad and he tried to use television to demonstrate different technologies to farmers but the district government did not support him.

The lack of important tool kits or stationary like pens and papers discourages the extension officers to tailor their services. As a result, they operate in a routine way, to show their bosses that they were active in training farmers, but in reality, they do not care much about the impact of the training.

Despite the fact that training sessions form part of the policy priorities, the extension officers themselves are hardly motivated to take the initiative to organize training sessions. One of the explanations for this is that the extension officers themselves are not informed on new technologies, so they think that they repeat themselves and have little new to offer farmers. They fear farmers will challenge them and undermine their credibility. As the Bigwa ward extension officer explained:

I have now been working for over a year in this ward. Since that time, I have not received any information on new technology to grow crops or combat diseases, which I can transfer to farmers (Interview Bigwa WAEO).

The interest of individual farmers to participate in training sessions organized at the initiative of extension officers seems to be very limited. Apparently, what is offered does not meet their needs, or the plus value of the training sessions is not clear to them.

5.4.5 Field schools

As mentioned earlier, field schools are considered a modern way of delivering extension services, and it has been promoted by the Tanzanian central government since 2006. The original idea of a field school is that groups of 20 – 25 farmers participate in a series of hands-on experimentation and non-formal training sessions during a single crop-growing season. The goal is not only to enhance the practical knowledge and skills of farmers, but also to sharpen their decision-making and management skills. Selected farmers should receive additional training and qualify as farmer-trainers themselves (Anderson 2008: 20).

In the context of Morogoro Municipality, two types of field schools are organized, for crops and for livestock. Crop growers organize themselves in a group and prepare a farm for training in collaboration with extension officers.
The selected farm is used as school in which farmers, over a period of time and in subsequent sessions, are trained on farm preparation, planting and harvesting. Livestock keepers have to propose a progressive farmer to volunteer for a field school. The volunteer allows his livestock to be used as field school to teach others. For example, the poultry-keeping group at Bigwa ward organized a field school in which all poultry keepers learned how to mix up food for poultry and fight different diseases. This is done with the support of the extension officers who organize the training.

The idea of farmers’ field schools is promoted by central government, and appears in policies and guidelines that instruct local agricultural development plans. In practice, the number of field schools that were organized over the past years in the three wards, was very modest. If we look at the fiscal year 2012/2013, in Bigwa ward there were field schools on maize, poultry and horticulture. In Kichangani field schools were organized on paddy (on a plot close to the ward office), and on maize, introducing new seed varieties such as PANA and TAN quality seeds. Kilakala ward did not organize field schools in 2012/2013.

The research reveals that a main explanation for this relates to resources. A field school requires the availability of a plot or a livestock farm that can serve as a site where farmers can learn by doing. The municipality does not own plots or farms that can be used. Therefore, there must be farmers that will volunteer and offer their plot or farm to be used. In practice, farmers are reluctant to do so. Some fear that it could provoke the theft of their properties. In addition, farmers almost always expect something in return, such as seeds or fertilizer (Interviews Bigwa, Kilakala and Kichangani WAEOs). Moreover, agricultural input and tools are necessary to run a field school. Except for the rare occasion when a field school is earmarked as a project and funds from the Agricultural Development Grant are allocated, there is no budget available for agricultural input and tools. Without these resources, it is not possible to set up a field school. Moreover, our research shows that if budget is initially available, the school stops functioning when the budget runs out.

The Umoja poultry project mentioned earlier implied the delivery of extension services in the form of a field school. The project was funded and the extension officer held regular sessions with the group. When the funds ran out, the extension officer stopped to visit the group. As one extension officer explained: We have no tools, for example you cannot advise farmers on soil because certain soil may have a lack of nitrogen minerals, which can be tested by tools; but if we do not have tools... (Interview Bigwa WAEO).
The schools that function have to deal with two problems. One is that extension officers are not properly trained to organize and run a field school. Consequently, extension officers use their own local knowledge to run the field school in a way that they think is correct. Although between 2006 and 2009 a number of officials from the municipality were trained on the use of farmers’ field schools, these have still not adequately transferred the knowledge to ward extension officers who have direct contact with farmers and who are directly responsible to run the schools (Interviews Bigwa, Kichangani and Kilakala WAEOs).

A second problem is that farmers are not always motivated to participate or continue in a field school. Some attend because they want to learn new things on how to practice their agriculture. Others however, attend a field school because they expect to get some incentives like free seeds, fertilizer and chickens and drop out if they do not get what they expected; still others drop out in case of an outbreak of disease which threatens to kill their poultry. In addition, there is a category of farmers who believe that they cannot learn anything new from field schools. Lastly, there are farmers who do not want to participate because they believe that the field school is something that is top down, because it comes from the Municipality (Focus group discussion with Poultry keepers at Bigwa; interviews Bigwa and Kichangani WAEOs).

Although the idea of a farmer’s field is promoted by government as stated in policies and guidelines, it does not function as expected. Overall, it does not get much attention within Morogoro Municipality. There is a lack of central government funds to organize field schools, and the municipality itself does not use its own resources to finance field schools. The lack of funds results in a lack of agricultural input and tools. Extension officers are not properly trained and farmers are difficult to motivate so that they volunteer their plots or farms, or to participate if they do not receive some kind of compensation in terms of agricultural input.

5.4.6 Actual service delivery and resources: money, expertise and time

In the description of the way field officers provide extension services, there is a recurring reference to a lack of resources as an explanation for flaws in the home visits to farmers, in training and field schools. There is no discussion possible about the need to provide field officers with fuel for transport and with the tools to train farmers and run field schools. The number of visits, training sessions and field schools cannot be expected to increase substantially if central and local government does not allocate more funds to finance these activities.

Field extension officers themselves feel that their expertise is not up to date, they often transfer general knowledge that some or even many of the
farmers already possess. The records show that the municipality has made some efforts to train extension officers in various courses. For example, between 2006 and 2013 six headquarter officials were trained on farmers’ field schools at Lukindo center. From 2008 to 2010, five officers were trained on the processing of food crops at MATI Ilongo Agricultural Institute; in 2009/2010, five officers were trained on project planning. All these training efforts were targeted at senior and policy officers. At the ward level, in 2008/2009, 12 officials attended farmers’ field schools on agriculture and livestock in the Singida region. Between 2011 and 2013, 24 extension officials received training on commercial agriculture, offered by the MATI Agricultural Institute in Kilosa. Although these efforts are not insignificant, the training of field officers on new agricultural technologies and on how to run field schools seems to fall short. At least, that was the shared opinion of field officers in the ward included in the research (Interviews Bigwa and Kilakala WAEOs).

Extension officers also claim that they do not have enough time to attend all the farmers’ groups in the area for which they are responsible. This claim seems unfounded. Although it is difficult to make statements that are valid for the whole municipality, the observations and interviews with field officers and farmers in the three wards suggest that extension officers dedicate a maximum of three hours a day visiting groups, providing training and running field schools. They do that during four days of the week, as one day they stay at their office to perform administrative duties such as the writing of reports. For the rest of the time, extension officers make home visits predominantly to farmers who pay for their services, or dedicate their time to other private business or leisure. The ward government has little knowledge and control on how the officers use their time. Consequently, time is only a scarce resource because of the priority extension officers give to farmers who pay for their services.

5.4.7 The special case of farmers outside the municipality

As was mentioned earlier, land in Morogoro Municipality is scarce and farmers from the municipality have been practicing agriculture outside the municipality. However, according to government policy and guidelines, the farmers engaged in agriculture outside municipal jurisdiction do not qualify to get extension services from the municipality. Since these farmers are resident within the municipality, it has been using a number of strategies to link them with the extension services.

In the first place, the municipal government decided to allocate farmland to municipal extension officers in those areas as an incentive to deliver services to these farmers. The assumption was that, if the extension officers have their farms in those areas, they will visit them and once they are there,
other farmers will get opportunity to consult them for their problems (Interviews MEO; ALO).

In addition, these farmers still consume the services from the municipal extension officers in case of a need for training or advice on the use of agricultural input and modern farming techniques as long as they are within the Municipality (Focus group discussion and observation - farmers training at Kichangani ward).

Nevertheless, as a general rule, the municipality is only responsible for providing extension services to farmers who belong to it and have their land within its jurisdiction because the budget is allocated on that basis. The provision of such services to the farmers outside the municipal jurisdiction is an informal arrangement between the extension officers and the farmers. There is no formal regulation that guides the provision of such services. This implies that with time, the farmers who farm outside the municipality may not receive public extension services from the Municipality.

5.5 Service delivery by NGOs

In Morogoro Municipality, a number of NGO’s are also engaged in the delivery of agricultural extension services. These include BRAC, PASS Trust Morogoro, SWISS contact and SNV. These NGOs render both livestock and agricultural services. Formally, these NGO’s have to register as an organization that delivers agricultural services and they must report to the municipality about their activities. In addition, they have to arrange for a schedule of activities in collaboration with ward extension officers.

The registration is a legal requirement. To become registered NGOs must provide insight into the quality of their staff, their experience and their financial soundness. It is considered as a way to guarantee that all NGOs engaged in service delivery adhere to certain minimum standards. The requirement that NGOs must develop a schedule for their activities in cooperation with the ward extension officers must guarantee coordination between the public and private delivery of services, ensure collaboration, avoid overlap and target the services where they are most needed (Interviews Bigwa and Kichangani WAEOs, and BRAC NGO director).

Our research reveals that registration does not guarantee that an NGO delivers quality services. A first example of this concerns BRAC. This is an international NGO, which supports the delivery of agricultural, and livestock services to farmers in different regions in Tanzania and has an overall good reputation. Nevertheless, it happened that a livestock promoter from BRAC NGO delivered services to farmers without the knowledge of the ward extension officer, and the livestock keepers suspected him to be delivering sub-standard services. They complained to the government. Consequently, the
promoter was summoned and stopped from continuing with service delivery (Interview Bigwa WAEO).

A second example relates to PASS Trust NGO in Morogoro. This is a private organization established in 2000 and registered in 2007 under the Incorporation Act (2002) in order to promote commercial agriculture. The mission of this NGO is to deliver business development and financial services to small and medium agricultural entrepreneurs, acting as an intermediary between farmers and financial institutions such as the Exim Bank, and Saving and Credit Associations (PASS TRUST Guidelines 2013). The research shows that this organization used to offer financial services to individual farmers without collaterals. As a result, it almost went bankrupt because many farmers who borrowed money could not pay it back. Recently, it has established new regulations and criteria which the farmers must meet before receiving loans from them (Interview BDO- PASS Trust).

Our research also showed that there is a lack of coordination between the services rendered by public extension officers and NGOs. Different factors seem to play a role. First, some of the NGOs deliver services without formal registration. The municipality has attempted to find out about their activities in order to get them registered and to improve coordination.

*The problem is that, some NGOs go directly to wards and then to farmers without passing through municipal level and some deliver services without registration (Interview MAO).*

Second, even if NGOs are registered, they work on their own accord. The idea is that extension officers serve as a link between them and farmers. In case NGOs want to provide services to farmers, they should report to the Municipal Agricultural and Livestock Development Officer who introduces them to the municipal procedures for recruiting farmers for training. In practice, NGOs select farmers for training by using their own criteria. In most cases, they use a survey to identify the farmers within the areas and make stock of their problems. After identifying farmers, they train them and give them free input like fertilizer and seeds. BRAC is one of the NGOs that proceed like this. One of the consequences is that the training offered replicates earlier training. Despite the fact that no new knowledge is offered to farmers, they attend the training because they are given free vaccination and food for poultry (Focus group discussion –Bigwa Umoja Poultry Group).

Third, if NGO’s seek cooperation with extension officers, extension officers are not always keen to collaborate. For example, PASS Trust wanted to offer training to farmers on an irrigation plan. As required, the PASS officials passed through the district office and acquired permission. The local government extension officials were then instructed to offer the necessary cooperation. For the first day, they came as instructed and supported PASS in
preparing the training. After showing up for the first and second day, they disappeared. To make it worse, they also switched off their phones. The reason for their withdrawal was that they were expecting to receive an allowance for the first day, but they did not get it because it is contrary to PASS regulations to pay allowances to public officials. As a result, PASS did not receive assistance to locate the farmers who were in need of training (Interview PASS Trust BDO).

Conclusively, there are number of NGOs engaged in supporting the delivery of agricultural, livestock and financial services to farmers. Formal procedures are in place to secure that the services of NGOs meet a number of quality standards and that coordination takes place between the public and private services. However, some of the NGOs do not get registration and even those that are registered do not cooperate well with the municipal officials. The lack of cooperation results in overlap and conflicts between municipal extension officials and the NGOs. According to local government officials, the lack of coordination is caused by the fact that NGOs operate on their own, use their own criteria and policies; NGOs suggest that the lack of coordination is caused by the fact that extension officers refuse to collaborate if they are not compensated for their efforts. At the end of the day, effective coordination does not take place.

5.6 The role of Agricultural research institutes

5.6.1 Introduction and background

As discussed in chapter four, public agricultural research in Tanzania is organized into seven zones all over the country. Each zone has one agricultural research institute, responsible for agricultural research and for the transfer of information and modern technology to local government authorities and farmers in its area. Morogoro Municipality is one of the local government authorities that falls under the eastern zone in which the research institute responsible for research is Ilonga Agricultural Research Institute (IARI). It is located in Kilosa district in the Morogoro Region. The institute was established in 1943 on land provided by the Ministry of Agriculture and was known as the headquarters for agricultural research. The objective of the institute was to improve cotton production, but it extended its activities to research on food crops.

In 1989, the institute was promoted to the zonal agricultural research institute for the eastern zone, which covers Dar es Salaam, Morogoro, Tanga and the coastal region. The main activities of the institute include: the development of improved management practices such as time for planting, studies on spacing, fertilizer studies, and research on crop protection; the testing pesticides control for insect pests and weeds, and the transfer of technology
to farmers (Ilonga ARI research report 2003). With respect to crops research, the institute has a mandate to conduct research on rice, maize and vegetables for low and medium altitude from 0-1800 meters and disseminate research output, at first to nearby farmers, later to all farmers in the country. To fulfill these tasks, the review of documents suggests that the institute has formulated a number of research projects. They are said to be the result of a so-called Client Oriented Research Development and Management approach (CORDEMA). The projects include:

- Germplasm maintenance for rice, maize, tropical vegetables crops and development of maize varieties.
- Production of breeder seeds of maize and rice varieties developed at the center for research activities
- On farm estimation of Drought Tolerant Maize varieties, breeder seeds increase and pre-basic seed multiplication
- Evaluation of seeds companies and their adaptability
- Climate impact assessment
- Participatory variety selection, fertilizer recommendation for maize and rice
- Development of agronomic packages, development of improved varieties of maize and rice, and the production of basic seeds (M & EEZ A Draft report 2010:35).

To carry out these activities, the institute has employed a number of research scientists and field officers. These include: eleven research scientists, eight field officers and nine staff for support services (Administration, Accounts and Security). Among the researchers, eight are holding a Msc. Degree and three are holding a Bsc. degree. At the time of the research, two among them were on PhD leave and one was on leave to take a Msc. program. The working tools owned by the institute include: one hundred research farm plots; an office building; a dormitory; a workshop; laboratories for soil, plant and seed analyses; a store room, a screen house; a conference room and 15 staff quarters.

### 5.6.2 Financing of the Ilonga agricultural research institute

Every year, the institute receives funds from the Government of Tanzania to fulfill its tasks. Government funds are for recurrent costs, i.e. the costs of keeping the institute running and for development, that is for costs related to research projects and the development of new technology and the salaries of employees. It was not possible to reconstruct precise overviews of the budget and expenditures of the institute, but from the interviews with staff of the ministry and the institute, it has become clear that the budget allocated by central government only covers a small part of what the institute itself deems necessary. Over the past years, every year the institute requested no less than
one billion Tsh. (Interviews MPO DRD and Ilonga ARI Accountant). The budget allocated to the institute amounts to round and about 10% of what is requested. Table 5.13 shows the budget disbursed to the institute for the fiscal years 2012/2013 to 2014/2015.

<table>
<thead>
<tr>
<th>Year</th>
<th>2012/2013</th>
<th>2013/2014</th>
<th>2014/2015</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recurrent</td>
<td>31,745,000</td>
<td>45,617,774</td>
<td>41,600,000</td>
<td>118,962,744</td>
</tr>
<tr>
<td>Development</td>
<td>203,500,000</td>
<td>91,400,000</td>
<td>87,350,000</td>
<td>382,250,000</td>
</tr>
<tr>
<td>Grand total</td>
<td>235,245,000</td>
<td>137,017,774</td>
<td>128,950,000</td>
<td>501,212,774</td>
</tr>
</tbody>
</table>

Source: Constructed from Ilonga Agricultural Research Institute, disbursement of fund report 2016.

Apart from the direct grants from central government, the institute depends on funds provided by external public and private sponsors, who finance specific research projects. The institute can submit project proposals to the Zonal Agricultural Research Development Fund, a basket fund fed by foreign and international sponsors. However, in the past three years from 2012-2015 the Zonal Agricultural Research and Development which is supposed to be subscribed by donors and government has vanished. The reason is that the donors claimed that the government failed to fulfill its commitment to a subscription to the fund and therefore they cannot contribute (Interviews IARI Accountant).

In addition, the ARI can carry out projects commissioned by institutes such as the International maize and wheat improvement center (CIMMIYT), the International Rice Research Institute (IRRI), African rice, Japan International Cooperation Agency (ICA), the International Center for Research in Agro forestry (ICRAF), or the Eastern Africa Agricultural Productivity Project (EAAPP). The revenues obtained through projects on commission on average make out much more than half of the total budget of the institute (see table 5.14).

### 5.6.3 The decision-making about research

According to the formal guidelines from government policy documents, when research institutes decide on their research program, they must take into account the problems and priorities put forward by farmers. The idea is that the research by institutes should be demand driven. At the level of districts and municipalities, stakeholder meetings should take place once every three years. Representatives of different stakeholders should participate in the program review meetings that the institute must hold every three years (URT 2002).
Table 5.14: Funds allocated by external sponsors, example from 2012-2015.

<table>
<thead>
<tr>
<th>PROJECT</th>
<th>2012/2013</th>
<th>2013/2014</th>
<th>2014/2015</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 CDTF</td>
<td>-</td>
<td>941,540,000</td>
<td>103,870,000</td>
<td>1,045,410,000</td>
</tr>
<tr>
<td>2 MCKNIGHT</td>
<td>99,200,000</td>
<td>101,104,200</td>
<td>329,851,340</td>
<td>530,155,540</td>
</tr>
<tr>
<td>3 TL 11 COWPEA</td>
<td>25,146,764</td>
<td>-</td>
<td>22,826,390</td>
<td>47,973,154</td>
</tr>
<tr>
<td>4 TL II Pigeonpea</td>
<td>-</td>
<td>10,573,785</td>
<td>11,258,610</td>
<td>21,832,395</td>
</tr>
<tr>
<td>5 TL II Soya Bean</td>
<td>151,214,405</td>
<td>72,615,696</td>
<td>60,110,379</td>
<td>283,940,480</td>
</tr>
<tr>
<td>6 AGRA</td>
<td>64,947,960</td>
<td>-</td>
<td>85,091,930</td>
<td>150,039,890</td>
</tr>
<tr>
<td>7 Wema Project</td>
<td>15,000,000</td>
<td>30,000,000</td>
<td>26,650,000</td>
<td>71,650,000</td>
</tr>
<tr>
<td>8 Thailand Fund</td>
<td>20,000,000</td>
<td>-</td>
<td>-</td>
<td>20,000,000</td>
</tr>
<tr>
<td>9 TRANS-SEC</td>
<td>-</td>
<td>123,167,029</td>
<td>247,346,164</td>
<td>370,513,193</td>
</tr>
<tr>
<td>10 ICRISAT</td>
<td>-</td>
<td>-</td>
<td>29,135,462</td>
<td>29,135,462</td>
</tr>
<tr>
<td>11 YALA</td>
<td>9,775,000</td>
<td>-</td>
<td>-</td>
<td>9,775,000</td>
</tr>
<tr>
<td>12 CIMMYT</td>
<td>17,876,082</td>
<td>-</td>
<td>17,876,082</td>
<td>17,876,082</td>
</tr>
<tr>
<td>13 PANNER</td>
<td>4,218,000</td>
<td>-</td>
<td>4,218,000</td>
<td>4,218,000</td>
</tr>
<tr>
<td>14 LAMBD</td>
<td>4,906,000</td>
<td>-</td>
<td>4,906,000</td>
<td>4,906,000</td>
</tr>
<tr>
<td>15 MONSATO</td>
<td>9,228,370</td>
<td>49,676,720</td>
<td>58,905,090</td>
<td>1,818,944,286</td>
</tr>
<tr>
<td>Total</td>
<td>384,737,499</td>
<td>431,614,710</td>
<td>1,002,592,077</td>
<td>1,818,944,286</td>
</tr>
</tbody>
</table>

Source: Constructed from Ilonga Agricultural Research Institute, Donor fund allocation report 2016.

In practice, there is no such a thing as demand driven research; districts and municipalities do not hold stakeholder meetings to make stock of research needs. Although the institute claims that the program for the ongoing activities were developed through client oriented research and management approach, it was developed more than five years ago. Over the past four years, the institute has not organized any stakeholders’ meetings. The argument put forward by local government and the institute for not organizing stakeholder meetings is that there are no funds (Interviews MAEO and IARID).

It is not possible to organize meetings because if you organize a meeting you must have to fund at least for food and drink, and at least a rim of paper. The institute has not organized a meeting and we have not done it either. As you know, you need funding to organize a meeting. If you do not have funding, you cannot have meeting (Interview MAEO).

Although there is no question that funds for recurring expenditures are scarce and that there are some costs involved in organizing stakeholder meetings,
this does not mean that it would be impossible to collect information about research priorities that are articulated at the local level. As we described earlier, extension officers in Morogoro report on diseases and other problems farmers have to deal with, and these reports could be used to collect information about local research priorities. However, the officials from the institute do not seem to have communication with the municipality nor do they collect information from the mentioned reports.

Occasionally, the institute requests the local governments in the area to submit ideas for research projects. However, these are not honored by the Ilonga ARI if the local governments do not provide for funds themselves. In practice, the Ilonga ARI only conducts research on the request of local governments if the latter are willing to provide the necessary funds to carry out a project (Interviews IARID and IARI FSR). Local governments do not dispose of funds meant for research and are not inclined to use one of the available block grants to finance research.

For example, Ilonga Agricultural research institute requested for priority from the municipalities. One municipality responded by indicating priority on soil analysis because they grow sunflower as cash crops. The institute did not respond and the reason for not responding was that the municipality did not want to pay for the requested research and therefore their research was kept pending (Interview ARI director).

The institute is not keen on spending its’ own limited budget on research driven by local demands. One reason is that it feels that research should focus on basic research and technological innovation, and not on applied research, which is what local governments request most of the time. Moreover, there are already too little funds to carry out basic research. For example, there are yellow coconut and rice diseases, which need new scientific knowledge to solve them, but they have not been properly addressed due to lack of innovation (Interview IARID). Another reason is that the institute also must take the priorities of central government in mind.

As we mentioned earlier, there are additional funds available from external sponsors, but these are allocated according to the priorities of the sponsors. For example, an observation from the internal program review meeting, which was held on 19th and 20th of December 2012, indicated that most of the ongoing research at that time was funded by donors. As donors have control over how their money is spent, researchers formulate project proposals in such a way that they suit the interests and preferences of donors (Interview IARID). To give an idea of the budgets involved table 5.14 shows a number of projects, which were financed, by different donors and the amount of fund disbursed.
Conclusively, funds provided by central government are very limited. Ilonga ARI does not subscribe to the demand driven concept, because it limits them to conduct basic research and develop new technologies. Moreover, the institute has to take central government priorities into account. A substantial part of the research is financed by external donors. Ilonga ARI therefore develops research projects that correspond with the priorities of the donors. Overall, in the case of Ilonga ARI agricultural, research is not driven by the demand of local governments, farmers or their representatives.

5.6.4 Information transfer to farmers

According to guidelines, apart from conducting research, the agricultural research institutes must transfer knowledge and information on new technologies to municipal and district councils. To that effect, the institutes have a Liaison Unit. The main role of the liaison officers is to translate research findings into a simplified language that the farmers can understand, to evaluate the adoption of technology to farmers and to advise on new research topics suggested by farmers. Normally, the liaison unit of the institute depends on letters and manuals to transfer the information. The idea is that officials visit the local governments and inform extension officers and farmers about new technologies and that they evaluate the rate of adoption of new technologies (Interviews ILO & IARID). Alternatively, the extension officers from local government have to come to the institutes for training on new technologies and on how to transfer these to farmers.

There are a number of reasons why these two methods do not function properly. In the first place, both methods require funds. If the research institute wants to transfer new technology through visits to local governments, they must then pay for the transport of their liaison officers and other costs. In practice, the budget the Ilonga ARI receives for recurrent expenditures is not used to pay for visits of the liaison officers to local governments. These visits only take place very occasionally (Interviews IARID).

Secondly, the local authorities have to subscribe to the fact that their extension officers visit the research institutes for training on new technologies and they must pay for the costs, as the Ilonga ARI does not reserve budget for the costs involved in these visits. Local governments also have limited funds. As we described earlier, over the years Morogoro Municipality sent some of its officials to training centers. But overall, the numbers have been very limited and sending extension officers to Ilonga ARI to inform themselves about the findings of research is not a priority of local government (Interview MAEO). A possible explanation is that the research carried out by Ilonga is not driven by the demand of local governments, but by sponsors who have their own priorities. As a result, a substantial part of the research findings, knowledge and information on new technologies may not be directly relevant
for the local governments, or at least, that is what they may think (Interviews IARID and IARI LO).

In the area that falls under the responsibility of Ilonga ARI it is difficult to use modern technologies to transfer information and knowledge. The electronic transfer of information is still a problem because the research institute itself and most of the local authorities that have to receive research information are located in rural areas where there is no access to internet services. Offering training sessions to extension officers through the internet is not a method that can be used. This implies that, if the liaison officer wants to transfer any information, he must go physically. Alternatively, he could use a phone but much of the knowledge on new technologies cannot be discussed and transferred via phones (Interview IARID).

A last circumstance that is unfavorable for the exchange of information between the Ilonga ARI and local governments is that researchers who carry out a project do not always contact the local governments to inform them. If they think their research may not match the needs of the local government, they go straight to the wards and villages to conduct research; they collect their data and very often do not provide feedback to the farmers involved in the research (Interview Bigwa WAEO; focus group discussion with dairy farmers). For example, another research institute, Sokoine University of agriculture, bypassed municipal officials and contacted farmers through ward extension officers for the development and application of Ngoro technology. Subsequently, some farmers were selected by Sokoine to travel to another region to learn about the application of this technology in their context: all this without the knowledge and consent of Morogoro Municipality. These practices breed distrust between local government and research institutes.

In sum, just like other research institutes, Ilonga ARI has to transfer information and knowledge on new technologies to local governments, extension officers and in the end, farmers. Our research shows that the liaison unit of Ilonga ARI does not visit local governments to transfer new information. On the other hand, Morogoro Municipality only occasionally sends its extension officers to be trained by Ilonga ARI. Scarce funds for transportation, allowances and other costs explain a part of this practice. However, it is also clear that both Ilonga ARI and Morogoro Municipality do not give much priority to information transfer and training. One underlying cause for that may be that a substantial part of the research carried out by Ilonga ARI is not driven by local demands, and that the relevance of research findings is not clear for local governments. The consequence of the weak link between Ilonga ARI and Morogoro Municipality is that extension officers in the wards included in our research felt that they were ill informed about new agricultural technologies and that their expertise is outdated.
5.7 Conclusion

In 1999, the Tanzanian government transferred the responsibility for the delivery of agricultural extension services to local government. One of the main goals of the decentralization project was to promote demand driven service delivery. The direct involvement of farmers in the planning of services and decision-making by democratically elected institutions should warrant that service delivery is attuned to the needs and preferences of the local community. In this section, we recapitulate our research findings to establish to what extent this goal was achieved and how the result can be explained. Moreover, we look at a number of other effects that according to the literature are associated with decentralization: tailor made services, cost efficiency and coordination.

5.7.1 Planning and budgeting: Allocative efficiency and local democracy

Ideally, the delivery of extension services should be guided by policies and plans that – through a democratic process - reflect the preferences of the community and thereby warrant an allocation of resources that maximizes social welfare. In Morogoro Municipality decision-making on plans and policies for the delivery of extension services proceeds according to the procedural guidelines established by central government, at least in a formal sense. Every five years the elected local council establishes a strategic development plan based on a SWOT analysis. The plan contains a section on agriculture and on extension services and sets goals to be achieved. Every year the council establishes an Agricultural Development Plan, thereby approving the allocation of financial resources to a number of extension projects. Farmers at the grass root level are involved in the development of the annual plan. So, in principle, conditions for democratic decision-making - representative and direct - are fulfilled; and the procedures that are followed should make it possible to develop plans that reflect the preferences of the community.

In practice, decision-making in Morogoro Municipality about the strategic and annuals plans was dominated by the local officials. The Agricultural and Livestock Officers carried out a SWOT analysis and formulated policy goals and strategies to achieve these. The SWOT analysis was very general in character and there was no direct link between the analysis and the goals and strategies that were formulated in the plan. The goals that were formulated to a high degree reflected priorities that were formulated in national policies. To a large extent, the same was the case with the annual plans. Farmers were consulted at the lowest administrative level, the street level. They could voice their ideas about possible extension projects. However, this process of consultation took place under strong guidance of ward extension officers, who suggested certain projects would qualify for funding because they fitted central government priorities and advised against others that would not qualify.
In the process of the compilation of ward plans into a municipal plan, and the selection of projects carried out by the officials, the budget ceiling and priorities formulated by central government were leading. Overall, the direct involvement of farmers in the development of plans – as far as it actually took place – did not result in draft plans that reflected their preferences.

The drafts of the strategic and the annual plans were tabled for approval in council committees and the full council. It was however striking that neither the committees nor the council actually discussed the content of the plans, the projects that were proposed or the financial resources allocated to projects. In none of the meetings about strategic and annual plans of the years we studied did any councilor question the priorities included in the plans, or propose to make changes in favor of the ward he represented. In fact, the meetings in which the plans were on the agenda, were dominated by issues like revenue collection or reports on the implementation of development projects. Overall, at the moment of deciding on the plans, the council did not articulate preferences of the community, and consequently, these were not reflected in the plans.

There are a number of explanations for this practice. One has to do with the formal institutions. The administrative system for the delivery of extension services is still quite centralistic. National policies define priorities that local governments have to abide to. Legislation prescribes that certain planning procedures must be followed and that the resulting plans and budgets need the approval of central government. As can be observed from the overviews, local revenues are small. For the implementation of development projects, local government largely depends on earmarked grants, and is therefore subject to conditions set by central government. Moreover, central government agencies such as the regional secretariat can scrutinize proposals developed by the local bureaucracy even before they are submitted to the council. Overall, the formal institutions imply that the room for local government to set its own priorities is limited.

However, the formal institutions cannot explain why councilors do not even question or discuss the content of plans and the proposed budget allocations, or why they do not at least try to mold plans in a way that they address the needs of their own constituency. Our research reveals that councilors abide to social rules that prevent them to try to alter the plans and budgets tabled to them. It is a shared conviction that an elected politician cannot go against the manifesto of his or her political party; and the plans and budgets are considered to be in line with that manifesto, because they have been scrutinized by officials from the ruling party. It is a shared conviction that interventions have no use, as plans that have been altered by the council will be rejected by central government. Moreover, their behavior is guided by the general social rule that locally elected politicians should not question the policies and guidelines set by central government. The combination of the limited discretion left to local government and these social rules explain the
passive attitude of councilors towards the plans and budgets submitted to them. It also explains the behavior of councilors with respect to implementation: once plans, budgets and projects are endorsed by central government, they feel free to question and correct local administrators, if they think the interests of their constituency are at stake.

5.7.2 Actual service delivery: allocative efficiency, cost-efficiency, tailor made services and coordination

Whether extension services are delivered in a way that maximizes social welfare not only depends on local policies and plans, but also on the way field workers carry out their job. Plans and policies can only provide general guidelines and leave the administration a certain degree of discretion. In the case of Morogoro Municipality, the Agricultural Development Plans leave the administration substantial discretion, because they only define a limited number of projects and the financial resources that go with them. No other policy statements, guidelines or priorities concerning the delivery of extension services are included in the plans.

One circumstance the administration has to deal with is a structural shortage of resources. For projects that are included in an agricultural plan, funds for transport, tools and agricultural input are made available. However, the number of projects is limited and for some wards years go by in which no projects are granted. For the regular delivery of services, the visits to individual farmers and farmers’ groups, training and field schools, means for transport, tools, medicine and agricultural input are not provided or only in very limited quantities. How does the administration allocate its’ scarce resources, to what extent does it try to address the needs and preferences of the farmers?

The pattern of service delivery in the wards that were included in the research shows a number of characteristics. The first is that extension officers implement the agricultural plans concerning projects that are included: they provide support to farmers’ groups that receive funds for extension projects. The second is that extension officers give priority to advise and support farmers who pay for their services, i.e. compensate them for the costs of transport and medicine or insecticides, and for their willingness to assist them. A substantial part of their working day is dedicated to service these farmers, who are predominantly livestock keepers and economically relatively well off. Other farmers and groups that are not financially supported, are neglected, unless they live nearby and/or have developed a special bond with the extension officer. It is evident that farmers who are in need of support are largely left without extension services.

No doubt, the scarcity of resources leaves extension officers with a difficult task. The fact that they can dedicate a substantial part of their time to service paying farmers can be explained by the absence of instruction and
supervision. Field extension officers in the three wards only receive very general instructions, which leave them ample room to develop their own working schedules. To account for their activities, they only have to submit a monthly report. As long as they can show they have been attending a number of farmers in their ward, the supervisors are satisfied. Moreover, field extension officers are guided by the rule that the delivery of extension services deserves something in return from the farmer: if farmers are not willing to compensate them for their efforts, they feel justified to refuse assistance.

The same factors - general instructions and supervision, and the fact that extension officers consider their assistance to farmers as a favor, not as something farmers are entitled to, results in low cost-efficiency in the primary task of the extension officers. While extension officers are paid to deliver public extension services 45 hours a week, our estimation is that in the three wards most half of that time is dedicated to training, field schools and other group visits. The rest of the time extension officers are engaged in visits to individual farmers, especially livestock keepers, who pay for their services, or in other private activities.

As it turns out, in Morogoro Municipality visits to groups of farmers, field schools and training sessions only constitute a relatively small part of the activities of the extension officers. To what extent are these services tailored to characteristics of the farmers or their circumstances? We found that overall, training sessions take place over the weekend, taking into account that farmers work during weekdays. We also found examples of extension officers who adjust their didactical method to the age and literacy of farmers they train, but these are exceptions, not the general practice. In most cases, extension officers provide standard lectures and programs on standard topics.

There is no indication that formal institutions stand in the way of tailoring services to the characteristics or circumstances of farmers. Instructions extension officers have to follow are general and so is supervision by their superiors: extension officers can choose their own repertoires and didactical methods. A scarcity of resources like transport or tools cannot fully explain the lack of personalization either. Although some methods require special resources – for example a video set – others can be used without extra resources or costs; they only need for the extension officer to go the extra mile, make himself aware of the differences between farmers and their circumstances and choose an appropriate repertoire. In a situation where extension officers can choose their own repertoires, one of two conditions should be present to make them try to tailor their services: incentives provided by the administration or a social rule that implies that personalization is imperative, because it is a precondition for effective service delivery. In Morogoro Municipality, both conditions are absent.
One of the assumptions of the theory is that decentralization creates favorable conditions for the coordination between different policy sectors or services provided at the local level. One of the challenges in the field of extension services is the coordination between the services offered by local government and the ones offered by NGOs. Formal institutions are in place to bring about coordination: the mandatory registration of NGOs at the local government and the formal requirement for NGOs to develop working schedules in collaboration with extension officers. In practice, coordination fails to materialize, resulting in overlap and repetition of services to the same groups of farmers, and the absence of services where they are most needed. Two factors can explain the lack of coordination: NGOs avoid contacts with local government, go their own way and directly approach farmers, which enables them to follow their own priorities; extension officers refuse cooperation with NGOs, if these are not willing to compensate them for their efforts.

5.7.3 The relation between the Municipal government and the Research institute

Local extension services are supposed to be supported by the zonal research institutes. The research institutes must transfer information and knowledge on new technologies to local governments and train extension officers. Local governments on the other hand are supposed to feed research institutes with information on problems the farmers in their area are confronted with, and suggest topics for research to deal with these problems. The exchange of information and knowledge between the Ilonga ARI and Morogoro Municipality is very limited to almost nonexistent. Over the past years, officials from the institute have not visited the municipality to educate extension officers or inquire after possible research topics; local government officials have not taken part in stakeholder meetings about research programs, as these have not been held. The number of extension officers that participated in training sessions organized by Ilonga ARI has been very limited. One of the consequences is that field extension officers in the three wards included in the research feel that they are ill trained and have to work with outdated knowledge. Another consequence is that the research program of Ilonga ARI is not based on the input of stakeholders such as Morogoro Municipality, and does not meet the criterion of being demand-driven, a criterion set by the government of Tanzania.

Both the local government and the Ilonga ARI claim that the main reason for the weak link between them is the lack of resources. Limited as resources may be, it is also a matter of priorities. Ilonga ARI receives a direct grant from central government for research, but it prefers projects in line with central government priorities and fundamental research projects to honoring requests from local governments, unless the latter pay for the research. Moreover, the institute focusses on acquiring funds from external donors,
who have their own research priorities. The transfer of knowledge has little priority within the institute. The same goes for Morogoro Municipality: agriculture is not a sector that ranks high on the list of priorities; local government does not allocate its own resources to the training of extension officers, let alone to finance research projects; the department of Agriculture and Livestock is not active in consulting the Ilonga ARI for advice and support.
6.1 Hai District Council: General features

6.1.1 Geography

Hai district council is one of the districts of the Kilimanjaro region in Tanzania. The district is located 25 kilometers from the regional headquarters, which is Moshi Municipality. Geographically, it is bordered by the districts Rombo and Siha in the north, Arumeru in the west, Simanjiro in the south and Moshi in the east. The district covers 1011 km², which is equal to 7.6% out of the total area of the region. It is located between latitudes 2° 50’ and 3° 29’ south of the equator and between longitudes 30° 30’ and 37° 10’ east of Greenwich. Average temperatures oscillate between 23 and 35 centigrade; rainfall ranges from 700mm per annum in the lowland zone to 1750 mm per annum in the highland zone (Hai District Council Report 2010). The district has a population of 210,533 with 102,457 males and 108,076 females with an average household size of 4.2.

Geographically, the district is divided into three zones: the high land zone, the central zone and the lowland zone. The high land zone is located between 1660 to 1700 m above sea level with rainfall ranging from 1250 to 1750 mm per annum; the day temperature oscillates between 15 and 20 centigrade. This zone covers the following wards of the district: Machame Kaskazini, Machame West, Narumu, Uroki, Masama North and Masama East. The central zone is located between 900 and 1660 m above sea level with rainfall ranging from 700 mm to 1250 mm per annum and a temperature oscillating between 22 and 26 centigrade. The zone covers the wards Masama West, Masama Kusini and Hai Town. The lowland zone is located between 900 to 1660 m above sea level with a rainfall ranging from 500 mm to 700 mm per annum. The zone covers the wards KIA, Masama Rundugai, Machame Weruweru and Machame South (Hai District Council Report 2010).
The research was carried out in Hai district council at two levels: at the district council headquarters and at the ward level in three wards selected from different agro ecological zones of the district. The wards include Machame Kaskazini, Masama Kusini and Masama Rundugai.

6.1.2 The council government

Politically, the district is led by the council, the highest decision-making body in the district. It consists of fourteen ward councilors elected by citizens from each ward; five councilors for special seats, nominated by political parties and appointed by the national electoral commission; one member of parliament elected by citizens in the district; and two members of parliament, nominated by political parties and appointed by the national electoral commission.
The ruling party (CCM) occupies 11 council seats, the same number as the opposition party CHADEMA (Hai District Council Report 2010), which makes Hai District one of the few local governments in Tanzania in which CCM does not have an absolute majority. All elected councilors from the wards are male and all special seats are occupied by women. The council is chaired by the mayor who is elected from among the councilors.

The decision-making in the council is processed by thirteen departments and six units. The departments include: human resources and administration; health; primary education; water; livestock and fishing; community development and social welfare, environment and sanitation; planning, statistics and coordination; finance and trade; secondary education; agriculture, irrigation and cooperatives; land and natural resources; fire and works. The units include: internal audit; procurement and management; election; legal and security; beekeeping; technology; and information and communication relations.

Before a decision can be approved by the full council, it must be processed by standing committees that scrutinize the proposals and advise the full council. These committees include: the finance, administration and planning committee; the committee for health, education and water; the economics, works and the environment committee (Hai District Council Report 2010; Hai district council investment profile). Administratively, the district is headed by the district executive director (DED) who is an urban planner by profession and holds a postgraduate diploma in that field. The DED oversees 14 wards, which are further divided into 60 villages and 11 streets. The DED also serves as a secretary of the full council.

6.1.3 The council budget

One of the main tasks of the council is to approve the annual budget. It includes an estimate of the revenues of the council from their internal resources (local taxes, other sources) and the intergovernmental transfers that come in the form of central government grants. The budget includes the allocation of the financial resources to different policy sectors and services. Over the fiscal years 2010/11, 2011/2012 and 2012/2013 the revenues from intergovernmental transfers and own sources increased from 18,419,585,203 Tsh. to 24,748,387,522 Tsh. Table 6.1 shows the budget in terms of revenues and expenditures as programmed for the period of 2010-2013.
### Table 6.1: The budget for three fiscal years

<table>
<thead>
<tr>
<th>Year 2010/2011</th>
<th>Annual budget</th>
<th>Percentage of total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenues</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Own sources</td>
<td>421,750,000</td>
<td>2</td>
</tr>
<tr>
<td>Intergovernmental transfers</td>
<td>17,997,835,203</td>
<td>98</td>
</tr>
<tr>
<td>Total</td>
<td>18,418,585,203</td>
<td>100</td>
</tr>
<tr>
<td><strong>Expenditure</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Development expenditure</td>
<td>3,504,792,385</td>
<td>19</td>
</tr>
<tr>
<td>Recurrent expenditure</td>
<td>14,554,506,818</td>
<td>81</td>
</tr>
<tr>
<td>Total</td>
<td>18,059,299,203</td>
<td>100.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2011/2012</th>
<th>Annual budget</th>
<th>Percentage of total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenues</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Own sources</td>
<td>1,010,900,642</td>
<td>4</td>
</tr>
<tr>
<td>Intergovernmental transfers</td>
<td>21,852,856,510</td>
<td>96</td>
</tr>
<tr>
<td>Total</td>
<td>22,863,757,152</td>
<td>100</td>
</tr>
<tr>
<td><strong>Expenditure</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Development expenditure</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Recurrent expenditure</td>
<td>22,863,757,152</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>22,863,757,152</td>
<td>100.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2012/2013</th>
<th>Annual budget</th>
<th>Percentage of total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenues</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Own sources</td>
<td>1,410,411,800</td>
<td>6</td>
</tr>
<tr>
<td>Intergovernmental transfers</td>
<td>23,337,975,722</td>
<td>94</td>
</tr>
<tr>
<td>Total</td>
<td>24,748,387,522</td>
<td>100</td>
</tr>
<tr>
<td><strong>Expenditure</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Development expenditure</td>
<td>3,138,825,015</td>
<td>14</td>
</tr>
<tr>
<td>Recurrent expenditure</td>
<td>19,820,005,707</td>
<td>86</td>
</tr>
<tr>
<td>Total</td>
<td>22,958,830,722</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: constructed from Local Government Information, PMORALG, Hai District Council 2013

1. The data are taken from the local government information system; they raise some questions that we have not been able to resolve, such as the fact that for 2011/2012 no budget was available for development expenditure.
It must be noted that table 6.1 shows the budget as programmed. In practice, each of the fiscal years produced a cash flow problem. Central government grants were not paid according to what was promised, and the revenues from their own resources proved to be lower than expected, due to problems with collecting taxes and policy decisions of central government, i.e. the abolishment of a number of indirect sources of revenue for local government authorities. In addition, like in Morogoro, the little funds available from their own sources are largely spent on the payment of allowances for local politicians and temporary employment (interview Human resources officer and Planning officer). The common crops they grow include maize, beans and paddy. The cash flow problem will be discussed more extensively below in relation to the implementation of agricultural extension projects.

6.1.4 Agriculture in Hai District Council

Within Hai district council, there are a total of 49,600 farmers engaged in agriculture and livestock production. These farmers can be classified into three categories: small scale (1-10 acres), medium scale (10-50 acres) and large-scale farmers (>50 acres). Small-scale farmers constitute 80% of all farmers; 15% are medium scale farmers; large-scale farmers constitute 5% of the total number of farmers. Large-scale farmers are mainly cooperatives that are engaged in the production of food and cash crops. Although the number of registered farmers is small, the empirical data suggest that all men and women in the district participate in farming in one way or the other. Most of them practice mixed farming, which involves agriculture and livestock breeding. The types of crops they grow include annual crops such as maize, sunflower, paddy, horticulture crops, ground nuts and potatoes; and perennial crops such as coffee, banana, mango, avocado, pitches and yams.

The types of livestock they keep are classified into indigenous or local cattle, and exotic breeds i.e. improved varieties. Exotic breeds include different types of dairy cattle such as fresh and ashier; local cattle include borane, sheep and goats. Besides, farmers keep exotic poultry such as light success layers and broiler and indigenous breeds such as local chicken cross-breded with chotara (Hai District Council Report 2010; interview DAEO). Table 6.2 contains an overview of the most important types of cattle and poultry.
Table 6.2: Livestock data for cattle and poultry

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cattle</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indigenous cattle</td>
<td>60,022</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dairy cattle</td>
<td>46,160</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goats for milk</td>
<td>1,837</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local goats</td>
<td>52,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sheep</td>
<td>44,224</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pigs</td>
<td>8,073</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Donkey</td>
<td>1,682</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hare</td>
<td>2,547</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Horses</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dogs</td>
<td>7,473</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cats</td>
<td>1,413</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Camel</td>
<td>62</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Poultry</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local chicken</td>
<td>144,446</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Broiler</td>
<td>15,220</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ducks</td>
<td>6,620</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Crop production is considered of relatively high economic value compared to livestock breeding. More than 95% of the population in the district depends on agriculture as their livelihood (Interviews DAEO; Hai District Investment Profile 2013).

Table 6.3 presents the production figures of a number of important crops over the period 2009/2012. It shows that production for the different crops can vary quite substantially from year to year.

Table 6.3: Crop data in tons 2009/2010 – 2011/2012

<table>
<thead>
<tr>
<th>Crops in tons</th>
<th>Maize</th>
<th>Beans</th>
<th>Bananas</th>
<th>Paddy</th>
<th>Sunflower</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009/2010</td>
<td>88,800</td>
<td>1,050</td>
<td>60,000</td>
<td>10,800</td>
<td>850</td>
</tr>
<tr>
<td>2010/2011</td>
<td>6,239</td>
<td>3,921</td>
<td>63,000</td>
<td>12,375</td>
<td>675</td>
</tr>
<tr>
<td>2011/2012</td>
<td>25,680</td>
<td>9,800</td>
<td>148,000</td>
<td>13,920</td>
<td>233</td>
</tr>
</tbody>
</table>

Source: Hai District Investment Profile 2013.

Despite the potential for increasing crop production and stockbreeding, and despite the presence of 46,506 hectares suitable for agriculture, of which 27,406 hectares are suitable for irrigation, there are only 17,030 hectares used for production. This is due to a lack of irrigation infrastructure (Hai District Council Report 2010).

Apart from the lack of irrigation infrastructure, the farmers have to deal with different types of diseases that affect their cattle and poultry such as tick...
born, bacteria, viral disease, cholera, typhoid and worms and crop diseases such as coffee berry and powdery mild. Although the data from the investment report suggest that for some crops production has increased over the years, other sources indicate that recently the district has been experiencing a downward production trend due to a lack of rainfall, which is attributed to climate change. For example, the production of maize has been decreasing from 21 bags of maize per acre in 2008 to 5 bags of maize per acre in 2012 (Hai District Council Report 2010; interview DAEO). In reaction to this, the farmers in the district have been advised to plant drought resistant crops such as millet and pigeon pea, but the adoption rate of this technology is still very low: only 22% of the farmers have adopted it (Interview DAEO).

6.1.5 The organization of agricultural extension services delivery in Hai District Council

In the process of delivering services, the district allocates extension officers to a ward, who serve the farmers in the villages of that ward. At the district level, there is head of department of agriculture and livestock, who is professionally a livestock production expert with a degree in veterinary medicines and a masters’ degree in tropical animal production (Hai District Council Report 2010; interview HDAL). The district employs a total of 102 extension officers. Of these, 26 extension officers are stationed at the headquarters. They are specialists in livestock production, cooperatives, animal health, input supply, crops production, irrigation, land conservation, and horticulture. The headquarter officers also provide for the coordination of the 76 field workers who operate at the ward and village level. Of the total of 102 officers about 88 have their main business in agriculture and livestock (Interview DAEO).

The data suggest that most of the officials have the required qualification. For example, most of them who serve at the village level have a tertiary education on either crop production or livestock or both. Officials working at the ward level have a higher tertiary education in similar fields of study. At the district headquarters, officials hold bachelor or masters’ degree in their respective fields of specialization (Interview DAEO). Table 6.4 presents the agricultural extension staff for Hai district council.

Table 6.4: The extension staff of Hai district council dedicated to agriculture and livestock

<table>
<thead>
<tr>
<th>Stock</th>
<th>Bachelor degree and above</th>
<th>Education Diploma</th>
<th>Certificate</th>
<th>Short Course</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>3</td>
<td>36</td>
<td>3</td>
<td>7</td>
<td>49</td>
</tr>
<tr>
<td>Livestock</td>
<td>6</td>
<td>31</td>
<td>1</td>
<td>1</td>
<td>39</td>
</tr>
<tr>
<td>Total</td>
<td>9</td>
<td>67</td>
<td>4</td>
<td>8</td>
<td>88</td>
</tr>
</tbody>
</table>

Source: Hai District Council list of agricultural and livestock staff 2012.
6.1.6 The three wards selected for research

As mentioned earlier, the research was carried out in three wards: Machame Kaskazini, Masama Kusini and Masama Rundugai. Machame Kaskazini ward is represented in the full council by one ward councilor elected by citizens in the ward. The councilor also chairs the ward development committee, which meets quarterly to discuss development issues of the ward. The ward staff consists of a ward executive officer, a ward agricultural extension officer, a community development officer, a social worker, four health professionals, seven village extension officers and a security guard. The ward is divided into 7 villages with a population of 23,334 of which 11,317 are male and 12,017 are female. The number of people engaged in farming in this ward is 21,779. These farmers grow different crops such as coffee, banana, maize, beans and vegetables. The main diseases that affect their crops and cattle are the coffee berry disease, tick borne fever and east coastal fever.

Masama Kusini ward is divided into three villages with a population of 12,060 of which 5,824 are male and 6,236 are female. The ward is represented in the full council by one elected ward councilor. The staff of the ward consists of a ward executive officer, a ward agricultural extension officer, a community development officer, three health professionals, three village agricultural extension officers and three village executive officers. The number of registered farmers engaged in farming in this ward is 2,660. These farmers grow maize, beans, sunflower, vegetables and coffee. Some crops are often affected by powdery mildew disease, such as sunflower and maize.

Masama Rundugai is divided into four villages with a population of 14,033 of which 7,036 are male and 6,997 are female. The number of registered farmers engaged in farming in this ward is 4261. The ward is represented in the full council by one elected ward councilor. Its’ staff is constituted by a ward executive officer, a community development officer, six health professionals, three village extension officers, and four village executive officers. The common crops grown include maize, beans and paddy. The pests and insects are the common problems that affect crops (Hai District Council 2010).

6.1.7 Channels and methods of service delivery

Like elsewhere, the main task of extension officers in Hai district is to transfer information and knowledge on agricultural technology to farmers. The main channels to transfer information and knowledge are home visits to individual farmers and visits to groups.

Formally, the extension officers are supposed to be provided with a list of contact farmers in the villages that form part of the extension officers’ working area. Practically, the officers work with what they call a provisional list. They have discretion to identify new farmers and include them in the list. The
officers use the so-called ‘annual calendar’ to guide them concerning the type of advice relevant to farmers in different seasons of the year. The extension officers have to formulate a weekly schedule that specifies the area, time and the activities to be carried out in a given week. The week schedule includes visits to groups and individual farmers, although as we will see further on, in practice individual visits are only paid to livestock keepers that call upon the extension officers for help.

The visits to groups involve different methods of transfer of information and knowledge. Apart from simply providing advice to farmers in response to their questions, extension officers organize training sessions on selected issues and field schools for groups to provide hands-on training. The field schools are normally run and organized by extension officers and the farmers who volunteer their plots. They can also be organized by cooperative farms, who offer plots to extension officers to be used as demonstration plots.

Apart from the two channels discussed above, in Hai district, the transfer of information to farmers involves the use of two other channels that are not used frequently in urban areas. The first being village meetings. These meetings are held every three months. They serve as a platform for the exchange of information between the village council, village and district officials and the village population, and to discuss the development of the village. In Hai district, extension officers use them as a platform to share agricultural information with farmers. These meetings are used because of the large number of farmers who do not form part of a farmers’ group or get information through home visits (Interviews Kwasadala VEO; Machame Kaskazini WAE0; Udu-ru VAE0 and DAEO).

The second channel is the district farmer’s voice radio called Boma radio. Through this radio, special programs are broadcast to transfer information to farmers. Extension officers prepare the topics based on the input from the farmers, who discuss their problems with field workers. During the broadcasts, farmers also have the opportunity to ask questions and get feedback from extension officers.

6.2 The planning of agricultural extension services in Hai District Council

6.2.1 Hai District Council strategic plans

The planning for agricultural extension services takes place by means of strategic and annual district agricultural development plans. The strategic

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2. Cf. chapter 5, table 5.12, which shows the annual calendar in use in all local governments.
plan is a general five-year plan that provides for the priorities and policy goals in different policy sectors; it includes agriculture and livestock.

In Hai district, the current strategic plan covered the period 2011/2012 – 2015/2016. Its formulation was dominated by officials representing different departments of the district. In principle and according to procedures, stakeholders must be consulted in writing up the plan. However, farmers’ organizations and cooperatives, who are key stakeholders, were not consulted. Although the ward officials were supposed to collect citizen’s opinions in order to inform themselves about their priorities, this was not at their convenience. Even where they invited citizens to provide their input, the citizens themselves did not have knowledge about the plan and did not know what to contribute (interviews Rundugai and Masama Kusini WCs). Some stakeholders such as NGOs, traditional and community leaders were consulted, but not until the last phase (HDC strategic plan 2011:3-4; interview DAEO).

What did take place was a SWOT analysis. However, overall, the SWOT analysis was rather general and did not focus on specific problems of the district. For agriculture, some issues that are general in character were identified as threats. This includes issues of climate change and the low adoption rate of modern agricultural technology. In fact, the formulation of strategic objectives was guided by central government policies and priorities. The officials claimed their commitment to national policies.

The office of the District Executive Director as a coordinator to this exercise has realized the importance of having a strategic plan that is in line with the on-going national frameworks specifically to the Five Years National Development Plan (FYDP) that was inaugurated by the President of Tanzania in June, 2011 (Hai district strategic plan 2011: VIII).

In theory, strategic plans are important policy documents, because they formulate development priorities and goals, and one would expect the councils to seriously discuss the plan tabled by the officials. In accordance with the formal procedures, the 2011/2012 – 2015/2016 plan was discussed in different council committees and decided on by the full council. However, the minutes of the meetings of the committees and the full council show that the plan did not give rise to any serious debate. No amendments with respect to the targets or measures were made. The strategic plan was accepted such as it had been tabled by the officials.

Those involved in the decision-making explain the limited role of the council by referring to the fact that local government almost entirely depends on central government grants and the plan is subject to approval by central government. It is important that a strategic plan reflect ongoing national frameworks in order not to jeopardize the allocation of financial resources. The officials make sure that the plan conforms to national priorities and it does not make sense for the council to try to amend the plan. Councilors feel
that these plans are endorsed by central government and that they have little to contribute to their development or content (Interviews Council chairperson, Rundugai ward councilor, DPO, DAEO). Second, the councilors, particularly from the ruling part believe that their role is to make sure that the plans reflect the party manifesto and failure to do so could mean losing the opportunity to be reelected and the possibility of promotion in their political career (Interviews DCC, Rundugai and Machame Kaskazini WCs).

The strategic plan did contain quite specific targets in terms of production growth to be realized at the end of the planning period. For example, with respect to the agricultural sector, the target was to increase the total food production from 241,800 tons in 2011 to 313,160 tons in 2016 through imparting training on modern farming techniques to groups of farmers on the production of maize, rice, bananas, and beans and through the construction of demonstration plots on sorghum production. This was expected to increase maize production by 25% (18,000 tons), rice production by 37% (7,550 tons), bananas production by 1.8% (3,160 tons), beans production by 30% (5,000 tons), and sorghum production by 100% (100 tons) (Hai district strategic plan 2011). Despite serious efforts by the researcher, it was impossible to reconstruct the foundation of these expectations. The officers claim that the targets are based on an input supply survey that indicates the number of farmers present and the amount of agricultural input and other resources required, while taking into account the previous performance. However, the input supply survey does not provide the information to substantiate that the growth percentages can be realized. The growth percentages are more or less copies from central government documents, which are sent to local government through the Regional secretariat (Input supply survey 2012; interview DPO).
Table 6.5: Strategic Plan for the improvement of agricultural extension services in the year 2011-2016

<table>
<thead>
<tr>
<th>Specific objectives</th>
<th>Indicators</th>
<th>Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extension Service improved from the rate of 50% in 2009 to 70% by 2016.</td>
<td>To make study tours for Extension officers.</td>
<td>No. of study tours made increased from 0 in 2011 to 9 by June 2016</td>
</tr>
<tr>
<td>To conduct Seminars and Workshops for Extension officers</td>
<td>No. of Seminars and Workshops conducted increased from 5 in 2011 to 7 by June 2016</td>
<td></td>
</tr>
<tr>
<td>To provide Short courses to Extension Officers</td>
<td>Numbers of Short courses provided increased from 4 in 2011 to 6 by June 2016</td>
<td></td>
</tr>
<tr>
<td>To provide long courses train. to Extension Officers</td>
<td>No. of long courses provided increased from 6 to 13 by June 2016</td>
<td></td>
</tr>
<tr>
<td>To provide motorcycle to Extension Officer</td>
<td>No. of motorcycle provided increased from 4 in 2011 to 20 by June 2016</td>
<td></td>
</tr>
<tr>
<td>To visit farmers’ groups for extension services</td>
<td>No. of farmers’ groups visited increased from 240 in 2011 to 250 by June 2016</td>
<td></td>
</tr>
</tbody>
</table>


Extension services are the only means mentioned in the plan to realize the increase in food production. According to the plan, service delivery should be improved from 50% to 70% in 2016, without specifying to what the percentages refer. The plan was quite elaborate in formulating targets to improve the capacity and enhance the skills of the extension service itself, specifying the number of study tours, seminars and workshops, short and long courses for extension officers, and the number of extra motorcycles for extension officers, as shown in table 6.5. All these efforts however would, according to the plan itself, only result in a very small increase in the number of farmers’ groups visited: from 240 in 2011, to 250 in 2016.

6.2.2 District agricultural development plans

Next to strategic plans covering all policy sectors, councils must also develop annual plans for each sector, including agriculture. As explained in chapter four, this planning process is formally supposed to be bottom up. This implies that the process has to begin at the lowest level – the village level - and must be guided by formal planning methods known as Obstacles and Oppor-
tunities to Development (O & OD). The method delineates a number of steps to be followed in preparing the district plan. The use of this method is supposed to be facilitated by district and ward teams, which are organized at the district and ward level. District facilitation teams are supposed to be oriented by the national facilitation team; in turn, they have to orient ward facilitation teams on how to use the O & OD method. In Hai district, the regional secretariat based in the regional headquarters from time to time organizes a workshop to educate the district facilitation team on how to conduct bottom up planning through the O & OD method (DADPs Project 2012).

Practically, the planning for agricultural development begins at the village level. The village chairpersons are instructed by the district executive director to arrange for a special village assembly (Interview DAEO). The extension officials at the ward and district level who are the members of their respective facilitations teams attend the meeting. The assembly appoints a committee that consists of women, elderly and young villagers, and ward and district officials. The committee collects information with a focus on production potential. After collecting the information, the committee presents the report in the village assembly where it is discussed (Interview Kwasadala VAEO). Then the committee advises the village assembly on the preferences of the farmers based on data collected. Based on the report, the village assembly identifies the list of projects to be implemented (Interviews Uduru VAEO, DAEO).

In this way, for example, the banana and irrigation projects in Machame Kaskazini and Masama Rundugai ward were formulated in village meetings. In these meetings, more than fifty percent of citizens attended and deliberated on their preferences (Interviews Warindoo VAEO, Machame Kaskazini WAE0, Chemka VAEO and Rundugai WAE0).

Sometimes ward extension officials suggest to develop plans and projects that cover more than one village. In that case, the extension officer participates in the meetings in all the villages and takes on board the suggestions put forward in the different meetings (Interview DAEO).

Although the farmers are supposed to suggest their priorities, the extension officials lead them by explaining the problems and opportunities associated with their choice. If the extension officials think that the project proposed by farmers cannot work or if it is inconsistent with government priorities, they change it. One of the recent government priorities relates to the principle of the value chain: projects that relate to the processing of crops have priority over projects that relate to the increase in production, because the former are assumed to add more value and result in higher income for the farmers (Interviews DAEO, DALDO, Rundugai WAE0 and Rundugai VAEO).

*What we do is to explain them about the problems or opportunities associated with their choice and then they make the final decision themselves.*
These decisions end up in the village plan that is the outcome of a village meeting. Although the farmers can initiate projects, we change them, if we think they cannot work. What we do is to educate them and if they put forward several projects, we select the right projects and we ask them to cooperate for implementation (Interviews DAEO, DCO).

Central government priorities strictly guide the selection of projects because of the limited funds that are available. Funds have even become more limited due to the fact that the grants for agricultural development programs were phasing out in the year 2013. Therefore, the central government instructed district governments to identify only two priorities, one for crop production and one for livestock. Over the past years, extension officials have suggested that only projects that result in a substantial improvement of the value-chain will qualify for funding. In line with this, maize and dairy farming projects were suggested by the officials to be implemented in Kimashuku and Sony village, because they qualify as projects adding to the value chain.

In addition to that, the Extension Block Grant, which is used to finance the operating costs of extension services like the procurement of gumboots, coats and teaching kits for extension officers, has recently vanished because the first phase of the District Agricultural Development Plan has ended (Interview DAEO).

However, the allocation of Development and recurrent grants for operating costs and Personnel Emoluments for the agricultural staff to the district is higher than to urban Local Government Authorities. The calculation of the amount to be allocated was based on the number of villages and the farming population. The three-year fund allocated for recurrent expenditure for the Agriculture Sector from 2010-2013 was 2,587,818,048 Tsh. while for development was 1,117,009,371. See table 6.6 on the allocation of budget for the district (Interviews DAEO; DPO; URT 2006b).
Table 6.6: The amount of fund allocated for Agriculture: Development, Recurrent expenditure (OC) and Personnel Emoluments (PE) from 2010-2013

<table>
<thead>
<tr>
<th>Year</th>
<th>Code</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010/2011</td>
<td>PE</td>
<td>671,719,000</td>
</tr>
<tr>
<td></td>
<td>OC</td>
<td>29,050,000</td>
</tr>
<tr>
<td></td>
<td>DEVELOPMENT</td>
<td>456,425,308</td>
</tr>
<tr>
<td>2011/2012</td>
<td>PE</td>
<td>848,632,716</td>
</tr>
<tr>
<td></td>
<td>OC</td>
<td>79,957,692</td>
</tr>
<tr>
<td></td>
<td>DEVELOPMENT</td>
<td>0</td>
</tr>
<tr>
<td>2012/2013</td>
<td>PE</td>
<td>924,888,000(^3)</td>
</tr>
<tr>
<td></td>
<td>OC</td>
<td>33,564,640</td>
</tr>
<tr>
<td></td>
<td>DEVELOPMENT</td>
<td>713,670,063</td>
</tr>
</tbody>
</table>

Source: Constructed from Local Government Information, PMORALG, Hai District Council 2013

The research shows that indeed farmers themselves are involved in the development of agricultural development plans and that through the village meetings a substantial number of farmers somehow take part. However, it is also clear that the bottom up character is very limited. First, the farmers and their groups are still weak and do not have the capacity to articulate their needs, let alone write project proposals that meet the requirements for funding. Officials have to assist farmers in articulating their needs and suggesting proposals for projects. Second, when it comes to concrete suggestions and the selection of project proposals, the extension officers play a dominant role, and make sure that project proposals and plans are not at odds with central government priorities and conditions attached to grants (Interviews Masama Kusini and Masama Rundugai WAEOs, Mungushi VAEO).

6.2.3 The Ward level

At the Ward level, the suggestions that come out of the village meetings are transformed into project proposals by the ward facilitation team. The team consists of the ward extension officer, who serves as a secretary, the community development officer and the ward executive officer, who acts as a chairperson. The role of a team is to write project proposals in line with central government priorities and requirements. Together the proposals that come out of a village meeting are considered as a village agricultural development plan. The plans from different villages are discussed and compiled at the ward level and then taken to the district level. In the end, the council must

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3. The local government information system mentions a figure of 92,488,800 Tsh. Obviously, there was an error by a factor 10, in view of the fact that expenditure for PE was reported as 1,030,982,127 Tsh.
decide and approve projects depending on the priorities and the availability of funds (Interviews Masama Kusini and Masama Rundugai WAEOs).

6.2.4 The District level

At the district level, the officials review the ward plans to make sure they conform to central government criteria and the general criteria related to the success of projects. Regarding the former, officials take the budget ceiling into account as communicated by central government. Moreover, they look at the policy priorities as formulated in national and local strategic plans. For example, one of the sector objectives for agriculture that was formulated for previous periods, conforming to the 1997 national agricultural and livestock policy, was to improve crop and livestock productivity through irrigation projects and investments in production; they were selected accordingly. More recently, projects such as the promotion of processing sunflower into sunflower oil have been included in district plans, because they meet the criterion that projects must add value to crops.

Apart from considerations concerning the budget and policy priorities, there are general criteria related to success of project that officials use to select projects. One of them is the willingness of the community to share the costs involved in the implementation of a project. The assumption is that if the community shares the cost, it will feel that the project belongs to them, it creates a sense of ownership.

Another criterion is the leadership capacity of the village. Applying this criterion, the officials want to make sure that the village involved in the project has a leader who can manage and supervise its’ implementation. To evaluate the possible rate of success officials also look at the availability of basic resources. For example, the absence of a reliable water source is considered a contra indication for the selection of an irrigation project (Interviews Mungushi VAEO, Masama WAEO).

Lastly, in the selection of projects officials apply the principle of fairness. They want to prevent that, over time, all funds fall to a small number of villages and other villages do not benefit from the available funds at all. Therefore, if a village has had projects approved in one year, it normally will not qualify to receive funds in the next year (Interviews DAEO and DAO).

The district agricultural development plan is drawn up by the officials of the department of agriculture and livestock. It constitutes one part of the general development plan that is decided on by the council. However, before the development plan is tabled for discussion and decision-making in the council, it is submitted to the regional secretariat for review and advice. The review intends to find out if the plan is consistent with the guidelines and priorities of central government. The review of the district development plans of which
the agricultural development plans are part, is discussed in meetings between district officials and officials from the regional secretariat (Interview DPO).

6.2.5 The role of the council

After the review of the annual plan by the regional secretariat, it is presented to the council for discussion and approval. The draft of the plan is first discussed and scrutinized by council committees and finally submitted to the full council. District agricultural development plans are discussed in two council committees: first in the economic, works and environment committee and then in the planning, finance and administration committee. To establish what the exact role of the council in decision-making on the allocation of funds to projects, we analyzed minutes of council committee meetings over a number of years and observed a number of full council meetings. The research shows that when agricultural development plans were on the agenda, council committees and the full council were very much preoccupied with issues of tax collection and expenditures in general, but did not discuss, less try to amend the specifics of the agricultural development plan or the allocation of financial resources to agricultural development projects. This can be illustrated sketching what happened in a number of meetings of the most important committee, the planning, finance and administration committee.

The committee meeting of April 6th 2011 was dedicated to the discussion of the budget for different policy sectors. Present were 6 council members and 24 officials. The committee did not question the allocation of budget to different policy sectors. It merely discussed the relation between income and expenditures for primary and secondary education.

In the committee meeting of May 28th 2012 8 council members and 17 officials were present. On the table was the allocation of budget to a series of projects that amounted to 246,336,880 Tsh. Amongst others they included the construction of toilets in the Mula market, educational projects and the repair of a bridge. One member raised a question on the allocation of money for the garden at the head office, 20,000,000 Tsh., which appeared to be a lot compared to 9,960,000 Tsh. for the procurement of desks. The officials explained the reason for the amount in question and the council members accepted the entire proposal for the allocation of budget to the different projects without any further discussion.

The overall picture that arises is that the role of the council in the discussion and approval of plans and the allocation of budget is very limited. This is validated by interviews with councilors who indicate that the council does not critically examine and discuss the proposals tabled by the officials. Questions are raised on occasion, but they ask for the clarification of proposals and budget reports, and do not question the allocation of resources itself,
except on rare occasions; council committees nor the full council have, over
the past years, made any amendments to the proposed development plans or
the allocation of resources to development projects. This is contrary to what
one would expect. The benefits of development projects fall to specific wards
and villages, which form the constituency of the councilors. Given the gen-
eral scarcity of resources, one would expect councilors to try to get projects
for their wards approved. This is not what happens, at least not in public, in
the context of council meetings. Councilors themselves explain their behav-
ior as follows. They feel that the allocation of a budget to projects is guided
by priorities from central government and the ruling party manifesto. Going
against central government policies is not considered effective – because the
local plans need approval from central government – nor appropriate. Local
governments should not defy what has been decided by central government
(Review of the minutes of the Council meetings; observations Council meet-
ings).

In Hai District, half of the members of the council, including the mayor,
are not from the ruling party CCM. One would expect that they would chal-
lenge or at least discuss the proposals tabled by the officials, which reflect the
priorities of central government. In fact, on occasion, they do raise a debate
about plans and projects. An example was the water project at Kia ward, in
which case opposition members in the full council questioned the allocation
of funds and the payments to the contractor. In the end however, they did not
oppose the approval of the plan. This seems to be the dominant pattern. In
general, all councilors accept central government guidelines as rules that
must be respected (interviews Hai district council chairperson and DPO;
Rundugai and Machame Kaskazini ward councilors and members of the
standing committees). On occasion, opposition members question the alloca-
tion of funds to projects. However, this does not result in amendments of the
proposals, because they are aware that it could lead to the refusal of central
government to provide funds, and that would not be in the interest of the
community (Interviews HDC chairperson from the opposition, Rundugai
WC; HoD A & LD).

We discuss the plans in the council and sometimes we disagree with each
other but in the end, we accept the proposal because we all have to follow
the guidelines in order to get funding for the project (interviews Rundugai
ward councilor and Hai district council chairperson from the opposition
party).

4. Research into the role of councilors in decision-making carried out in other districts reports
that they do sometimes try and influence officials to include projects for their ward in de-
velopment plans before the plans are submitted to the council (Hulst et al. 2015).
6.2.6 Planning for projects outside the formal planning procedure

The planning of and decision-making on some projects deviate from the formal procedure. Sometimes this is due to central government interventions. An example was when the district agricultural official was instructed by the ministry to prepare and submit a proposal in four days that would include a project for four villages. The official decided to write the project proposal himself, without involving the farmers, in order, as he explained, ‘to please the ministry bureaucracy and protect his job’ (Interview DAEO). Interventions of this kind are however rare. Most decision-making outside the normal procedure takes place when private companies or NGO’s have an interest in funding projects.

In these cases, the companies or NGO’s contact one of the extension officers at the district or ward level. They need the assistance of extension officers to find farmers’ groups that are interested and suited to participate in a project. The extension officers on the other hand can benefit from the cooperation with the sponsors, because normally they will ask and receive some kind of allowance for their help in setting up a project or for the activities they undertake within the project itself.

In the case a sponsor presents himself, the extension officer does not use the village meeting to inform farmers about the opportunity, but directly contacts a group of farmers that he thinks may be suitable and willing, and advises them on the type of project they can formulate in order to get funds. An example is the Red apple farmers group in Kwasadala village in Masama Kusini ward, who engaged in three projects, none of which was decided on following the normal planning procedure.

*On the initiative of the DAEO and a German NGO the group set up three projects: a maize project, a horticulture project and a poultry project. With respect to the first project, the DAEO visited the group and advised them to start a project to grow maize. The group accepted the idea and the district commissioner offered them 5 acres of land to start with. In the same way, the DAEO advised on a horticulture and a poultry project. Eventually the horticulture project was financed by using the groups’ own funds. The German NGO financed the poultry project. The group received 2,015,500 Tsh. and used it to buy 50 chickens to start with and to construct a poultry shed (Interview Chairperson Red apple farmers’ group).*

Other examples were found in the villages Mungushi and Kware in Masama Kusini ward, where the agricultural extension officers visited the onion and banana farmers’ groups and advised them to write a proposal and take it to funders who extension officials knew to be interested in this type of project.
Planning outside the formal procedure for the development of agriculture plans such as described here, is to a large extent driven by the preferences of the sponsors. Local government, i.e. the council, is not involved. Farmers can of course decide not to respond to the opportunities that are presented. But many times, the incentives in terms of financial support or input for crop or livestock are strong and farmers tend to pursue directly tangible benefits.

### 6.2.7 The implementation of the district agricultural development plan

Are the plans and projects that are approved actually implemented? The picture is mixed. Some projects are completed as planned, others suffer serious delays or are not carried out at all. Table 6.7 contains examples of both.

<table>
<thead>
<tr>
<th>Year</th>
<th>Project</th>
<th>Budget Tsh.</th>
<th>Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010/11</td>
<td>Construction of milk collection center in Lemira</td>
<td>42,700,663</td>
<td>Funds not enough to complete the project</td>
</tr>
<tr>
<td></td>
<td>Milk production in Uduru village</td>
<td>39,169,148</td>
<td></td>
</tr>
<tr>
<td>2011/12</td>
<td>The repair of irrigation scheme of 400 meters in Nsaya Urori village</td>
<td>40,000,000</td>
<td>Completed</td>
</tr>
<tr>
<td></td>
<td>Poultry project for Tindigani</td>
<td>40,000,000</td>
<td>Completed</td>
</tr>
<tr>
<td></td>
<td>240 local chicken procured and 20 sheds constructed</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Procurement of five bulls and four improved varieties of cows for Tindigani</td>
<td>4,000,000</td>
<td>Completed</td>
</tr>
<tr>
<td></td>
<td>Repair of irrigation scheme at Shirinjoro</td>
<td>40,000,000</td>
<td>Expected to be completed in 2013/14</td>
</tr>
<tr>
<td></td>
<td>Dairy farming project for five bulls</td>
<td>4,000,000</td>
<td>Expected to be completed in 2013/14</td>
</tr>
<tr>
<td>2012/13</td>
<td>Repair of irrigation scheme and organization of field schools</td>
<td>8,132,000</td>
<td>Not completed, funds were delayed</td>
</tr>
<tr>
<td></td>
<td>Repair of Kishaku irrigation scheme and field schools</td>
<td>No funds received</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>A dairy building project at Lemira</td>
<td>21,925,000</td>
<td>Project expected to start in 2013/14</td>
</tr>
<tr>
<td></td>
<td>Construction of milk processing building</td>
<td>No funds received</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Repair of irrigation scheme at Kikavu Chini river, construction of floods control and dykes</td>
<td>87,999,000</td>
<td>The fund has been received and the project has been completed</td>
</tr>
</tbody>
</table>

Source: Hai District Council DADPs documents, amended.
Our research provides insight into a series of factors that have a negative impact on the implementation of projects. Some factors are related to the functioning and sustainability of the farmers’ groups. We will discuss these below. One important factor is highlighted in this section: the problem of resources that come too late or do not reach the groups at all, despite the fact that they were officially allocated. For example, the delay of funds affected a plan to improve the production per acre in 55 villages by means of raising the amount of irrigated land; as a result of the delay only 30% of the areas included in the project were provided with irrigation. A plan to double the milk production per cow in Mamba village failed to achieve its goals because only 20% of the allocated funds were actually made available to the farmers (Hai District Council budget for the year 2011/2012). Table 6.8 provides an overview.

Table 6.8: The cash flow of the development budget for agriculture in Hai District Council.

<table>
<thead>
<tr>
<th>Fiscal year</th>
<th>Budget Tsh</th>
<th>Quarter</th>
<th>Cash flow Tsh</th>
<th>Cash flow %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010/2011</td>
<td>533,391,517</td>
<td>1</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>19,796,000</td>
<td>3.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3</td>
<td>19,796,000</td>
<td>3.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4</td>
<td>318,116,091</td>
<td>59.6</td>
</tr>
<tr>
<td>2011/2012</td>
<td>278,098,000</td>
<td>1</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>50,000,000</td>
<td>18.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3</td>
<td>467,875,959</td>
<td>168.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4</td>
<td>678,400,000</td>
<td>243.9⁵</td>
</tr>
<tr>
<td>2012/2013</td>
<td>713,670,063</td>
<td>1</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3</td>
<td>35,537,000</td>
<td>5.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4</td>
<td>45,682,000</td>
<td>6.4</td>
</tr>
</tbody>
</table>

Source: Constructed from Local Government Information, PMORALG, Hai District Council 2013.

An explanation for the delay of cash flow is that the budget for the agricultural sector is provided by central government, which in turn depends on agreements with foreign sponsors. If sponsors consider that the conditions of

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5. This quarterly cash flow seems to be bigger than all quarters. Although there is no explanation from the sources, it seems that it is accumulated cash from the previous quarters.
the agreements are not fulfilled or if somehow disagreements arise between central government and sponsors, the cash flow comes to a halt and local governments do not actually receive the funds that were initially promised (Hai District Council report 2013).

Another problem related to implementation is the lack of motivation of extension officers themselves who provide extension services to projects. In the past, the district used to offer allowances to extension officers who offer the services to projects. The allowance was meant for fuel, to facilitate the extension officers travel expenses - contacting the groups involved in the projects. The allowances were calculated based on 60% of their salary but recently such allowances are no longer provided because of limited budget (Interviews HoD A & LD and PADEP Coordinator).

6.2.8 The council supervises

Our research shows that the role of the council is very limited when it comes to the approval of plans, programs and budgets. However, when it comes to the implementation of plans and programs, the council is quite active. Councilors supervise the progress of the implementation of projects by making site visits; they discuss progress reports and evaluate the efficiency of projects that have been implemented; and they issue specific instructions to the officials, for example concerning revenue collection. Some examples.

*In the meeting of the finance, planning and administration committee of May 4th 2012 the councilors instructed the officials to collect the outstanding revenue payment from the flower estate company that is located within the district. In the same session, the committee instructed the DED to allow the village councils to supervise the revenue collection from the local market in their areas. In the meeting of February 23rd 2011 the committee instructed the officials to list all hotels and their contributions and present it in the following meeting. Moreover, the committee instructed the DED to report on why Hai town ward had not contributed sufficiently to the contribution of revenues (Minutes of committee meetings of February 23rd 2011 and May 4th 2012).*

*In the meeting of May 30th 2012 the education, health and water committee discussed a report presented by the officials about the progress of the implementation of projects to improve education and the disbursement of capitation funds. The councilors asked the officials a series of questions and accepted the report after being satisfied with the answers (Minutes of the council committee meeting of May 30th 2012).*

*The council committee of economics, works and environment convened on April 16th 2013 instructed the DED to write a report on the implementation of a project concerning cow dip, which refers to an underground hole*
for washing and cleaning the insects affecting cow skin (Minutes of the council committee meeting of April 16th 2013).

Furthermore, it can be said that the council committees are quite active when it comes to supervising the daily functioning of the local bureaucracy. Whenever councilors think action should be taken, they do not hesitate to issue instructions.

*In March 2013, the committee on economics, works and environment members instructed the DED to write a letter to village executive officers and convene a meeting with farmers at Kwasadala; they also asked for a letter to the village councils to instruct them to conserve the road by avoiding farming close to roads. Moreover, the DED was instructed to prepare a report about the diseases affecting the livestock in the district (Minutes of the council committee meeting of March 20th 2013)*

In sum, while the council and its committees are hardly visible when it comes to the establishment of development plans and the allocation of budgets to projects, they play an active role supervising the implementation of projects and discussing day-to-day issues that occur in the council and its bureaucracy. In case of poor performance, they instruct the DED and other officials to take action and, on occasion, to redo their work.

**6.2.9 The role of the regional secretariat in the implementation of projects**

The regional secretariat, in her role as agency of central government, supervises the implementation of projects approved under the District Agricultural Development Plans. To that effect, the district councils in the region must submit quarterly implementation reports to the regional secretariat. The secretariat then issues instructions regarding measures to optimize the use of resources, and informs the local council on changes in central government policies that are relevant for the implementation of the plans. The meeting held by the regional secretariat to discuss the implementation report of the second quarter of 2013, can serve as an example.

*In this meeting, the district official presented the quarterly report, which showed delays in the implementation of a number of projects, due to, amongst other factors, problems of cash flow. In response, the regional administrative secretary instructed the local officials to refrain from using extension officers in administrative duties and to consider using own sources instead of central government grants to secure the implementation of the agricultural development projects (Minutes of the DADPs project implementation meeting 2013).*
Overseeing the process of planning, budgeting and implementation three observations can be made. The first is that despite the central government rhetoric of bottom-up planning the role of farmers in the development of strategic plans and agricultural programs is very limited. Extension officers have the lead in the planning process, and the selection of development projects is to a large extent guided by central government priorities and guidelines and by the initiatives and conditions set by private sponsors. With respect to the district council, which is formally responsible for deciding on plans and programs, the most striking finding is that it does not discuss the allocation of resources to development projects or question the priorities as tabled by the officials. Councilors – correctly - believe that the drafts reflect the priorities of central government and that they should not question or try to amend them. In fact, the grip of central government agencies such as the district commissioner and the regional secretariat on the process is tight: drafts are scrutinized before they are submitted to the council, plans established by the council need approval of central government and the implementation of the plans and programs is supervised by the regional secretariat.

6.3 The delivery of extension services

6.3.1 The organization of farmers

Organizing farmers is perceived as an important strategy for the delivery of extension services. Over the years, this strategy has been considered as the most efficient method. In Hai district, there are a large number of farmers’ groups and cooperatives. These organizations vary in size and in the nature of the services they provide to their members.

According to the strategic plan, the district has a total of 70 cooperatives with 36402 members (HDC Strategic Plan 2011:14). Cooperatives play a role in providing credit to their members and in getting access to the market. An example is the Uduru village cooperative that was set up in 1948 as a collection point for coffee production. Now it has a total of 750 members. The head office of the cooperative has hired its own extension officer who provides specialized services in coffee production to its members (Interview secretary Uduru cooperative).

Apart from cooperatives, the district has a total of 250 farmers’ groups and 185 livestock groups. Some of them are small and include only farmers from one ward; others are big and are constituted by members from different wards. Some groups are simply set up as an organizational arrangement to receive collective training in the form of field schools or otherwise. Other groups have been constituted to carry out a project. Funds for projects are only allocated to registered groups. In order to qualify for registration, a group must have a chairperson and a treasurer. The farmers’ groups also function as a point for organizing field days. On a field day groups demon-
strate newly developed technologies. Farmers, district officials and other stakeholders are invited to take part. For example, in 2014, groups in Hai District organized a total of three farmers’ field days.

6.3.2 Farmers’ groups in the selected wards

In the three wards included in the research a total of 72 farmers’ groups are present. In Machame Kaskazini ward, there are 35 farmers’ groups for coffee, horticultural and poultry. Of these, 25 groups are registered; the other 10 are not, because they do not meet the requirements for registration (Machame Kaskazini monthly report, February 2014). In Masama Rundugai ward there are 26 farmers’ groups engaged in farm preparation, harvesting, and banana planting (Monthly report march 2013). In Masama Kusini ward there are 11 farmers’ groups for poultry, horticulture, banana production, cassava, maize, potatoes and poultry (Interview WAEO and monthly report, March 2013). A number of examples can illustrate the variety of the groups and of the activities they are engaged in.

The Makoa nursery coffee farmers group in Uduru village (Machame Kaskazini ward) is an example of a small group with limited functions. The group was formed in 2004 by 25 coffee growers. The main objective of the group is to grow nursery coffee plants through budding and to sell the products to other coffee growers in and outside their village. The group cooperates with the Lyamungo coffee research institute (TACRI) to build its capacity and make it sustainable. The group is now able to supply thousands of nursery coffee plants to farmers (Focus group discussion with Makoa coffee farmers group).

The Usei Kahawa Bora farmers group is located in Usei village in Machame Kaskazini ward and is also engaged in nursery coffee production. The group is not yet registered; it has not completed the necessary procedures and requirements for registration due to a lack of leadership (Focus group discussion with Usei Kahawa Bora farmers group).

The Umoja poultry group from Machame Kaskazini was set up by women to diversify their sources of income. It consists of more than 30 members and is engaged in collectively keeping chickens. It has been functioning well. When the group resources are not sufficient to buy poultry feeds or medicine for the treatment of diseases, they distribute the chicken amongst the members (Focus group discussion with Umoja farmers group).

The Red apple farmers group in Masama Kusini ward was already mentioned in the preceding section. The group was formed to assist young people in various socioeconomic problems with approximately 20 members; its head office is located in Kwasadala village. The group deals with horticultural farming and maize production. In addition to that, the group
is engaged in theatre, which gives them additional income (Interview Chairperson Red apple farmers group).

Another group in Masama Kusini ward is the Kimamu group, which was set up by 15 farmers with the objective to increase their income through growing nursery plant seeds and horticulture. The group cooperates with the Selian Agricultural Research Institute to increase their knowledge in budding plants. The group markets its products through village meetings where they announce the availability of new nursery plants (Interview chairperson Kimamu farmers group).

The UKIVITA farmers group in Masama Rundugai ward has 30 active members. This group functions as an umbrella for other small farmers’ groups. Its objective is to organize small farmers’ groups and link them with credit and extension services. The group is chaired by a woman, who is also a member of MVIWATA (The National Association of Farmers) (Focus group discussion with UKIVITA Farmers group, interview with group chairperson).

So, the three wards have a substantial number of farmers’ groups that can serve to link farmers to extension services. Nevertheless, the research reveals that groups experience a number of challenges that hinder their functioning and sustainability.

One of the problems relates to leadership. Groups frequently suffer from the absence of good leadership. It limits the capacity of a group to develop a sustainable vision and obstructs the development of a group. If a group cannot agree on who will act as a chairperson and who to appoint as treasurer, it cannot be registered as a group and does not qualify to receive funds from the district or credit from a bank. Both the Usei Kahawa Bora farmers group and the Kimamu farmers discussed above suffered from leadership problems, which caused disagreements and affected the sustainability of the groups (Focus group discussion Kahawa Bora farmers group, interview Kimamu farmers’ group chairperson). Especially when groups consist of members of different villages, the absence of good leadership can provide a problem. An example is the inter-village project for constructing an irrigation canal at Sanya station village. This project was intended to benefit the two villages through irrigation schemes, but the water source is located in one village (Sanya station). When the project started, the village that owns the water source started forcing their neighbors to stop using the water out of fear that they would destroy the water source (Interviews Mungushi VAEO and Masama WAEO).

A second and more important problem relates to the commitment of farmers to a group. Farmers engage in group activities as long as their membership brings them immediate and tangible benefits. If for some reason these benefits do not materialize, membership drops and groups tend to fall into a
steady state of inactivity. For example, the fluctuation of product prices or market prices that are too low, leads to the demotivation of group members.

The membership of the Makoa coffee farmers group discussed earlier has been dropping since the fall in the price of coffee in the market (Focus group discussion with Makoa farmers group). In Rundugai ward farmers initiated a paddy project called Mtamba and Kaala, but at the end the farmers did not get a good market for their harvest, due to the dominant market position of the buyers, who can set the price. To avoid the project from failing, the district has financed the construction of a warehouse in order to store and process paddy into rice, so farmers can sell their rice at a higher price (Interview Rundugai WAEO). The sustainability of the Kimamu farmers group discussed above is threatened by the fact that the selling price of their nursery plants, on which they were advised by the Tengeru Agricultural Research Institute, proves to be lower than the costs of production.

In the same vein, groups tend to lose members or dissolve when funds that have been allocated to them for a project run out. When the Kimamu farmers group started, it was able to flourish because it was getting funds from an agricultural development empowerment project. When the funding stopped, a big number of members left the group. Related to the issue of funds is the availability of support by extension officials. Some groups would like to have more training, because they think it will help them to produce and sell more (Interview Chairperson Kimamu farmers group). As we will show below, not all groups that ask for support by extension officials are serviced.

Apart from leadership problems and demotivation as a result of a lack of direct benefits, there are also external conditions that affect the sustainability of groups: chronic diseases or extreme drought and a lack of means to fight these, sometimes make cooperation in the eyes of farmers obsolete. An example is the poultry group that has remained with only fifteen members due to an outburst of viral diseases. The group started well with large number of members but after the eruption of viral diseases many people were demotivated to proceed with the group (Focus group discussion Machame Kaskazini ward poultry group).

6.4 Actual service delivery

In Hai District, the actual delivery of extension services is carried out at the lowest level by village agricultural extension officers. The village officials to a large extent decide for themselves to whom and when services are delivered. Every week they develop a schedule to plan their activities. A typical
example of such a schedule is the one used by the Uduru village extension officer.

On Monday, she goes to her village office and attends farmers who seek her advice. On Tuesday, Wednesday and Thursday she visits farmers and farmers’ groups. On Friday, she remains in the village office again to attend farmers with special problems.

If, for some reason, it happens that the extension officers fail to carry out the schedule, they notify the farmers who were due to receive the services and they arrange for another meeting on the topic that was supposed to be covered either through a training session or a field school (Interviews Uduru (Machame Kaskazini Ward) and Kwasadala (Masama Kusini) VAEOs).

The national annual calendar for extension services provides the input concerning the type of activities to be undertaken by extension officers, related to the different seasons (Interviews DADPs coordinator and HOD agriculture and livestock). But the annual calendar does not take into account the variation in ecological zones. In mountainous areas like Machame Kaskazini, agriculture is carried out throughout the year and crops are harvested several times. Therefore, extension officers decide for themselves which activities to undertake, taking into account the features of agriculture in their area.

Earlier, we distinguished a number of channels and methods used for the delivery of extension services. The following sections describe the patterns of service delivery we found in Hai district.

6.4.1 Home visits to individual farmers

Home visits involve the extension officers visiting individual farmers at their homes. Although the home visit is considered one of the common methods to advise farmers and transmit knowledge, extension officers seldom visit crop growers. Extension officers do visit individual livestock keepers, who call upon them for help treating ill livestock, for immunization or for assistance with pregnancy of their cattle or delivery. When asked to explain this pattern of service delivery, extension officials referred to the problem of transport. Making home visits implies bridging substantial distances, and extension officials do not dispose of the necessary means for transport. The district government has made some efforts to facilitate transport. Some years ago, it bought bicycles, but for larger distances and mountainous areas they did not serve. So, more recently the district has provided motorcycles to some of the extension officers. Other officials rent a motor cycle themselves at 5000 Tsh. a day. But the district does not provide fuel, because it claims there is no budget for it (Interviews DCO and DAEO). According to district agricultural extension officials, the officials working at the District headquarters use the
budget available from Other Charges to pay for fuel for their own transport (Interview DAEO).

The transport problem does not present itself when it comes to visiting individual livestock keepers, because extension officers charge these farmers for their services. They ask compensation for the fuel or rental costs of their motor cycle. And they also expect farmers to pay for the medicines they bring and for the treatment or advice itself. Charging farmers for extension services is a common practice. Livestock keepers in general accept that extension officers charge for their services. They depend upon them for assistance with their livestock and cannot risk losing what for many of them is their prime source of income.

On the other hand, farmers do not always trust the officials. Although many farmers reside in remote rural areas, in general they are quite aware of the price and quality of veterinary medicines. If they feel overcharged, conflict arises and farmers may refuse to pay for the treatment. In order to control the overcharging of farmers by officials and prevent conflicts, the district extension officials have prepared informal guidelines for different services, such as 500 Tsh. for the treatment of ill livestock and 2000 Tsh. for a pregnancy diagnosis. These guidelines were developed after consulting the extension officials working in the field (Interviews DAEO, Rundugai WAEO). However, not all extension officials are aware of these guidelines or apply them.

The day before yesterday I had a problem because I treated two cows using vitamin for 3000 Tsh. and then the farmers complained that I was overcharging them and they went to the village government. I bought these medicines myself, but now I have to follow the guidelines for the treatment that also indicate the price of medicines (Interview Kware VAEO).

In sum, the research shows that as far as home visits to individual farmers are concerned, extension officials almost fully concentrate on services to livestock keepers and charge for the services rendered. This practice is accepted and even endorsed by the district, as the issuing of informal guidelines for the price of different treatments and medicines shows.

### 6.4.2 Visits to farmers’ groups

Although home visits to individual farmers are still recognized as one of the channels to be used, the district government policy is to focus on visits to groups. In view of the general scarcity of resources it is perceived as the more efficient way of transmitting information to farmers. Therefore, the weekly schedules of extension officials normally include a number of visits to groups. In the example mentioned earlier, the extension official in Uduru
village in Machame Kaskazini ward normally programs to visit three groups a week, dedicating one day to each group; this was a practice also found in the other two wards, Rundugai and Masama Kusini (Interviews Uduru VAEO; Rundugai WAEO and Kwasadala VAEO from Masama Kusini).

As was explained earlier, one of the methods used in service delivery is training. It implies the pre-structured transfer of knowledge to groups of farmers. It is offered either in class rooms or in the field, depending on the type of training and topic. Over the three fiscal years 2010/2011 – 2012/2013, in Hai District a total of 4509 farmers received training on topics such as coffee, maize, paddy and banana production, dairy farming, skin processing and beef production (see table 6.9).

Table 6.9: Training offered to farmers in Hai District

<table>
<thead>
<tr>
<th>Fiscal year</th>
<th>Coffee</th>
<th>Maize</th>
<th>Paddy</th>
<th>Banana</th>
<th>Dairy</th>
<th>Skin</th>
<th>Beef</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010/2011</td>
<td>83</td>
<td>630</td>
<td>37</td>
<td>223</td>
<td>222</td>
<td>45</td>
<td>72</td>
<td>1312</td>
</tr>
<tr>
<td>2011/2012</td>
<td>102</td>
<td>710</td>
<td>42</td>
<td>138</td>
<td>273</td>
<td>130</td>
<td>51</td>
<td>1446</td>
</tr>
<tr>
<td>2012/2013</td>
<td>52</td>
<td>540</td>
<td>61</td>
<td>188</td>
<td>682</td>
<td>130</td>
<td>98</td>
<td>1751</td>
</tr>
<tr>
<td>Total</td>
<td>237</td>
<td>1880</td>
<td>140</td>
<td>549</td>
<td>1177</td>
<td>305</td>
<td>221</td>
<td>4509</td>
</tr>
</tbody>
</table>

Source: Hai District Council Report 2013

There are no records on the exact number of training sessions in the three wards included in the research, but extension officials claim that in the wards Masama Rundugai and Machame Kaskazini in recent years numerous training topics were offered to farmers on agricultural input, maize, lethal necrosis diseases, crop rotation, inter cropping and the immunization of cattle. In Masama Kusini ward, training was delivered on groundnut growing, environment conservation, selection of crops for projects, food security, modern farming, and the immunization of livestock; on irrigation schemes, the production of beans, banana, and maize; and on goat and poultry keeping (Interviews Masama Kusini and Machame Kaskazini WAEOs).

Extension officials suggest that they do not have the means necessary to run the training sessions. They are not provided with stationary or pencils farmers can use during the sessions; and, more important even, officials do not dispose of financial resources to offer sitting allowances to farmers. Without this type of incentive, it proves to be difficult to motivate farmers to participate in training sessions. Training is provided using standard programs and the level

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6. In three years’ time, this amounts to less than 10% of the total number of farmers. To this we must add a 129 farmers who were sent on training outside the district. They participated in training sessions on soil conservation in Rombo District and on dairy farming at the LITA agricultural institute (Hai District Council Report 2013; Interview DAE0).
of knowledge or literacy of the farmers involved is generally not taken into account, although occasionally some degree of personalization takes place. For example, in Mungushi village (Masama Kusini Ward) the extension officer uses banana drawings or goats’ pictures to train groups of illiterate farmers. In Masama Rundugai, the officer organizes short sessions and transfers knowledge orally when groups consist of aged farmers, while written material is used in groups of young farmers (Interviews Rundugai WAEO, Mungushi VAEO and Uduru VAEO). Overall, training services are only adapted to characteristics of the farmers or to local circumstances in a very limited way.

*Field schools* are conceived as a modern and effective method of delivering extension services to farmers, as it implies learning by doing. Over the years, the district government has allocated financial funds to field school projects in order to provide seed and fertilizer as an incentive for farmers to participate. The farmers receive these farming inputs on the condition that they participate in all stages of the learning process, and that they do the weeding and harvesting (Interview Mungushi VAEO).

In the fiscal years 2010/2011 – 2012/2013, in Hai district council, at the initiative of the district, a total of 99 field schools were organized and supported financially for different crops (see table 6.10).

*Table 6.10: Farmer field schools in Hai district council*

<table>
<thead>
<tr>
<th></th>
<th>2010/2011</th>
<th>2011/2012</th>
<th>2012/2013</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maize</td>
<td>20</td>
<td>19</td>
<td>0</td>
<td>39</td>
</tr>
<tr>
<td>Lab lab</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Banana</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>Coffee</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Pasture PRDN</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>Dairy husbandry</td>
<td>2</td>
<td>2</td>
<td>23</td>
<td>27</td>
</tr>
<tr>
<td>Total</td>
<td>33</td>
<td>32</td>
<td>34</td>
<td>99</td>
</tr>
</tbody>
</table>

Source: Hai District Council farmers’ field school report 2013.

When field schools have completed their production cycle, extension officers organize a field day to demonstrate the new knowledge. The stakeholders invited for the field day include farmers and farmers’ groups, district officials and policy makers. At this field day show, farmers have the opportunity to learn and ask questions (Interview Mungushi VAEO).

The field schools established at the initiative and with the financial support of the district are relatively big and institutionalized. Next to these, small field schools are set up in cooperation between extension officials and farmers at the village level.
The typical way to start these small field schools is to approach a farmers’
group or a village council and ask farmers to volunteer plots to be used for
the field school (Interviews Uduru and Rundugai VAEOs).

We get the farm after a sub village meeting where some farmers volunteer
for plots. After a group meeting we decide to go for the field school to-
gether. If it is pruning, we do it together and we learn how to prune or
prepare the farm or apply manure (Interview Uduru VAEO).

In Machame Kaskazini ward for example, in 2013 there were 19 farmers’
field schools for coffee, irrigation and poultry. The activities of these schools
found themselves at different stages of the production cycle. For example, the
irrigation field school was fully completed, while the maize field school, the
poultry field schools, the coffee pruning and weeding field schools had com-
pleted 70% to 90% of their program. Masama Kusini ward had 23 field
schools for maize, beans, pigeon peas, poultry, horticulture, sunflower, on-
ions, potatoes and banana. In Masama Rundugai ward there were 8 farmers’
field schools active in similar crops (Extension officers monthly report,
March 2013; interviews Machame Kusini WAEOs, Kware, Kwasadala and
Mungushi VAEOs).

All in all, in Hai District there is a substantial presence of farmer’s field
schools. However, they face a number of challenges. The first is the percep-
tion of farmers about field schools. Many farmers primarily think of them as
a direct source of income, a place where they can get money or material input for their farms, such as seeds or fertilizer. If these are not offered, farmers are not motivated to participate (Interviews Mungushi and Kwasadala VAEOs).

If you call the farmers for school without offering funds, they do not participate. They normally want to get immediate compensation. The farmers only volunteer for a field school if they know they will directly benefit (Interview Machame Kaskazini WAEO).

Before, there were a number of field schools in Kware. Farmers were given a small allowance to pay for lunch and drinks. Now these allowances have stopped because the District does not provide any money for small field schools. As a result, only two field schools remain, the others have collapsed (Interview Kware VAEO).

Lastly, despite the presence of field schools, many farmers still use their traditional knowledge to grow crops. For example, the farmers prepare farm and apply their traditional manure; for beans the farmers buy seeds from the local market based on their own experience; and they also prune and uproot the affected maize by using knowledge that they acquired from the elders. In addition, the farmers do not use modern technology such as string planting, because they find it too expensive (Focus group discussion with farmers at Kwasadala village).

6.4.3 The haphazard delivery of services

As explained earlier, extension officials develop a schedule for group visits. It not only provides a basis for their superiors to monitor their work, it also enables farmers’ groups to prepare themselves for the visit and call upon their members to participate in a meeting or a training or field school session. In practice however, the visits to groups frequently do not take place as programmed. Extension officials themselves mainly attribute this to problems with the local infrastructure and deficient transport facilities. A number of exemplary stories can illustrate these claims.

In Machame Kaskazini ward, the ward extension officer does not have a motor cycle. If he wants to visit farmers’ groups, he has to take a commuter bus until the stop that is closest to the groups he wants to visit, or he must hire a motorcycle of which the cost must be recovered from the farmers. One of the days the researcher visited the ward to interview the official. He had an appointment to visit farmers’ groups in one of the villages located in the periphery of the ward. But the visit did not take place. The official explained that he was supposed to visit some groups in Lamba village, but that he could not because he did not have a means of transport (Interview Machame Kaskazini WAEO).
One of the village extension officials in Masama Rundugai ward does not reside in the village he must service. He stays in a small town where he can get recreational services. If he wants to visit the farmers’ groups in the village, he always must use his motor cycle. In the course of the research, I asked the official if I could accompany him on one of his field trips in order to observe the interaction between officials and farmers’ groups. He granted my request on the condition that I would pay for the fuel. We visited the UKIVITA farmers group and were welcomed with complaints. The official had promised to visit the group a week before. The group had organized a meeting; all farmers had been waiting for the extension official to visit them. But he had not shown up (Observation field trip Masama Rundugai ward).

You cannot walk into four sub villages without transport and you must rent a motorcycle without any help from the farmers. That is why many experts don’t want to work in the village. (Mungushi- VAEO).

During the rainy season the rain water floods between the two villages and makes the road impassable. If the extension officer has scheduled to visit the groups in the village, he has to wait until the water dries out otherwise he would be swept away (Interview Rundugai WAEO).

Apart from the problems of transport, extension officers also claim that their workload exceeds the time they have available and prevents them from visiting farmers’ groups. An example is the Rundugai village extension officer in Masama Rundugai ward, who builds his schedule on visits to groups in his own village, but who would also need two days a week to visit groups in the neighboring village called Chekimaji, that does not have an extension officer of its own (Interview Rundugai VAEO).

In fact, part of the time of extension officials available for advice, training sessions and field schools is taken up by administrative and other duties that are ordered by the headquarters. In the villages Kwasadala, Kware and Rundugai extension officials were deployed to provide food to people threatened by starvation; and in Masama Kusini ward agricultural extension officers had to act as ward and village executive officers, when the responsible officers were out of office (Interviews Rundugai WAEO and Kwasadala VAEO). Sometimes even instructions from central government interfere with the activities of extension officers, because they are asked to assist in the supervision of school examinations or in the Uhuru Torch, i.e. the celebration of Independence Day activities. Officers must leave their job and help in

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7. The examination activities include the invigilation of examinations and the supply of necessary equipment to carry out the examinations. The Uhuru torch involves the celebration of Independence Day of Tanzania in which the government officials of respective areas prepare to welcome and provide food and drinks to visitors from the headquarters.
these activities because, if they reject they will be seen as opposing the government (Interviews HoD A & LD and PADP coordinator).

However, what seems to interfere most in the schedules for visits to groups, training sessions and field schools is the priority extension officials give to what they call ‘emergencies.’ In the three wards included in the research we found that if livestock keepers call upon extension officials to assist them in the treatment of cattle and are willing to pay for these services, extension officials abandon their weekly schedules and respond. The headquarters acknowledges that extension officials in the field use these ‘emergencies’ as an excuse to break with their schedules and provide services that are paid for (Interviews Kware, Kwasadala and Rundugai VAEOs; interview DAEO). As a result of this practice a substantial part of the available capacity of extension officials is dedicated to the paid treatment of cattle, at the cost of transferring knowledge and the training of crop growers.

Although no hard data are available, our observations and interviews with extension officials suggest that the officials spend a maximum of three hours a day visiting and training farmers’ groups. After the field visit, they are required to report to the office and do some administration. In practice, the rest of the time is spent at the discretion of extension officers, on visits to individual livestock keepers, i.e. to farmers who pay for their services, or on their private business or leisure. We can say that extension officers at the most dedicate half of working hours to extension activities in the proper sense (Interviews Uduru VAEO, Rundugai VAEO and Mungushi VAEO).

The research shows that the extension officials have a large degree of discretion concerning their daily activities. Weekly schedules and the year calendar are formulated in very general terms and supervision by headquarters is also general in character. Ward officials and officials from the headquarters do from time to time check whether extension officials actually visited groups or engaged in training sessions or field schools. But ward officials also suffer from limited means of transport. They primarily rely on monthly reports that only contain general information to assess the performance of the field workers. As long as village extension officials indicate the number and type of farmers they have visited, and visits have actually taken place, their superiors are satisfied (Monthly reports 2012/2013; interview DAEO).

Central government has been aware of the discretion of field officials and the lack of supervision that provides them with opportunities to set their own priorities or neglect their duties. Therefore, the prime ministers’ office for regional and local government has issued instructions that field extension officials fill in a daily register, providing detailed information on their activities. Every extension official has been given a register book and instructions on how to fill it in (Interviews DADPs coordinator, HoD A & LD and Machame WAEO). In practice, the registers are only used to a certain extent.
Officials complain that they were not properly educated on how to use them. They also find the register books too cumbersome to transport. As a result, they use their own notebook and when they have time, they fill the information in the registers.

_If find it easier to use my diary. Sometimes you find there is rain and you have to go with this big book, but you do not have proper transport so we do not take it (Interviews Masama Kusini WEO and Mungushi VAEO)._  

All in all, the decisions concerning which services are provided to whom are to a very large extent taken by individual village and ward extension officials. The District Agricultural Development Program does not function as a guideline, except for the cases in which budget has been allocated to projects such as field schools. For the remainder, extension officials working in the field are primarily interested in servicing paying livestock keepers. Although visits to groups take place, and training sessions and field schools are conducted, the allocation of time and energy to these activities to a large extent seems to be guided by practical circumstances such as distance, transport means, working tools, the weather; not by what farmers or farmers’ groups need in terms of advice and support.

A lack of responsiveness also shows itself in relation to the problems identified by farmers and field officials. As mentioned earlier, extension officials must write a monthly report on their activities. Apart from indicating the number and type of farmers they visited, they are also supposed to identify specific problems and issues farmers encounter. In order to make up the monthly reports, the ward agricultural extension officials set specific dates to meet with village extension officials in their office. In Machame Kaskazani ward for example, the village extension officers meet every 25th of the month to fill in the monthly report together. The reports are then compiled by ward extension officers and submitted to the district headquarters.

The village and ward extension officials feel that they hardly get any feedback on their reports. If problems are signaled, the District does not do anything about them. For example, village extension officials raised problems such as monkeys and rodents eating crops, but the district officials did not respond. The argument put forward was a lack of funds, but the officials working in the field suspect that the district officials simply do not read the reports (Interviews Machame Kaskazini and Masama Rundugai WAEOs, Uduru VAEO). The district officials on the other hand think that this type of problems is or should be managed at the village level. Not everything needs assistance from the headquarters (Interview DAEO).
6.4.4 The transfer of information through the district Radio

Apart from the channels discussed above, the district also uses the district radio to transfer information to farmers. The radio was introduced under a special program called farmers voice with the purpose of transferring agricultural information and technology to many farmers at the same time. The district uses the radio to educate farmers on modern livestock keeping and farming principles. For example, in 2013 more than thirty-three radio sessions were broadcasted to educate farmers on agricultural input, livestock keeping and modern poultry keeping, and the importance of immunization and horticulture.

Apart from transmitting general information, the program also tries to respond to individual needs of farmers. Farmers can ask questions during the broadcasts and get immediate feedback by experts, and many farmers have taken the opportunity to do so. Despite its success, the radio project suffers from the fact that it is not included in the regular budget of the council. The preparation of the sessions has been difficult due to a lack of resources (Interview DAEO; quarterly agricultural and livestock activities report 2013). This implies that the radio project faces problems that are similar to the ones other channels and methods for the delivery of extension services.

6.4.5 The transfer of information through village meetings

The data suggest that village meetings are used as an additional channel to communicate agricultural information to farmers. Village meetings take place every three months. Village extension officials assist in the meetings and inform the attendants about issues, problems and opportunities related to farming. The extension officers assume that those who do not take part in one of the groups in a village can benefit through this means of communication (Interview Mungushi VAEO).

An example is the meeting on 02/04/2013 at Mungushi village. The extension official tabled the problem of new maize diseases called maize lethal necrotic diseases. The meeting was also used to discuss environmental problems and it was suggested to plant trees during the rainy season, in order to fight erosion. Of the 400 villagers, 224 attended the meeting (Minutes of the village meeting of 02/04/2013).

However, the village meetings play a limited role in the transfer of information and knowledge. Although villagers are expected to participate, attendance is frequently low.

The Village executive officer of Wari village in Machame Kaskazini organized a meeting on the 29th of July 2013 to discuss the income and ex-
penditure report, but only 66 out of 300 residents attended. Later in the year he called a meeting first on the 10th and then on the 18th of September. In both cases there was no quorum. Following that, the village government decided to establish fines to punish citizens who do not attend the village meetings (Minutes of the village meeting of 29/07/2013; Interview Wari VEO).

Moreover, despite the fact that almost all citizens are engaged in agriculture, other topics generally dominate the agenda, especially the income and expenditure reports that concern the village, and issues related to investments in health or education, i.e. the construction or extension of school buildings and the way government grants should be spent (Minutes of village meetings at Kwasadala village on 20/06/2011; at Wari village on 29/07/2013, at Mkalamata village on 26/06/2013, interview Wari VEO; observations village meetings).

6.4.6 Service delivery by NGOs

Although the delivery of agricultural extension services is primarily considered as a public responsibility, the Tanzanian government acknowledges the role the private sector can play. As mentioned in chapter 4, one of the goals of the Extended Block Grant was to provide local governments with the financial means to contract service delivery out to private providers. In practice, financial resources allocated to local government are not used for this purpose. However, NGOs who dispose of the financial resources and manpower to provide extension services to farmers are welcomed, subject to a number of conditions. The regulations require that NGOs pass through district councils to register and get formal permission to deliver services in the district. They have to meet a number of criteria. Amongst others, they must have a sound financial base; have experience in the agricultural sector and in community mobilization, farmer empowerment and participatory methods; dispose of adequate personnel and facilities such as cars, bikes and office space; and they must have a record of successful previous programs (URT 2006b).

The District agricultural and livestock development officer decides the type of services needed and the areas where they should be provided and NGOs must agree to deliver their services in certain areas and to certain groups of farmers.

In Hai district Council, there are number of NGOs engaged in the delivery of extension services to farmers. Some of these NGOs are set up by churches, some result from other types of private initiatives. A number of examples.
World Vision is a global Christian relief and development organization also active in the delivery of extension services. Objectives of this NGO include the increase of maize and milk production to reduce hunger amongst farmers. In order to achieve this, it provides agricultural inputs such as seeds for the production of quality protein maize, and dairy heifers, goats and poultry to farmers. It also offers artificial insemination services and training on dairy husbandry.

Envirocare is an international NGO active in the protection of the environment and human rights. In Hai district it offers training of farmers in organic farming, the use of organic pesticides and integrated pest management.

Faida MaLi (not an NGO) is a Tanzanian organization with the mission to empower women and men in rural areas to access markets through capacity building. In Hai district, it imparts marketing and production skills to farmers and assists dairy cooperative societies to collect and store milk by using modern technology. It has assisted dairy farmers in Nronga, Ng’uni, Marukeni, Kalali and Nure village to acquire milk coolers and improve their business (Hai District Council Report 2013, Nongovernmental Organizations working with Hai District Council).

To provide more insight in how NGO’s operate in the field of extension services, we sketch a more detailed picture of BRAC Tanzania, a branch of BRAC International, which is one of the biggest development organizations in the world. Amongst many other activities BRAC Tanzania provides agricultural input and training to farmers and artificial insemination to livestock. Besides, it offers macro credits to big farmers and micro credits to small farmers who are organized in groups. It has a professional staff of livestock and agricultural officers and credit officers.

BRAC uses a survey method through which they collect the information about farmers in specific area and use it to select appropriate farmers for the project. After this they enter into three-year contracts for service delivery with respective farmers. BRAC then offers chicken and other feeds; in return the farmers prepare shades and a sign post to show other farmers their demonstration plot. BRAC trains community agricultural and livestock promoters to advise the farmers; in case of serious problems, the farmers contact the professionals from the NGOs headquarters (Interview BRAC LO).

Although it is a legal requirement that all NGOs or business organizations who want to deliver the services must register and acquire permission from the district councils, not all do. There were a number of examples of business organizations and NGOs that bypassed the district office and approached farmers directly to offer advice or agricultural input. When district or ward officials discover these practices the organizations are ordered to get permis-
sion from the district and farmers are educated not to accept services from the companies or NGOs in question.

There was one company that supplies pesticides and went directly to a ward. It prepared a demonstration plot to show the use and non-use of their chemicals, but the ward executive officer stopped them because they did not have official letter from the DED.

USA AID introduced a green beans project without acquiring approval from the district office. When the officials realized this, they educated the farmers to stop accepting advice from people who do not have permission from the district office.

A number of NGOs engaged in helping disabled farmers, directly approached farmers through the churches of which they were a member. When the officials discovered they asked them to stop.

A last example was a Church NGO that transferred improved goats from Simanjiro village to the Sanya Juu area without the knowledge of district extension officials. The officials asked them to stop, because of the risk of spreading diseases to other areas. (Interviews DAEO, Mungushi VAEO and Rundugai WAEO).

So, organizations do not ask permission from the district because they assume the simple and proper way of contacting farmers is to go straight to the villages. However, the idea behind the obligation to acquire permission from the district is that the district agricultural and livestock development officer can determine the type of services needed and the areas where they should be provided. Moreover, private service providers are required to cooperate with government extension officers at the ward or villages level, when they are delivering services in their areas. In this way coordination between public and private services should be achieved.

In practice, coordination does not always take place. NGOs follow their own working schedules that are not attuned to the schedules of the extension officers. They decide which farmers to include in the program themselves. The NGOs feel that they are autonomous from the district council because they do not receive funds from the government. This means that the allocation of services does not follow the preferences established by the district. Sometimes a lack of coordination results in the delivery of services by NGOs that do not take into account the characteristics of the area or type of farming.

Extension workers from an NGO such as Brac use their own working schedules, provided by the headquarters of the organization, which can explain that village extension officers sometimes find extension workers from Brac working in villages without having prior knowledge of that (Interview Kware VAEO). Brac on the other hand underlines that they do work with the government. ‘Of course we work with the government, alt-
Though we have our own schedule we often work with the government. For example, here we organize 14 days training to our farmers and after they graduate we invite the government officer to give them a certificate’ (Interview BRAC Livestock officer).

It has occurred that NGOs provided seeds to farmers without informing the local government extension officials and that the seeds did not germinate because they were from a different environment (Interviews DAEO and Kware VAEO).

On the other hand, as was reported earlier in the chapter, NGOs sometimes approach extension officials at the ward or village level to ask for assistance in identifying groups of farmers that are interested in participating in a project. Extension officers tend to cooperate with an NGO as long as they themselves benefit, for example in the form of a small finder’s fee or compensation for their efforts.

The NGOs do not coordinate their services or cooperate among themselves, because they do not share the objectives (Interviews DAEO and BRAC LO). The NGOs themselves face challenges comparable to the ones the public service has to deal with. Most of them cover small areas; they have limited specialized extension staff and capital at their disposal; and they are confronted with a low adoption rate of new technology by farmers. For example, it took one year for farmers to accept quality protein maize seeds and the technology of using organic pesticides, which was introduced by BRAC (Interview BRAC LO).

All in all, cooperation between public and private extensions services is limited. The district does not contract out services to private providers. The mandatory registration of private service providers makes it possible to bar providers that fail to meet a number of quality criteria, but some providers operate without being registered. The fact that private providers have to ask for permission for their activities would open possibilities to allocate private extension services to areas or groups where these are most needed. But the overall picture is that NGOs to a large extent set their own priorities and develop their own schedules for service provision. Cooperation in the field seems to be limited to situations in which the NGOs need the assistance of extension officials to identify and mobilize farmers.

6.4.7 The skills and knowledge of extension officers and the information transfer

Whether the transfer of knowledge to farmers in any of the methods discussed above is relevant for the farmers, helps them to deal with the problems they face and enhances their ability to increase productivity to a large extent depends on the knowledge and skills of the extension officers in the field. If
the extension officer is not informed about new developments in his field, about new diseases and methods to fight them, about new techniques to improve productivity, or if he is not familiar with new methods to transfer knowledge and mobilize farmers, his knowledge is likely to become obsolete and his methods ineffective.

Our research suggests that extension officers feel that they have not been empowered enough in terms of knowledge that is relevant to farmers and methods to transfer knowledge and skills to farmers’ groups effectively. The Machame Kaskazini ward extension officer was very explicit about this. He feels that extension officers do not have up to date knowledge. Since he was appointed to work in Hai district council, he has not received any training. He only received training on sunflower growing many years ago, when he was working in another district called Kondoa, which is not relevant at present (Interview Machame Kaskazini WAEO). Table 6.11 shows the extension officers in the district who have recently received a training.

Table 6.11: The extension officers who received a training between 2011/2013

<table>
<thead>
<tr>
<th>Financial year</th>
<th>Diploma</th>
<th>1st Degree</th>
<th>2nd Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010/2011</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>2011/2012</td>
<td>0</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>2012/2013</td>
<td>0</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Financial year</th>
<th>Lesson trained</th>
<th>Number</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010/2011</td>
<td>Computer</td>
<td>16</td>
<td>8 weeks</td>
</tr>
<tr>
<td>2011/2012</td>
<td>Small industry Processing</td>
<td>2</td>
<td>6 weeks</td>
</tr>
<tr>
<td>2012/2013</td>
<td>PLANREP</td>
<td>4</td>
<td>2 weeks</td>
</tr>
</tbody>
</table>


However, if we look at the budgets and the subjects of training a number of observations are in place. First, the subjects are for a large part related to planning techniques and methods that have been developed and prescribed by central government. Secondly, the subjects reflect central government priorities such as the value chain, industrial processing and the use of computers. Whilst these maybe relevant to some extent for the extension officers themselves, they do not seem directly related to the day to day problems and needs of the farmers.
Table 6.12: The allocation of training budget to different activities in 2012

<table>
<thead>
<tr>
<th>Activity</th>
<th>Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office consumables</td>
<td>765,000</td>
</tr>
<tr>
<td>Training allowance</td>
<td>1,600,000</td>
</tr>
<tr>
<td>Food and refreshment</td>
<td>2,000,000</td>
</tr>
<tr>
<td>Per diem</td>
<td>1,800,000</td>
</tr>
<tr>
<td>Extra-Duty</td>
<td>800,000</td>
</tr>
<tr>
<td>Diesel</td>
<td>1,000,000</td>
</tr>
<tr>
<td>Total</td>
<td>7,165,000</td>
</tr>
</tbody>
</table>


And third, a remarkable part of the budget goes to sitting allowances, office consumables, food and drinks, and not to fees for specialized trainers or teaching material (see table 6.12).

Overall, there do not seem to be structural provisions to keep the knowledge and skills of extension officials in the field up to date in a way that is directly relevant for the farmers they have to service.

6.5 The role of the Research Institute

6.5.1 Introduction and background

As discussed in chapter four, agricultural research services in Tanzania are delivered by zonal institutes. The Hai district council, which forms part of our research, falls under the Northern Zone Agricultural Research Institute (NZARI). The zone covers three regions namely: Arusha, Kilimanjaro, Manyara and one district (Muheza) in Tanga Region. The Arusha region is comprised of 7 districts, the Kilimanjaro region of 7 and the Manyara region of 5 districts. The NZARI hosts three institutes namely the Selian Agricultural Research Institute, the Horticultural Research Training Institute in Tengeru and the Lyamungu Agricultural Research Institute. Among these, the Salien Agricultural Research Institute is the headquarters of the zone. Although the institute is composed of three centers, the zonal staffing records shows the staff available for only two centers, SARI and Horticultural center, which total 176. These staff serve a total of 20 districts with 17 agro ecological areas.

The numbers indicate that the institute has a relatively large number of qualified staff at its disposal. In the future, it is likely that the institute will suffer from a shortage of staff due to existence of large number of aging staff particularly in technical positions. This is likely to constrain the performance of the institute particularly in conducting research, which is its core activity.
Table 6.13: The staffing level of the two research centers.

<table>
<thead>
<tr>
<th></th>
<th>SARI</th>
<th>Horticultur center</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No of scientists</td>
<td>27</td>
<td>18</td>
<td>45</td>
</tr>
<tr>
<td>Male</td>
<td>23</td>
<td>10</td>
<td>33</td>
</tr>
<tr>
<td>Female</td>
<td>4</td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td><strong>Academic qualification</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PhD</td>
<td>5</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>MSc</td>
<td>17</td>
<td>4</td>
<td>21</td>
</tr>
<tr>
<td>BSc</td>
<td>5</td>
<td>13</td>
<td>18</td>
</tr>
<tr>
<td><strong>Supporting staff</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diploma</td>
<td>34</td>
<td>13</td>
<td>47</td>
</tr>
<tr>
<td>Certificate</td>
<td>25</td>
<td>14</td>
<td>39</td>
</tr>
<tr>
<td><strong>Grand total</strong></td>
<td>113</td>
<td>63</td>
<td>176</td>
</tr>
</tbody>
</table>

Source: URT 2008b; URT 2000a 2:5.

For example, within the next 5 years the institute is expecting a retirement of 22 staff. 11 out of these are senior research officers and 8 senior field officers. We would expect the institute to cope with this by recruiting and grooming the required number of staff, but this has not been possible, because recruitment decisions are made by central government, which does not meet the staffing requirement of the institute. For example, despite the fact that the institute is expecting the retirement of 22 staff shown above, it has received only five young researchers from central government.

In dealing with different sub ecological zones, the institute has marked all agro ecological conditions (farming system) and developed a system to identify technologies that work better in particular farming systems. For example, in the foot of Mount Kilimanjaro, farmers intercrop maize, beans and banana. When farmers report a problem, the institute is aware of the farming system in that area and can customize their advice taking into account the characteristics of the farming system (Interview SARID). Together, the three institutes conduct research on crops, natural resource management, socio economics, livestock activities, bananas and spices.

Our research concentrated on the Selian Agricultural Research Institute (SARI) the zone headquarters. The policy of SARI is to be a center for demand-driven research, to develop and disseminate agricultural information and technologies that are farmer-focused (URT 2000b:2). In order to enhance demand-driven research, all research proposed for funding should be requested by clients. The proposals must show who requests the research, who will be the beneficiaries, the farming system in which the research is of relevance and how the dissemination of research results will take place.

Formally, the decision on research topics and projects to include in the research must be informed by an annual stakeholder meeting and their involvement in the formal research planning committees such as the Zonal Executive Committee and the Northern Zone Agricultural Research Fund.
The stakeholders must provide their input, but the institute has also formulated a series of priorities and projects must be consistent with these. Table 6.14 shows the priorities on crop research.

Table 6.14: The priorities of the institute on crop research

<table>
<thead>
<tr>
<th>Activities</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development and dissemination of improved crop varieties and agronomic practices</td>
<td>1</td>
</tr>
<tr>
<td>Crop protection</td>
<td>2</td>
</tr>
<tr>
<td>Production and dissemination of user friendly outputs</td>
<td>3</td>
</tr>
<tr>
<td>Conservation and management of natural resources and promotion of alternative sources of energy</td>
<td>4</td>
</tr>
<tr>
<td>Empowerment of farming communities (participation in research, group formation, access to markets and information)</td>
<td>5</td>
</tr>
<tr>
<td>Post-harvest handling and utilization of farm produce</td>
<td>6</td>
</tr>
<tr>
<td>Research on various aspects of inputs</td>
<td>7</td>
</tr>
<tr>
<td>Research on the use of farm implements</td>
<td>8</td>
</tr>
</tbody>
</table>

Source: URT 2000b.

In order to link the extension services to their research activities, the institutes communicate with the districts councils in the northern zone. One of these districts is Hai district council, which forms part of our research.

6.5.2 Planning and decision-making for agricultural research

As stated earlier, the institute subscribes to the principle of demand-driven research, which is guided by the so-called Client Oriented Management Approach (CORDEMA). This means that the planning process for research is required to reflect the farmers’ research needs. To that effect, two procedures are followed. The first is to identify research requests by involving researchers and farmers in research groups. Group members are expected to participate in on-farm-trials (a method used by researchers in cooperation with extension officers to test the application of new crop technology in a particular farming system), in the evaluation of the research results and in the end, in the dissemination of the results. It is assumed that by participating in the on-farm-trials, the group members will become aware of the real problems and thus indicate research needs.

In the past years, several trials on pigeon peas, quality protein maize and beans were conducted in Babati, Hai and Karatu districts councils. The aim of these trials was to test the application of these technologies and the problems associated with their adoption in the respective farming systems. This in turn could provide input for the research plan. Overall however, the number of trials is very limited and cover a small number of farmers organized in groups. Their relevance for the planning of new research is low (Interview SARID; observations Institute meetings).
The second procedure is to organize stakeholder meetings. These meetings are meant to collect the research interest and requests of different stakeholders. From these requests, the idea is that the officials develop research proposals. These proposals must subsequently be discussed and deliberated in a number of planning and decision-making meetings such as Program Review meetings, meetings of the Zonal Executive Committee, and of the Northern Zone Agricultural Research Fund and Zonal Technical Committees.

However, this procedure for planning does not seem to be followed. First, in practice, the stakeholder meeting, which is supposed to be held once every three years, does not take place. In the northern zone, this meeting was supposed to be held in 2013, but because the government did not release the programmed budget for the meeting expenses, it was not held. This implies that if the institutes hold meetings, it would need money to pay for sitting allowances, stationary and drinks for the participants.

_We have not met recently because the meeting needs fund. We have taken about five years without receiving the fund. This is because of the lack of basket funding (Interview Institute director)._ 

Second, although different stakeholders such as farmers’ groups are supposed to participate in the Program Review meetings, these meetings do not take place as programmed, and if they take place not all farmers’ representatives participate. The limited funds constrain the institute to invite stakeholders such as farmer’s representatives for discussion and deliberation on research proposals.

In response to this, the institute has established alternative means of collecting information on research needs from farmers. One is sending their liaison officials to participate in the district council planning meetings in which they take part in the discussion about and the drafting of the district plan. In these meetings, the liaison officers collect information on farmer’s research needs, which in turn they present to the institute and the institute incorporates them in its research priorities for funding (Interviews SARID and SARILO).

Apart from the impediments to demand driven research discussed above, there are other factors that constrain its practice. The first is that donors release funds subject to conditions. For example, a donor who deals with maize is only interested in funding (specific types of) maize research, which not necessarily coincides with the needs or priorities of farmers. An example is a Simit company, which only funds maize research. If farmers suggest that it would be necessary to carry out research on millet, a researcher has to request funding from another source (Interview SARID).
Secondly, although in general terms the institute subscribes to the principle of demand-driven research, it is also thought necessary to conduct basic research to develop new technologies that have not necessarily been requested by farmers (Interviews SARI FSR & SARID).

Third, although the institute has formulated its own priorities, it has to take into account the research program established by central government. The responsible central government ministry has developed a program for research on crops production, on farming systems, on natural resources management and on the transfer of information to farmers. Apart from that, the central government allocates budget to the Institute according to its objectives, priorities and targets such as productivity and value chain of crops, which do not necessarily coincide with institute priorities (URT 2011, Interviews MPO DRD).

6.5.3 The funding of the activities of the Research Institute

To finance her activities Selian ARI depends on different sources. First there are the funds allocated directly by central government and the resources available through the Northern Zone Agricultural Research Fund, which is a basket fund fed by international sponsors. To obtain funds from the NZARF Selian ARI can submit research proposals; but Selian ARI is only one of the contenders for this fund. NGOs, farmers’ associations, local governments and even individual farmers can submit proposals.

The grant that is directly allocated to the research institute is very limited. Moreover, there is a lot of uncertainty about the cash flow; while the institute is supposed to receive money for recurrent expenditures every month, the cash flows unevenly and not all operating costs are covered (Interviews SARID and SARI Accountant). Every year, the research institute is supposed to express its needs and send a budget proposal to the ministry responsible i.e. the Ministry of Agriculture, Food Security and Cooperatives. The ministerial department responsible for research and development decides on the amount of fund to be allocated to all zonal research institutes. The budget is prepared and scrutinized by the budget committees of the ministry. The budget that is submitted by the research institute does not play a role in the allocation of the research grant. The main reason is that the research institutes ask for funds that by far exceed the budget ceiling of central government (Interview MPO DRD). In reaction to this, the Selian ARI has recently decided not to submit budgets anymore; it feels it makes no sense to prepare a budget that is not taken into account by the ministry (Interviews SARID and SARI Accountant).

The budget allocated for the fiscal years 2012/2013 to 2014/2015 gives an indication of their volume. The budget for development is meant for research projects; recurrent expenditures must cover costs such as office consumables,
water, electricity, transport, training, agricultural implements, fertilizer and per diems.

Table 6.15: Funds disbursed to Selian ARI by Government from 2012-2015

<table>
<thead>
<tr>
<th>Year</th>
<th>2012/2013</th>
<th>2013/2014</th>
<th>2014/2015</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recurrent</td>
<td>82,823,760</td>
<td>22,557,500</td>
<td>34,367,500</td>
<td>139,748,760</td>
</tr>
<tr>
<td>Development</td>
<td>53,417,365</td>
<td>42,032,500</td>
<td>43,410,000</td>
<td>138,859,865</td>
</tr>
<tr>
<td>Total</td>
<td>278,608,625</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Constructed from Selian Agricultural Research Institute, Detailed Report of Fund Disbursement from Government and Donors from 2010-2015.

Apart from the recurrent and development budget, which is allocated directly by government, there is the Zonal Agricultural Research and Development Fund (ZARDEF) allocated by sponsors in collaboration with government. In the fiscal years 2012-2015, the Institute received a total of 141,925,100 Tsh. out of this fund. A number of individual researchers and organizations competed for the fund. Those who met the criteria such as approval by the Program Review and Technical meetings were funded (Interview SARI Accountant). Nevertheless, the Zonal Research Fund is limited. It can only sponsor few research projects.

Given the limitations of the grant allocated by central government and available through ZARDEF, the Selian ARI depends on a number of other sources.

One is a collaborative research fund which is donor funded. This fund is used to finance the research activities carried out by national and international organizations. In case of collaborations, the partners must sign a memorandum of understanding, which specifies all contributions by the partners. The partner of the Institute must pay 10% of the recurrent research budget. Nevertheless, this fund is limited only to research projects established by the institute through collaboration with donors.

Table 6.16: Total of donor funds disbursed to the Institute from 2012-2015

<table>
<thead>
<tr>
<th>Donors</th>
<th>2012/2013</th>
<th>2013/2014</th>
<th>2014/2015</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICIRISAT</td>
<td>72,000,000</td>
<td>-</td>
<td>-</td>
<td>72,000,000</td>
</tr>
<tr>
<td>ASARECA</td>
<td>125,467,900</td>
<td>134,015,998</td>
<td>82,512,000</td>
<td>341,995,898</td>
</tr>
<tr>
<td>ILRI</td>
<td>56,332,800</td>
<td>-</td>
<td>-</td>
<td>56,332,800</td>
</tr>
<tr>
<td>AGRA</td>
<td>525,269,589</td>
<td>444,560,987</td>
<td>521,120,323</td>
<td>1,490,950,899</td>
</tr>
<tr>
<td>FASACI</td>
<td>-</td>
<td>130,546,780</td>
<td>106,000,000</td>
<td>236,546,780</td>
</tr>
<tr>
<td>TAMASA</td>
<td>-</td>
<td>-</td>
<td>126,789,000</td>
<td>126,789,000</td>
</tr>
<tr>
<td>AGORA</td>
<td>-</td>
<td>-</td>
<td>40,328,000</td>
<td>40,328,000</td>
</tr>
<tr>
<td>TANSIS</td>
<td>-</td>
<td>-</td>
<td>165,694,000</td>
<td>165,694,000</td>
</tr>
<tr>
<td>SIMLESA</td>
<td>97,365,611</td>
<td>80,000,000</td>
<td>70,536,911</td>
<td>247,902,522</td>
</tr>
<tr>
<td>Total</td>
<td>876,435,900</td>
<td>789,123,765</td>
<td>1,112,980,234</td>
<td>2,778,539,899</td>
</tr>
</tbody>
</table>
A last source to finance research projects is a contract fund established by Selian ARI. Farmers’ groups, NGOs or government institutions can commission the institute to carry out research. The payment from clients is not restricted to cash; they can also pay through the contribution of land and labor, staff time, vehicles or other facilities. Contract research has covered topics such as new crop varieties, crops husbandry, the improvement of seeds, livestock improvement, soil fertility and land management. Clients pay for contract research according to rates as presented in table 6.17.

Table 6.17: The institutional fees paid by farmers on contract farming

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>60%</td>
<td>For the responsible scientist</td>
</tr>
<tr>
<td>10%</td>
<td>For acquisition of the contract</td>
</tr>
<tr>
<td>10%</td>
<td>For reviewing of the results and draft report</td>
</tr>
<tr>
<td>20%</td>
<td>Overhead costs</td>
</tr>
</tbody>
</table>

Source: URT 2000b.

6.5.4 Conclusion with respect to funding

The research shows that financing of the research institute depends on two main sources: the government and donors. Altogether, the financial resources of Selian ARI to carry out research are relatively large. However, direct government funding on average only represents around 10% of the total financial resources for research. For the rest, the institute depends on contributions provided by donors, i.e. funds that come with conditions and for specific projects. Although it is a policy of the Institute to conduct demand driven research, in practice, the institute itself is not financially capable to make research demand driven.

6.5.5 Information transfer to farmers

One of the functions of the institute prescribed by central government regulations is the transfer of research information to local governments. The institute carries out this activity through its Zonal Information Extension Liaison Unit (ZIELU). This unit is supposed to learn about new technologies through briefings by scientists, to assemble and repack information, transfer the information to districts extension officers, train them and transfer information to other organizations. In order to do this, the liaison officers of the institute are supposed to contact the district executive directors and district agricultural and livestock development officers, who in turn have to introduce them to district extension officers.

In practice, ZIELU uses a number of methods for the preparation and the actual transfer of information to local governments. The first method in use is
the assembling and repackaging of agricultural information and technologies. This method involves the documentation of information in an orderly manner to be used for field days or agricultural shows. The documentation includes keeping the records of the agricultural shows, organized field days and trainings.

*Table 6.18*: The activities of the information transfer and their output in 2009/2012

<table>
<thead>
<tr>
<th>Major activities</th>
<th>Outputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assembling of agricultural information/technologies</td>
<td>24 interviews conducted with farmers at field days were assembled.</td>
</tr>
<tr>
<td></td>
<td>2500 still pictures collected &amp; used for different activities</td>
</tr>
<tr>
<td></td>
<td>Relevant reports were collected from research, farmers and private institutions through video shooting.</td>
</tr>
<tr>
<td></td>
<td>14 video clips were collected not edited</td>
</tr>
<tr>
<td>Repacking of agricultural information/technologies for users</td>
<td>Research findings were packed in brochures, video, DVDs and radio programs</td>
</tr>
<tr>
<td></td>
<td>2 success stories were documented from disseminated technologies on maize and pigeon pea.</td>
</tr>
<tr>
<td></td>
<td>The reports of major events in the institutes, e.g. Nane Nane shows, field days, workshops, trainings and visitors were documented.</td>
</tr>
</tbody>
</table>

Source: URT MAFC 2011.

A problem the liaison officers encounter is that research scientists of the institute are not inclined to organize and participate in debriefing sessions because they are not directly awarded for this activity. So, they feel they are not adequately informed about the content and meaning of newly developed technologies (Interview SARI LO).

After documentation, the institute disseminates information through numerous methods. One of the methods in use is the organization of field day meetings. For these the institute invites district council extension officials and other stakeholders like NGOs, policy makers and farmers’ organizations. The meeting involves demonstrations of new technologies that have been developed through on farm trial and research conducted by the Institute.
Table 6.19: Field days organized by the institute between 2010 and 2013

<table>
<thead>
<tr>
<th>Department</th>
<th>Type of technology</th>
<th>District in which the field day was conducted</th>
<th>Participants</th>
<th>Extension officers trained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breeding</td>
<td>Promising maize variety</td>
<td>Karatu</td>
<td>250</td>
<td>25</td>
</tr>
<tr>
<td>Weed science</td>
<td>Integrated weed management in maize</td>
<td>Monduli &amp; Babati</td>
<td>Babati 35</td>
<td>Babati 5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Monduli &amp; Babati</td>
<td>Monduli 30</td>
<td>Monduli 1</td>
</tr>
<tr>
<td>Conservation agriculture</td>
<td>Soil cover</td>
<td>Karatu, Hanang, Babati &amp; Meru</td>
<td>200</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Reaping to conserve moisture</td>
<td>Karatu, Hanang, Babati &amp; Meru</td>
<td>150</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Direct seeding of crops to reduce labour time &amp; costs</td>
<td>Karatu, Hanang, Babati &amp; Meru</td>
<td>200</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Legume cover crops for fertility conservation</td>
<td>Karatu, Hanang, Babati &amp; Meru</td>
<td>200</td>
<td>-</td>
</tr>
<tr>
<td>Wheat &amp; Barley</td>
<td>Farmer field school approach Demo of New and Old wheat variety recommended</td>
<td>Karatu, Hanang, Babati &amp; Meru, Kilimatembo</td>
<td>250</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Ongoing variety evaluation trials of wheat and barley</td>
<td>Kilimatembo, Karatu</td>
<td>100</td>
<td>-</td>
</tr>
<tr>
<td>Beans</td>
<td>Stake methods</td>
<td>Nane Nane</td>
<td>200</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Spacing</td>
<td>SARI</td>
<td>140</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Use of Minjingu fertilizer</td>
<td>Karatu, Monduli</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Seven different varieties of beans</td>
<td>Siha, Lushoto, Moshi</td>
<td>340</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Bean utilization</td>
<td>Same &amp; Mwanga</td>
<td>400</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Integrated pest &amp; disease management</td>
<td>Bashnet &amp; Magugu, Babati, Meru</td>
<td>200</td>
<td>-</td>
</tr>
<tr>
<td>Special Program</td>
<td>Scaling up of fertilizer and manure use on maize</td>
<td>Siha, Babati &amp; Karatu</td>
<td>360</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: URT MAFC 2011.

The idea is that stakeholders learn about the newly developed technologies and their application, and that extension officials in turn transfer the knowledge to farmers. Although there are no recent data, an overview of past years shows that numerous field days for different crops were organized by the Institute (see table 6.19).

It is clear that the institute is active in organizing field days. One of the problems the liaison officers encounter is that researchers do not systematically report on their experiences with the on-farm trials they conduct, so the
input for field days is limited. Moreover, the number of field days and the number of participants is low in relation to the number of farmers that are active in the Northern Zone, which as we have seen covers 20 districts (Interview Selian ARило).

A very similar method is the so called *Nane Nane*, the agricultural show that is organized every year on the 8th of August and that is directed at farmers. For example, in Hai district council, between 2009 and 2010 a total of 30 new technologies were demonstrated to farmers through this method and 22 extension materials were displayed (NZARI -2010). Although valuable in itself, the fact that the show takes place once a year and in one place implies that the number of farmers that is reached is limited.

*Figure 6.5: A field day conducted at the headquarters on quality protein maize technology*

Apart from these traditional methods, the liaison officers of the Selian ARI also make use of modern technology. The liaison officers of the institute and the local council extension officials in the zone are connected to cell phones, internet services and radio, through which they provide information to be transferred to farmers (URT 2008b). When farmers experience a problem, they report to the extension officer of the local government who is the contact person for crop research, and in turn the officer reports to the research institutes through email, cell phones or both. An example is the appearance of the maize *lethal necrosis* disease. It was reported to the institute by extension officers and subsequently the institute conducted research and organized a training to inform the farmers on strategies to deal with this disease.
Finally, the transfer of knowledge on new technologies for growing crops or fighting emerging diseases proceeds through the training of local government extension officials and farmers. The training is also delivered through stakeholders’ meetings organized by the regional office in which the liaison officers train the local government extension officials, policy makers, private sectors and farmers on new technology for growing crops and fighting crop diseases. Although there are no recent data on training, the records show that between 2008 - 2010 a number of training activities were organized for extension officers and other stakeholders.

Table 6.18: The type of training conducted by ZIELO to extension officers between 2008 and 2010

<table>
<thead>
<tr>
<th>The trainer</th>
<th>The areas for training</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZIELO in collaboration with other stakeholders</td>
<td>• Training and sensitization meetings of more than 2200 extension officers, researchers, policy makers, farmers and private sector on Maize Lethal Necrosis.</td>
</tr>
<tr>
<td></td>
<td>• Trained 1500 agricultural stakeholders on Maize Lethal Necrosis Disease in 3 days</td>
</tr>
<tr>
<td></td>
<td>• Participation in the Monday meetings of research at SARI</td>
</tr>
<tr>
<td></td>
<td>• Trained 20 field extension officers and on extension communication organized by FARM Africa</td>
</tr>
<tr>
<td></td>
<td>• Trained 93 field extension officers, policy makers, farmers and NGOs on Maize Lethal Necrosis Disease organized by MVIWATA</td>
</tr>
</tbody>
</table>

Source: URT MAFC 2011

The table also makes clear that the training activities of the institute itself were limited to one topic: to combat against the emerging disease affecting maize.

Nevertheless, on rare occasions liaison officers make use of an existing regional platform to communicate with farmers and other stakeholders. For example, in 2013, the officers presented a paper on beans technology in this platform (Interview SARILO).

Our research suggests that the transfer of information on new technologies also depends on the personal initiative of the liaison officers of the institute. If the liaison officer wants to promote a particular technology, which he believes to increase his personal or the institute’s credibility, he can use his personal contacts. An example is the promotion of a quality protein maize technology. The liaison officer of the institute used his contacts with councilors and directors of Hai district to influence them and approve the promotion of such technologies in their district. Eventually, he was successful and the protein maize technology was accepted by the council (Interview SARILO).

The liaison officers suggest that the promotion and adoption of new farming
technologies is sometimes obstructed by the local culture or by the fact that they do not fit with the local agro-economic system. An example of the former is that farmers in Rombo district challenged the introduction of a new beans technology with the claim that this crop affects their male reproductive organs. In reaction to that, the institute officials discussed with farmers to educate them that beans do not have such impact. An example of the latter concerned the introduction of the pigeon pea as a new crop. In Babati district council it was readily adopted. Farmers live nearby their farms and have a market for these products. In Moshi district however, farmers have a tradition of intercropping maize with beans, and they live far away from their farms. This makes it difficult to adopt this technology because the farmers are already used to intercrop beans with maize, and in addition the pigeon pea takes a long time to reap and there is no ready market for them (Interview SARI FSR).

Overall, the Selian ARI has a relatively large staff of scientists and field officers. However, its financial situation largely depends on funds provided by international donors, which limits the institute in the choice of research topics. Moreover, the institute cannot ignore central government priorities when deciding on the allocation of the relatively small central government grants. A systematic consultation of farmers’ organizations, local governments and other stakeholders on research priorities does not take place, but occasionally local extension officers do inform the institute about emerging problems that would need to be researched.

With respect to the transfer of information to local governments and farmers, the institute has demonstrated some strength. It makes use of a series of different channels and methods such as field days, training sessions and the promotion of technologies through direct contacts with local governments. Overall however, the number of extension officers and farmers that are reached is small in relation to the extension officers in place and the population of farmers in the zone.

6.6 Conclusion

As we did in the Morogoro case, we recapitulate our research findings to establish to what extent one of the main goals of the decentralization of extension services was realized in Hai district, i.e. to achieve that agricultural extension services are attuned to the needs and preferences of the local community. In Hai district, the intention to achieve this goal is reflected in the architecture of planning process in which the farmers and farmers’ group are supposed to participate in the planning process from the village level. Whether this, the subsequent decision-making by the local council and the actual delivery result in services that reflect the preferences of the local community is one of the main questions to be answered and explained. Moreover, as in
the Morogoro case, we look at other effects that are associated with decen-
tralization: whether services are tailor made, and provided in a cost efficient
and coordinated way.

6.6.1 Planning and budgeting: Allocative efficiency and local democracy

The planning process in Hai district meets the procedural requirements that
form part of the decentralized administrative system. The local administration
develops a five-year strategic development plan, which contains a section on
agriculture based on a SWOT analysis. In keeping with central government
guidelines, stakeholders are consulted. Subsequently, the plan is discussed
and approved by the elected local council. The local officials also prepare the
required annual agricultural development plans, which include agricultural
extension projects and the budgets for these projects. In the development of
the annual plans farmers at the village level are consulted and can articulate
their needs and preferences for extension projects. As is the case with the
five-year strategic plan, the annual plans are tabled for decision-making in
the local council. After the approval of the plan by the council and the subse-
quent approval by central government, funds can be disbursed to carry out
the extension projects included in the plan. In principle, the process is struc-
tured in a way that the local community, either directly or indirectly through
elected representatives, can articulate its needs and preferences and that plans
are established accordingly.

In practice, direct and representative local democracy function poorly and
allocative efficiency is not realized. In Hai district, the Head of department
for Agriculture and livestock is responsible for the development of the strate-
gic plan. The officials under his supervision conducted a SWOT analysis for
the five-year plan 2011-2016 and at a later stage invited stakeholders such as
traditional leaders and NGOs to provide their input. These stakeholders sug-
gested the improvement of irrigation systems and agricultural extension ser-
dvices, but the goals and strategies, which were eventually included in the plan
did not take the views of the stakeholders into account. The plan included
precise targets for the increase in the production of crop and livestock, but
strategies to realize these targets were very general and there was no visible
relation with the SWOT analysis or the input supply survey. Central govern-
ment programs were leading in the formulation of targets. One element that
was relatively elaborated were a series of measures to improve the extension
services themselves. In the end, the local council, which had the opportunity
to discuss strategies and targets, did nothing but rubber stamp the plan that
mainly reflected central government priorities.

In the development of the annual plans, the farmers at the village level are
involved. We saw that the consultations were elaborate and that farmers
could suggest their ideas about the projects they thought would help them
improve their farming practices. However, the village extension officers
guided them to projects that coincided with central government priorities in order to get funds. The central government budget ceiling and the priorities for certain crops or types of projects (such as projects adding to the value chain) also guided the compilation of plans and the selection of projects at the district level. Although the role of farmers was visible in the development of the plan at the village level, in the end the plans and project proposals matched with central government priorities, more than with the original input by farmers during the planning process.

As with the strategic plan, the role of the local council was very limited. The plans were tabled to council committees and the full council, but there was hardly any debate about their content or the allocation of resources. Meetings were dominated by issues of taxation and expenditure and indeed with the implementation of previously approved projects. But the content of plans and future projects did not become a subject for discussion. At the moment of deciding on the plans, the council did not challenge the proposals that mirrored central government priorities, nor did it articulate preferences of the community, and consequently, the latter were not reflected in the plans.

Hai district operates under the same formal arrangements as Morogoro Municipality. It is confronted with small own financial revenues; earmarked grants; central government conditions and priorities; and supervision. They all limit the possibilities for the local council to set its own priorities. The council is confronted with plans and budgets that are inspired by central government priorities and scrutinized beforehand by the regional secretariat. However, one would expect that in view of the composition of the council – the ruling party has no majority - harsh discussion and debate about plans tabled by the administration would take place. This proved not to be the case. Even councilors who, from a national perspective, belong to the opposition abided by the rule that it was either not sensible or not appropriate to challenge proposals that evidently had the blessing of central government.

### 6.6.2 Actual service delivery: allocative efficiency, cost-efficiency, tailor made services and coordination

Whether the delivery of agricultural extension services adequately reflects the preferences of farmers or not, not only depends on the local policies and plans, but also on the way the administration and more specifically the field workers operate, interpret policies and use their discretion. As in the case of Morogoro Municipality, in Hai district the Agricultural Development Plans only provide general guidelines for the delivery of agricultural extension services. They establish which projects are to be carried out and determine the available budget. With respect to services outside the projects, no specific policy guidelines are issued. So, the officials enjoy a large degree of discretion.
The pattern of service delivery in the three wards included in the research shows that the village extension officers visit farmers’ groups for advice, organize training sessions and field schools. They seem to take these tasks seriously and communicate with farmers’ groups in case they cannot honor their commitments. An explanation seems to be that supervision on field workers is relatively tight: officials must fill in a daily register and a monthly report, and, on occasion, ward extension officials carry out on site inspections to check on their personnel. Nevertheless, groups that are located far away or in areas with bad infrastructure, experience minimal visits by extension officers. And the same goes for groups that are no longer supported financially. Moreover, the Hai case shows a regular pattern of service delivery to paying farmers, especially livestock keepers, who call upon extension officials for assistance. The practice of paid assistance is silently endorsed by the department that established tariffs for different services rendered.

So, while the supervisors are relatively strict when it comes to field officials honoring their commitment to visit farmers’ groups, they leave them ample room to dedicate a substantial part of the working day to service paying farmers. In the end this means that the needs of small crop growers, most of whom are not in a position to pay for services rendered, are to a large extent neglected, and that allocative efficiency is distorted. The practice we found also implies that the cost-efficiency is low, as field officers are paid a full salary for rendering what is at most a half days’ work of extension services in the proper sense.

In Hai district, there are no guidelines in place that instruct field officials to tailor their services to individual or local circumstances. The extension officers themselves decide on the programs and techniques to be used. We found that extension officers tailor their services, but only in a limited way. Officers use diagrams to demonstrate how to grow crops if their audience is illiterate; training sessions are adjusted to the age of the participants. Overall however, officers use standard programs to educate farmers, which do not take into account the specific issues or circumstances different farmers have to deal with. Amongst field officers this is not felt as something that is necessary to be effective, nor are they trained to offer tailor made programs.

In Hai district, quite a number of NGOs also provide extension services. Formal regulations require NGOs to register, coordinate their activities with those of local government and collaborate in developing work schedules. The district insists on registration and many NGOs active in the field have been identified. Notwithstanding, the actual coordination of activities is limited, which the parties involved attribute to the fact that their goals and interests are different. At the ward level, extension officials occasionally take the initiative to seek cooperation in order to increase resources for their farmers. NGOs on the other hand sometimes seek assistance from officials to identify farmers to participate in an extension project. But cooperation fails to materialize if extension officials are not compensated for their efforts, and NGOs
then work in isolation. This sometimes results in overlap, the repetition of services to the same groups of farmers, and the absence of services where they are most needed.

6.6.3 The relation between the District government and the Research institute

The zonal research institutes have two main functions: to carry out demand-driven research and to disseminate new technologies and knowledge, either by transferring these to local governments and farmers or through the training of extension officials. With respect to the second function, the Selian ARI is relatively active. It makes use of a series of different channels and methods such as field days, radio broadcasts and training sessions; and it disseminates new technologies through direct contacts with local governments. Nevertheless, the number of extension officials and farmers that are reached by these activities is small in relation to the population of officials and farmers in the zone. Scarce resources, for example to invest in modern means of communication, provide an explanation.

Overall, the Selian ARI is not able to realize demand-driven research. On occasion and through its’ direct contacts with local governments, requests for research are made, and as much as possible honored by the institute. However, a wide consultation of stakeholders to identify research needs, as required by formal guidelines, does not take place. While the institute itself argues that it lacks the resources to organize such consultations, the reality is that the budget it can freely dispose of to carry out research is very limited; it makes stakeholder consultations hardly worthwhile. In practice, the institute is highly dependent on funds provided by international donors, which limits the institute in the choice of research topics.
Chapter 7

Comparative analysis and conclusions

7.1 Introduction

This chapter contains a comparative analysis of the two cases involved in the research. The analysis is based on the empirical evidence presented in the two previous chapters. There we described how the process of planning and decision-making about agricultural extension services in Morogoro Municipality and Hai district takes place, and how extension services are delivered to farmers. We also made an assessment of the quality of agricultural extension services delivery in the two local governments, measured against a number of criteria that are generally associated with decentralized systems of public administration: democratic decision-making; allocative efficiency; and tailor made, coordinated and cost-efficient service delivery. Moreover, for each case, we identified factors that could explain the process of service delivery and its output.

In this chapter our aim is to explore the similarities and differences in the practices that were found in the two cases, and use the comparative analysis to formulate an answer to our research question: how the formal institutions that regulate the delivery of extension services, the availability of financial, human and other resources, and the presence of informal, social rules separately and in mutual interaction result in the quality of agricultural extension services. The analysis is organized around the three topics that were used in the description of the two cases: planning and decision-making, actual service delivery and the relation between the research institutes and local government. We start with a summary of the main features of the two local governments.

7.1.1 General features of the two local governments

The municipality and the district included in the research are subject to the same formal administrative system. Their formal tasks and decision-making authority are the same, they must work under the same set of procedural guidelines concerning planning and budgeting, and are expected to contribute to the realization of the same set of national goals in the field of agriculture. But the two local governments show substantial differences with respect to a number of contextual features. Some of these features were known before the
research was undertaken and used as criteria for the selection of different cases, such as the geographical setting, population density, type of agriculture and the agro-ecological conditions.\textsuperscript{1} Other features came out of the research.

Hai district is a rural district with a scattered population of 210,533 and rainfall ranging from 750 mm to 1750 mm per annum. More than 95% of the population is engaged in farming. Morogoro Municipality is a densely populated urban district with a population of 315,886. Still around 33% of the population of Morogoro Municipality is engaged in farming, but for many agriculture is a secondary activity.

The fact that Hai district is in rural area with a village setting and has a big farming population, gives it an advantage in terms of financial resources. In relation to its population size, it receives larger amounts of development and recurrent grants for the agriculture sector than Morogoro. On the other hand, the number of (potential) clients per officer in Hai district is higher than in Morogoro Municipality. In Hai District 76 field extension officers must service almost 50,000 households involved in farming (1:657), in Morogoro Municipality 58 field officers must service an estimated number of households of 25,425, which is equal to a ratio of 1:438. Moreover, in Hai district 76 field workers have to cover large distances to service farmers engaged in agriculture and livestock breeding. The big number of farmers and the scattered population make it difficult for them to deliver the services especially during the rainy season. In Morogoro Municipality, the smaller number of farmers and on average shorter distances make it relatively easy for the 58 field extension officers to provide their services.

7.2 The planning and decision-making concerning agricultural extension services

One of the key assumptions of the theory on decentralization is that the transfer of decision-making authority to local government will enhance the democratic caliber of decision-making and realize an allocation of public goods that reflects the preferences of the community.\textsuperscript{2} Decision-making by elected local representatives and the direct involvement of citizens in the development of policies that affect them are considered as valuable in itself, but are also considered to be conducive to the realization of allocative efficiency. It is especially in the planning of extension services and in the allocation of resources to different activities that both criteria for the quality of local governance should materialize.

If we review the practices of planning and budgeting for agricultural extension services in Morogoro Municipality and Hai district, they show a high degree of similarity. Both in the development of the five-year strategic

\textsuperscript{1} Cf. chapter 3: Case selection strategy.
\textsuperscript{2} Cf. chapter 2: Local democracy; Responsiveness and allocative efficiency.
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plans and the annual development plans that we studied, non-elected officials played a dominant role. In both cases officials carried out a SWOT analysis as prescribed by central government guidelines to underpin the strategic development plans. The analysis carried out in Hai district was very general in character identifying issues such as climate change and the low adoption rate of modern technology. The strategic plan on the other hand contained very specific and detailed targets concerning the production of crop and livestock. In Morogoro, the analysis was also general and mentioned issues such as the lack of agricultural information available to farmers. Also here, the strategic plan included precise percentages for the increase in production of crops and livestock. In general, there was no relation between the SWOT analyses on one hand and the strategic plans on the other. The targets came out of the blue or, as officials from Morogoro Municipality admitted, were formulated with an eye for the national agricultural development policies. In contrast with the plan of Morogoro Municipality, the Hai district plan contained a specification of activities to improve the quality and quantity of extension services.

In Morogoro, stakeholders, such as farmers’ organizations and NGOs active in the field of agriculture were consulted but their views and opinions such as the need to increase agricultural extension services and farm implements were not reflected in the strategies. In Hai district, before the strategic plan was submitted to the council, community and traditional leaders were consulted about the overall strategic development plan, covering all policy sectors, but specific stakeholders for agriculture such as farmers’ groups were not consulted. Overall, the involvement of farmers or their representatives in the development of the strategic plans either was absent or did not affect the content of the plan.

Our research shows that in both local governments farmers are involved in the development of the annual district agricultural development plans. Officials follow the procedures prescribed by legislation and organize street or village assemblies, where farmers can make suggestions for projects that can contribute to the productivity or profitability of their activities. In Hai district even a quite elaborate system of consultation is in use, involving a special village committee and the village assembly. In these meetings farmers articulate their needs. Notwithstanding, the extension officials play a leading role in the process. They do so by ‘educating’, as they put it, the farmers about the priorities of central government and the chance of their project plans being financed. The role of the officials is even more prominent in the compilation of proposals from villages and wards into a draft for the district annual plan: projects are changed or selected so that they fit central government priorities. While at first sight the idea of bottom up planning is present in the case of the annual plans, the role of farmers is actually very limited; as a result, the plans
reflect the priorities and guidelines of central government as they are interpreted by the officials, not the preferences of the farmers.

In both local governments, the drafts of the five-year strategic and annual development plans are first submitted to the regional secretariat for review, then tabled to the council committees for advice, and subsequently submitted to the full council for approval. Our research shows that in both local governments, the council committees nor the full council discuss the plans in detail, nor do they challenge the goals, instruments or projects as proposed by the officials. Sometimes, council members ask questions for clarification. In Hai district occasionally plans give rise to a debate. But over the past years, councilors never proposed to amend the drafts, to reject some projects or include others, or to change the priorities included in the plans. All plans were approved as they had been presented to the council. The elected councilors represent a ward. However, when it comes to decide on development plans and the allocation of resources to projects, they do not represent their ward; they do not articulate the specific needs or preferences of their constituency. As a result, the priorities of central government included in the plans are not challenged, let alone substituted by local priorities.

All in all, the conclusion must be that the decentralization of agricultural extension services falls short in realizing direct and representative democracy when it comes to the planning and budgeting of these services. As a result, the preferences of the local community are not articulated and not reflected in the allocation of public extension services.

There are a number of explanations for this. One has to do with the formal institutions. The administrative system for the delivery of extension services has been decentralized in the sense that the local councils establish policies and plans, and that extension officials employed by local government deliver the services. In many other aspects the administrative system is still quite centralistic. National policies define priorities that local governments have to abide to. Legislation prescribes that certain planning procedures must be followed and that the resulting plans and budgets need the approval of central government. As can be observed from the overviews of the budgets of Morogoro Municipality and Hai district, local revenues that local governments are free to spend as they wish, are small. For the implementation of development projects, local governments largely depend on earmarked grants, and are therefore subject to conditions set by central government. Amendments to the Local Government Act passed in 2006 strengthened the position of deconcentrated central government officials such as the regional and district commissioners, introducing ‘consultative’ functions, which in practice result in ex ante supervision of council decisions (Hulst et al. 2015). Central government agencies such as the regional secretariats scrutinize the proposals developed by the local bureaucracy even before they are submitted to the council. All in all, the formal institutions imply that the room for local
government to set its own priorities is limited. *Decentralization by devolution* to a large extent has remained a symbolic project, at least in the field of agriculture.

However, the formal institutions alone cannot explain why local officials, who are supposed to make stock of the preferences of the local community, at the moment of drafting plans primarily orient themselves towards central government guidelines and priorities. The formal institutions do not explain why councilors do not even question or discuss the content of plans and the proposed budget allocations, why they do not at least try to mold plans in a way that these address the needs of their own constituency. Our research shows that local administrators and politicians share a *culture of upward accountability*: they abide to the social rule that you cannot and must not ignore the guidelines and priorities set by central government. Although formally employed by local government, senior officials consider themselves representatives of and accountable to central government. They consider it their duty to secure that local governments respect national legislation and implement national policies (cf. Hulst et al. 2015).

Amongst politicians it is a shared conviction that an elected politician cannot go against the manifesto of his or her political party. The plans and budgets that are submitted to the council are considered to be in line with the manifesto of the ruling party, because they have been scrutinized by officials appointed by party. Therefore, councilors from the ruling party will simply conform to them. This of course does not apply to councilors who do not belong to the ruling party. In Hai district, where the opposition is well represented, we found that councilors from the opposition occasionally question the proposals presented to them, but in the end no amendments were ever made. Even opposition councilors perceive guidelines from national government as a law that they should respect. The fact that alternative plans can jeopardize the necessary central government approval and the subsequent allocation of funds, also plays a role.

All in all, it is the combination of a *de facto* centralized administrative system, a culture of upward accountability shared by appointed officials and local councilors, and a lack of financial resources that local governments can freely allocate, that explain the limited degree of democratic decision-making on agricultural extension services, and the fact that local preferences are not taken into account.

### 7.3 The delivery of agricultural extension services

The strategic and annual plans established by the local councils and the funds that are allocated to projects constitute the policy framework for the actual delivery of agricultural extension services. The quality of the service to a large extent depends on how the local administration and its officials operate within that framework. According to the theory, there is a (possible) positive
relationship between decentralization and a number of quality dimensions of service delivery: allocative efficiency, the delivery of tailor made services, the coordination between different services and the cost efficiency of services. We will subsequently discuss the different quality dimensions of the actual delivery of extension services in the two local governments and try to explain them in terms of our theoretical framework.

7.3.1 Allocative efficiency

One assumption found in the literature is that local government is in a good position to incorporate different needs of a heterogeneous population into its services.\(^3\) That applies to a council that establishes policies, but also to agencies that implement these policies and enjoy a certain degree of discretion. In principle, extension officers are well-informed about the specific needs of farmers and can, within their discretionary power, allocate their services accordingly. What are the findings of our research concerning allocative efficiency in the actual delivery of services?

A first observation to be made is that in both local governments the strategic and annual development plans leave the administration, i.e. the responsible departments a large amount of discretion to choose what services to deliver and to whom. The strategic plans contain specific goals for the improvement of agricultural production, but only very general guidelines for the delivery of extension services. The annual development plans focus on extension projects and their funding; apart from that, they do not formulate priorities or include guidelines the administration has to take into account. So, except for the projects included in the plans, for the implementation of which they can be held accountable, the departments of agriculture and livestock of the two local governments can decide on the mix of activities and clients themselves.

The mix of activities and the choice of clients that are serviced in the two local governments show a very similar pattern; they only differ in some details. In both cases extension officers provide support to groups of farmers that receive funds for a project, i.e. if the cash flows to local government, and as long as the funding lasts. In both local governments the number of training sessions and field schools is very limited in relation to the number of farmers and farmers’ groups. Groups without funds and individual farmers who seek advice, are only serviced if they live nearby the office of the extension officer and if ‘emergencies’ do not stand in the way. A substantial part of the time and efforts of extension officers is dedicated to these ‘emergencies,’ i.e. to service farmers, especially livestock keepers, who pay for transport, medicine and herbicides, and for the treatment of their cattle or crop itself.

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3. Cf. chapter 2: Responsiveness and allocative efficiency.
While the above sketches the general pattern found in the two cases, some differentiation is necessary. The practice of service delivery in Hai district shows a bigger variety: village meetings are used to transfer information to farmers and there is the district radio, which also serves as a means to convey information and to respond to individual farmers who seek advice. Both have their limitations, but they address some of the needs for information and support. Moreover, extension officers in Hai district in some respects seem to take their responsibilities more seriously: if for some reason, they have to cancel a planned training session or field school, they notify the farmers’ group concerned and plan a new meeting. In Morogoro Municipality we found examples of farmers’ groups that several times in a row waited in vain for the extension officer to attend their meeting. A last difference relates to how much the extension officers charge for their services: in Morogoro Municipality this is left to the discretion of the individual extension officer; in Hai district, the department has established fixed rates for transport, medicine and support.

Although it is very difficult to make an objective assessment of the loss of social welfare that results from the practices we found, there is sufficient foundation for the conclusion that they distort allocative efficiency. In both cases farmers’ groups call upon extension officers to support them and are not attended; individual farmers seeking advice are neglected in favor of paying clients, who as a general rule are economically better off. Moreover, in both areas there are more crop growers than livestock keepers: in Morogoro Municipality, of the 15,000 registered farmers, more than 12,000 are engaged in crop growing, and 2,500 are livestock keepers; in Hai district, there are no exact data on the proportion of crop growers and livestock keepers, and many farmers who grow crops are also engaged in livestock breeding; but the data indicate that crop growing is the dominant activity. In both areas crop production represents a higher economic value than livestock keeping, and both strategic plans dedicate ample attention to improve the productivity of agriculture; notwithstanding, most of the time and efforts of the extension officers goes into assisting (paying) livestock keepers.

How can we explain the fact that the actual delivery of extension services fails to satisfy the evident need for advice, training and assistance of large numbers of farmers, especially crop growers? All policy and field officers that were interviewed as part of the research referred to the lack of resources available to them: means for transport, tools to be used in field schools or training sessions, agricultural input and medicine. There is no doubt that resources are scarce and that field officers are ill-equipped to perform their duties. On the other hand, the availability of resources is also a matter of choice. Every local government receives ‘Other Charges’ grants for recurrent expenditures, which are also meant to cover transport costs. The administration has funds at its disposal to pay for fuel. But, according to field officers in
Hai district, these are used by officials from the headquarters to pay for their own transport; they are not allocated to field officers to perform their duties. Servicing paying clients field officers generate extra income and compensation for the costs of transport and medicine. They subsequently choose not to spend these resources on transport and tools related to training sessions or field schools for farmers who cannot afford to pay for the services of extension officers. Although local revenues only represent a small portion of the total of revenues of local governments in Tanzania, they do provide some financial leeway. But our research suggests that these revenues are primarily spent on the creation of temporary employment in public service as part of a clientele system, and on allowances for politicians and senior officials, not on resources for public services. All are examples of situations in which politicians or officials consciously opt to withhold resources to be used in the actual delivery of public services. The argument that a lack of resources hinders adequate service delivery, is not without foundation, but it also serves as a ritual and covers up practices of elite capture.

What evidently is an important factor in explaining the mix of activities and clients in the delivery of extension services, is the way field officers are managed by their superiors. In both cases, the departments work with general instructions and work schedules, which to a very large extent leave it up to the field worker to decide which services he provides, to which farmers, when he does so, and how much time he spends. Work schedules are based on lists of households that are registered as farmers. They do not provide information about specific conditions or problems the farmers have to deal with. Consequently, the schedules only contain a very general description of the activities of the extension officers (‘visit’, ‘training’). And even then, deviations from work schedules are not sanctioned, as long as the field officer can show he has been active visiting farmers or farmers’ groups.

With respect to supervision, there is a difference between the two cases. In Morogoro Municipality field officers write a monthly report to account for their activities and do this in general terms. In Hai district field officers also have to fill in a daily register providing detailed information about their activities, although the registers are only used to a certain extent. In contrast with Morogoro Municipality, in Hai district ward extension officers occasionally visit villages to inspect the performance of extension officers working at the village level. These visits are not meant to check if extension officers keep to their work schedules. But the combination of the detailed registration of activities and occasional inspections by their superiors actually makes field officers experience supervision. This explains why field officers in Hai district inform farmers’ groups if they cannot attend a planned meeting: farmers can easily complain to visiting ward extension officers about village extension officers who do not take their responsibilities seriously. Our research suggests that the supervision of extension officers may be related to the fact that there is some pressure from farmers to perform. Farmers articulate their
needs in the planning process; agricultural issues come up in regular village meetings and farmers are relatively well informed about the existence of extension services.

Notwithstanding the somewhat tighter supervision in Hai district, overall, in both cases the field officers enjoy a large degree of discretion in their daily work. It allows them to dedicate a lot of time and effort to paying clients, and cutback on services to other individual farmers and farmers’ groups. Apart from considerations of personal gain, the research suggests there are a number of social rules that can explain the way field officers operate. One is that a reference to a lack of resources is used and accepted as a legitimate reason to withhold services or to ask farmers to pay for services. A second rule that we found is that the delivery of a public service is not the duty of extension officers, not something that farmers are entitled to, but a favor, which deserves a favor in return. This is backed up by explicit statements of extension officers (‘you cannot expect me to advise a farmer, if he is not willing to give me something in return’) and by the fact that we found no evidence whatsoever of farmers questioning the claims of extension officers concerning scarce resources, or protesting against the fact that they have to pay for services. Conflicts between farmers and extension officers can arise about the amount to be paid, payment itself is a socially accepted practice. The fact that in Hai district extension officers work with tariffs established by the department supports this.

Concluding, the distortion of allocative efficiency in the actual delivery of extension services can be explained by a combination of the management of extension officers, which allows for a high degree of discretion of field officers, and by social rules implying that giving priority to paying farmers, and not to farmers who need support most, is an acceptable way to deal with the scarcity of resources.

7.3.2 Tailor made services

According to the theory on decentralization, if local governments are not bound by standard operating procedures, methods and service categories established by central government, services can be tailored to circumstances and characteristics of the community or the individual client. In principle, field officers such as extension officers are well-informed about the circumstances and features of their clients and can tailor their services, provided that local government itself does not establish detailed standard operating procedures.

The research shows that both local governments are familiar with the so called annual calendar for agriculture and livestock activities, developed by

4. Cf. chapter 2: Tailor made service delivery.
central government, which aims to attune the content of support activities to the natural growth and breeding cycles. The calendar is used as a general frame of reference. However, in neither of the two cases does it serve as a set of rules that directly bind the extension officers. In Morogoro Municipality, it is simply left to the field officers to decide what support is rendered. That is also the case in Hai district, but there, the department explicitly justifies this by the fact that the calendar does not take into account the variation of ecological zones in the district. Consequently, the officers are instructed to attune their activities to the local conditions, for example to whether agriculture in their area involves several crops a year or not.

With respect to the methods extension officers use to transfer knowledge or train farmers, we have seen that in both local governments services are to some degree tailor made. Generally, training sessions are planned over the weekend to accommodate farmers. Some extension officers adjust their didactical method to the age or level of literacy of the farmers they train. But these are exceptions. In most cases extension officers provide standard lectures on standard topics.

As mentioned above, the local governments in question have not established detailed operating procedures that would stand in the way of tailor made services. Notwithstanding, these are realized only to a very limited degree. Extension officers claim that this is due to a lack of resources, i.e. tools that enable them to vary in their didactical methods. But this can only partially explain that services are not tailored, as a variation in didactical methods is also possible without special tools. The research suggests that extension officers do not feel any pressure to tailor their services. It is not considered as an imperative, not as a condition to make training and the transfer of knowledge effective. Then again, the departments in the two local governments do not evaluate the impact of training sessions and field schools.

### 7.3.3 Coordination with NGOs

According to the theory on decentralization, local governments that have decision-making authority about services rendered to the community are in a good position to coordinate between different public policies, and between public services and services provided by private organizations: they dispose of the necessary information about a possible overlap between services and have the discretionary power for mutual adjustment. Concerning extension services, we would expect that coordination between the public services and services offered by NGOs would take place.

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5. Cf. chapter 2: Coordination of service delivery.
In fact, we have established that there is no systematic coordination between the public extension services and the services rendered by NGOs. There is however a difference between Morogoro Municipality and Hai district. In the former, coordination is almost absent and a number of incidents were reported involving the delivery of extension services by NGOs that were either faulty or interfered with public services. In Hai district coordination and cooperation is more frequent. Regularly, NGOs with funds or resources approach extension officers at the ward level to interest groups of farmers to participate in an extension project. Extension officers tend to cooperate, at least if and as long as they benefit themselves. But in Hai district we also found examples of NGOs that operated on their own and interfered with public service delivery.

In both local governments formal rules make it mandatory for NGOs to register. NGOs must meet a number of criteria to be admitted. Moreover, in both local governments NGOs are obliged to contact either the department or the field extension officers in order to be introduced to farmers and coordinate their activities. In practice NGOs sometimes operate without being registered and/or develop their own schedule of activities contacting farmers’ groups themselves. Our research suggests that two factors play a role. First, NGOs have their own objectives and special interests, which makes it unattractive for them to coordinate with the public service. Second, as the Hai case shows, sometimes NGOs do approach the extension agencies in order to help them identify suitable farmers’ groups, but are then confronted with extension officers who refuse cooperation. Extension officers consider the assistance to NGOs as something that does not belong to their regular duties and expect to be compensated for their efforts. Sometimes, the statutes or sponsors of NGOs prohibit these types of payments, which leaves NGOs the option to operate on their own, or not to operate at all.

Concluding, in both cases the formal rules that require NGOs to register and cooperate with government extension officials do not seem to function properly because goals of NGOs and the local governments differ. In contrast with Morogoro Municipality, Hai district takes the issue of coordination somewhat more seriously. The district is confronted with some pressure from farmers to provide services and consider cooperation with NGOs as a means to increase the scarce resources for service delivery. The fact that field officers expect to be paid for their collaboration on occasion presents a barrier for effective cooperation.

### 7.3.4 Cost efficiency

In a decentralized system, local governments have decision-making authority on taxes and expenditures and can be held accountable by the public. The theory on decentralization assumes that this will promote cost-consciousness and give rise to management systems that control the costs of service deliv-
We would expect that local governments and administrators supervise extension officers to make sure that scarce resources are used in a cost-efficient way.

The Village Agricultural Extension Officers shall:

i. Train, facilitate and support farmer group formation and farmer networking,

ii. Assist groups and farmer’s fora and networks to develop service contract proposals and plans,

iii. Provide advice to project Committees and the PFC on agricultural issues,

iv. Ensure that VADPs pay due considerations to the environment and sustainable use of natural resources,

v. Facilitate implementation of on farm trials in collaboration with research institutes,

vi. Support up-scaling of successful activities and ensuring the dissemination of successful stories, and

vii. Prepare progress reports and submit them to Ward Agricultural Extension Officer.


Our research suggests that the cost efficiency of the delivery of extension services is low. Extension officers are paid on the basis of a 45-hour working week. In practice, based on interviews with field workers and direct observations of their activities, our estimate is that field extension officers dedicate a maximum of not more than three hours a day to deliver services to farmers’ groups in the form of training sessions or field schools. One working day of the week is generally reserved for administrative duties, which seems generous given the level of field activities. The rest of the work week is used to visit farmers who call upon the field workers to provide assistance and are willing to pay for the services. In most cases, it concerns livestock keepers, who ask for treatment of their ill cattle, or farmers, who need their crops to be treated with herbicides. Besides, some extension officers exploit a small private business, selling agricultural input such as seeds and fertilizer. Now, while there is no doubt that treating ill cattle or controlling crop diseases is a necessary activity and contributes to agricultural production, it does not form part of the job description of the extension officer. His job is to advise and train, to transfer information on agricultural technology, to assist farmers in developing projects and promote the formation of groups and networks. From this perspective, the limited amount of extension services produced by the average extension officer comes with a high price.

We have already established that the supervision of field workers is lenient, although there are differences between the two local governments included in the research. As long as field officers can show that they have been active visiting farmers their superiors are satisfied. The treatment of cattle

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and crop for paying farmers is a social practice that is allowed and even endorsed, as we found in Hai district. The two councils are active in supervising the administration when it concerns the implementation of projects and tax collection. But we found no evidence that they are interested in the cost efficiency of the services for which they bear responsibility. Therefore, for the administration there are no incentives to take it into account in their management of field officers. The main reason for the lack of interest in cost efficiency is related to the formal administrative system: it is central government that decides on the allocation of staff to local government and all permanent local staff are on the payroll of central government. Expenditures for personnel do not figure on the local budget; efficiency gains (by cutting back on staff for example) do not fall to local government. In fact, there is no incentive for local governments to invest in x-efficiency, i.e. to lower the personnel costs of a given quantity of public services.7

It is difficult to establish a well-founded criterion for the ratio between management and policy officers, and field officers. Still, in both local governments the ratio between the agricultural staff of the headquarters and field officers seems unbalanced. In Hai district 26 headquarter staff supervise 76 field workers; in Morogoro Municipality the ratio is 20 to 58. The administrative system of the allocation of permanent staff also means that local government has no influence on the number of different positions in its local administration: it is decided by central government. Here, the formal institutions prevent that local councils bother with cost efficiency.

7.4 The relation between Research institutes and local governments

Research institutes are attributed an important role in the system of delivery of extension services by local government. Local extension services must be fed with information on research findings and knowledge of new technologies. After their formal training in agricultural institutes, the extension staff of local governments must keep their expertise up to date with refresher courses and training provided by the research institutes. Moreover, the idea is that extension services in local government are best served by demand-driven research, i.e. research that relates to the problems encountered by the local governments themselves. To realize both ends, a good relationship and frequent contacts between local governments and the research institute in their area are crucial.

Our research shows that the relationship between the two research institutes and the local governments in their respective zones differs significantly.

7. If citizens would hold their representatives accountable for the level and quality of services, this could incite councilors to raise the level of y-efficiency, i.e. to demand more and better services from their administration with the same amount of resources. We have found no evidence of this mechanism, assumed to be working in a decentralized system, either.
Contacts between the Ilonga ARI and Morogoro Municipality are almost non-existent. The liaison unit of the Ilonga ARI does not visit Morogoro to inform the extension staff about new technologies or to inquire about specific problems in agriculture or research needs the municipality experiences. It does not take notice of the monthly reports of local extension officers to identify possible topics for research or training needs. In turn, the extension staff of Morogoro Municipality do not approach the research institute with proposals for research, except on request of the institute itself, which rarely happens. Officials of the municipality are not involved in the decision-making concerning the selection and funding of research projects. In contrast, there are regular contacts between the Selian ARI and Hai district (and other local governments in the zone). Liaison officers are invited by the district to participate in planning meetings and take stock of the research needs of local farmers. Liaison officers use their contacts to promote on-trial-farming projects that require the cooperation of the district. There are regular contacts by e-mail and phone between officials of the institute and the district; on occasion, these serve to voice and respond to urgent needs for support.

Notwithstanding the differences in the relationship between the research institutes and the local governments, in both cases the ends formulated above are not realized or only to a limited extent. The research programs of both institutes are not demand-driven; they are not based on the input, suggestions or proposals of local governments or of representatives of farmers. Although we found some exceptions, the dominant pattern is that research requests from local governments are not honored, unless they provide the funds themselves to carry out the research. With respect to the training of local extension officers, both institutes have offered these - the Selian ARI substantially more than the Ilonga ARI - but the number of trainings and trainees is low in relation to the total staff of extension officers in the respective zones. In contrast to the Ilonga ARI, the Selian ARI is relatively active disseminating knowledge about new technologies through brochures, video clips and field days. Nevertheless, even in the case of the Selian ARI the number of farmers reached is small in relation to the total population of farmers.

The research suggests that a number of factors can explain the fact that the research is not demand-driven. First, to finance research projects both research institutes heavily rely on funds provided by donors, i.e. international NGOs and private companies. As a general rule this implies that funds are available for certain research topics, that the public institutes have to orient their proposals to these topics and sometimes compete with private research organizations to obtain funding. Second, both institutes seem reluctant to spend the limited grants they directly receive from central government to projects requested by local governments. One reason is that central government has developed a national research program and priorities for research on crops and farming systems, the institutes feel they have to take into account.
A second reason is that institutes would prefer to carry out fundamental research on issues they themselves have identified, and not spend their resources on projects suggested by local governments. Both research institutes claim that they have no funds to organize stakeholder meetings, as these would imply paying for transport and allowances for the participants. Rather it would seem that for the two reasons given, they prefer not to spend their limited budget for recurrent expenditures to consult stakeholders and be confronted with demands they cannot or would prefer not to honor. On the other hand, in the case of Morogoro Municipality, the local government itself does not take initiatives to inform the Ilonga ARI of issues its farmers are facing and would require research. Overall, agriculture is not a high priority sector for Morogoro Municipality. This is in contrast with Hai district, where the economic weight of agriculture is substantially higher and local government sustains regular contacts with the Selian ARI. It explains why on occasion research projects are carried out in response to issues put forward by local government.

All in all, in both cases, the research does not seem to be demand driven. There is an issue of limited own resources of the research institutes to finance research, which makes them dependent on the priorities of donors; they must also take into account the priorities of central government. With respect to the dissemination of knowledge and training activities the Selian ARI is significantly more active than the Ilonga ARI, and overall its relationship with local governments such as Hai district is closer than the relationship between the Ilonga ARI and Morogoro Municipality. Here, the economic value attached to agriculture in the two regions plays a role. In Hai, agriculture is of high economic value and therefore given high priority by the local government, farmers and the institute; in Morogoro, agriculture is not considered important and the municipality does not take initiatives itself to contact the ARI; for the ARI, the municipality is not an important partner.

7.5 Conclusions

The main goal of our research project was to gain further insight into the factors that explain the functioning and performance of decentralist administrative systems of public administration. Much of the literature on decentralization in developing countries seeks explanations in features of the formal administrative system and the availability (or rather scarcity) of resources. Our assumption was that a thorough understanding of the effects of decentralization requires that we take three factors into account, both separately and in their mutual interaction: the formal administrative system, which includes the rules and procedures that regulate the intergovernmental relations and the way government entities operate in a certain policy sector or the delivery of a public service; the resources available to the different government entities, especially local government; and the informal institutions, i.e.
the social rules that guide the behavior of the different actors involved in the policy sector or public service.

To enhance the insight into the functioning of decentralized systems of public administration and the role different factors play therein, we carried out research into the delivery of extension services in Tanzania. Our research was guided by the following research question: *How does the decentralized system of agricultural extension service delivery in Tanzania function and perform, and how can the formal administrative system, informal institutions and the availability of resources explain the process of delivery and its output?* Based on the two case-studies that were conducted, the overall conclusion must be that the administrative system in place in Tanzania fails to realize the positive effects that are generally attributed to the decentralization of service delivery to local government. Direct and representative local democracy only function in a very limited way and the plans and projects established by the local councils do not reflect local preferences. The actual delivery of services to a large extent fails to address the needs of a large population of farmers to be trained and provided with up to date knowledge concerning techniques of farming and stock breeding. Only in a very limited way are services tailored to local and individual circumstances. The coordination between public and private service providers proceeds with difficulty. Although the support provided by the Research institutes to local governments varies, overall the institutes fail to address research needs of local governments and only reach a very limited number of local extension officers for training.

Above we analyzed how different quality dimensions of the delivery of extension services could be explained by features of the formal administrative system in place, certain social rules and the availability of certain resources. Now we take a different perspective and look at the way the formal administrative system, informal rules and the availability of resources influenced the process of service delivery and its output, both separately and in their mutual interaction.

### 7.5.1 The formal system of intergovernmental relations limits autonomy and breeds a culture of upward accountability

In 1999, the responsibility for the delivery of agricultural extension services was transferred from central government to local government. The authority to establish plans and programs that included extension projects and activities was attributed to the local councils. Extension officers formerly employed and instructed by central government, came into the employment of local government. From then on, the extension officers would provide the services instructed and supervised by officials of the local administration.

One of the key assumptions of the theory on decentralization is that the transfer of decision-making authority to local government - governed by
locally elected politicians and administered by officials who are accountable to these politicians - enhances the accountability of local government to the local population. As a result, decentralization would contribute to more allocative efficiency, more tailor-made services and more cost efficiency. Our research shows that in practice, when councilors decide on the allocation of financial resources, they do not articulate the preferences of the local community or their own constituency, but conform themselves to the proposals presented by the officials. Although procedural arrangements should in theory guarantee that the population can effectively influence the priorities in plans that affect them, in practice local officials to a very large extent determine their content. The officials make sure that central government priorities are reflected in the plans and proposals they submit to the council for approval.

It is obvious that the failure of the system of public administration to realize the professed goals of decentralization is to a large extent due to the fact that the formal relations between central and local government are in fact centralistic in nature. We have shown that central government guidelines and policy priorities, the conditions attached to grants and the supervision on local budgets, strategic plans and development programs together give central government extensive control over local decisions, especially decisions that involve the allocation of financial resources. Amendments to the Local Government Act passed in 2006 strengthened the position of deconcentrated central government officials such as the regional and district commissioners, introducing ‘consultative’ functions, which in practice result in ex ante supervision of council decisions (Hulst et al. 2015).

While these features of the administrative system obviously severely limit the autonomy of local government, there are still two other features that have their impact on the quality of service delivery.

One feature relates to the system of human resources management. One prominent feature of the system is that local officials such as the DED and the heads of the sectoral departments are hired and fired by central government. As a corollary of the Local Government Reform Program I, in 1999, full authority was granted to local government over its local staff. However, this authority was step by step curtailed by the Public Service Act 2004 and a series of Public Service Regulations (Tidemand et al. 2010: 51). A 2007 revision of the Public Service Act established a centralized recruitment system operated by the Public Service Recruitment Secretariat. In practice, central government not only recruits and allocates local executive directors and heads of departments, but the entire staff of health, educational and agricultural services, and only the Minister can decide on dismissal (Hulst et al. 2015).

The centralized system of recruitment and management of the local staff has two consequences. The first is that it limits the control of the local coun-
cil over the local administration. It cannot simply fire local administrators who underperform nor can it organize the local administration, and for example expand or reduce the capacity of certain departments or services according to its own preferences. One obvious consequence is that the system does not contain any incentive whatsoever to make sure that the local departments work in a cost-efficient way.

The second consequence of the centralized system of human resources management is that the career of senior officials entirely depends on how they perform from the perspective of central government and on good relations with central government officials, national politicians or indeed the President himself. In practice, senior officials are in fact tightly monitored by central government officials such as the district and regional commissioners and it is important to maintain good relationships with them as they have a big say in their promotion or demotion. If a DED is invited by a district commissioner for a consultative meeting that coincides with a meeting of the local council, as a rule he will give priority to the meeting with the district commissioner. A failure to give central government officials the required recognition could backfire on the local officials. In the light of the position of senior local officials it is understandable that the proposals they develop and the decisions they make are guided by one maxim: local policies and plans must conform to national policies and guidelines, and these will not be questioned or challenged, even if they are not in the interest of the local community (Melyoki et al 2008:29).

A last relevant feature of the system of public administration concerns the political dimension. In contrast with local officials, the position of members of the local council does not seem to depend on central government, but on the local community, at least at first sight. Local councils are elected every five years; each ward elects one member of council according to the plurality rule. However, directly elected members constitute only part of the council. According to an amendment of the Local Government Act (2000, art. 35, 1 c) one third of the council must consist of women, who are appointed by national electoral commission on the nomination of a political party. The one third women councilors are appointed through a special seats arrangement in order to increase the number of women in the decision-making bodies (Yoon 2011). Furthermore, members of Parliament representing constituencies within the local government area are by law members of the local council. Moreover, the Minister can appoint up to three members himself with regard to specific groups (Local Government Act 2006, section 35). As a result of this electoral system of the 42 members of council of Morogoro, only 29 are directly elected; in Hai District 14 of 22 members are directly elected.

Moreover, even elected members are not only accountable to their constituency. Candidates for council must be a member of a registered party, and it is the party that decides if someone can stand for election or not. This in
itself is not uncommon in democratic regimes where political parties serve as a vehicle to articulate and integrate the interests of the community. Whether this leaves local politicians the leeway to pursue local policies depends on the internal party procedures and structure. In the era of the one-party system, the single party, the Tanzania African National Union (TANU), preselected candidates for Parliament in a screening procedure. The party required a candidate to adhere to the party’s policies (Van Cranenburgh 1996). A members’ success was a derivative of his popularity and of his credentials as a party advocate, which limited the responsiveness of members of Parliament to their constituency. TANU established thousands of party cells throughout the country that were tasked with explaining TANU policies and providing information to party headquarters (Morse 2014). After the introduction of the multi-party system, CCM, the successor of TANU, has retained a hierarchical structure and effectively limits the possibilities for local councilors to go against national policies. Any elected official who votes against the party Manifesto can be expelled from the party; and to move up in the party hierarchy loyalty to the leadership is paramount (Hoffman & Robinson 2009). Although in the election of 2010 and 2015 some candidates for local elections imposed by national leaders of CCM and CHADEMA were rejected, there is still a norm that the nomination of local election candidates must be approved by national party leaders (Yoon 2011).

All in all, we can understand why CCM council members, appointed or elected, show upward accountability and do not challenge the national priorities reflected in local development plans and programs. There is a direct link with the absence of political decentralization. It is not until after allocation decisions have been made that councilors enter the arena on behalf of their constituency and try to make sure that projects that have been awarded are actually implemented by the local administration. Surprisingly, this pattern of behavior is not limited to CCM council members. Although members from the opposition could be expected to develop alternative plans and budgets, they do not. They also perceive the guidelines for planning developed by national government as a law that they should abide to. Moreover, the fact that as a general rule, local governments depend on central government for conditional grants also limits their possibilities to develop alternative plans. In Hai district, the opposition councilors on occasion tried to influence other members to accept an alternative proposal, but in the end it failed after taking into consideration the fact that coming up with alternative plan could mean getting no fund.

On balance, it is clear that the centralist character of the formal system of intergovernmental relations has a negative impact on a number of dimensions of the delivery of agricultural extension services. The combination of conditional grants, the limited authority to raise local taxes, the imposition of central government priorities and supervision of local decisions concerning
budgets and plans severely limit local autonomy. Local governments do not have control over the volume of financial and human resources and cannot freely allocate the resources they receive. But the impact of the formal system goes further. Our research shows that local politicians and administrators share a culture of upward accountability: they abide to the social rule that you cannot and must not ignore the guidelines and priorities set by central government.

A culture of upward accountability is not the inevitable concomitant of a formally centralized system of public administration. In many countries, central-local relations are characterized by conflicts between local and central government, and it is no exception that local politicians from parties that form part of national government challenge national policies they believe are not in the interest of their local communities (Newton et al. 2010: 123-124). But we found upward accountability to be present in the cases we researched. Our findings suggest that that the centralist character of the administrative system, especially of the management of human resources and the relations between local politicians and national political parties breed this culture of upward accountability. Together the centralist formal system of administration and the culture of upward accountability of politicians and administrators undermine the representative and direct democracy at the local level, result in plans and the allocation of budgets which do not reflect the preferences of the community and cause a lack of attention for the cost efficiency of the delivery of agricultural extension services.

7.5.2 The formal system of local administration leaves field officers ample discretion and makes service delivery dependent on their public service morale

The main task of field extension officials is to inform and train crop growers and livestock keepers in their area, and to advise farmers who call upon them for support. In theory, the transfer of the responsibility for extension services to local government would create favorable conditions for service delivery. The local council can establish a policy framework, issue guidelines and monitor the actual delivery of services. The local departments responsible for agricultural extension services are relatively small. Communication lines are short, not only within the administrative organization, but also with the clients, the farmers. Consequently, the proper instruction and supervision of field officers and an adequate processing of information about the needs and circumstances of farmers should make it possible to provide services that reflect local preferences, are tailor made and cost efficient.

Our analysis shows that the actual delivery of agricultural extension services to farmers suffers serious flaws. It is inefficient in the sense that fully paid extension officials only dedicate part of their work time to their actual tasks and the rest to paid services that do not fall within their job description. Allocative efficiency is not realized: while there is an evident need for advice...
to and training of crop growing farmers, most of the time and effort of extension officials goes into the assistance of livestock keepers, who pay for the services rendered. Unless financial resources are allocated to a group project, farmers’ groups are only serviced if they live nearby or have developed a special bond with the extension officer. And lastly, overall, the transfer of knowledge, the field schools and training sessions are offered in a standardized form, and for example generally do not take into account the different levels of education of the clients. How can the formal administrative system in place, the informal institutions and the availability of resources explain the flaws in the delivery of services?

Evidently, some of the resources necessary to provide extension services are scarce in an absolute sense. Extension officers, especially in Morogoro Municipality, complain that they are not provided with the knowledge of new agricultural technologies and do not receive training to update and improve their expertise. Moreover, working tools, agricultural input for field schools, teaching material, means of transport, and fuel for their motor cycles are scarce and sometimes lacking altogether. Obviously, the scarcity of resources implies that there are limitations to the number of farmers’ groups that can be serviced, that some remote areas cannot be serviced at all and that it is sometimes difficult to address specific problems and needs put forward by farmers. The scarcity of resources however does not explain the dominant pattern we found, extension officers dedicating most of their time and effort to the treatment of livestock of farmers who pay for services, at the cost of supporting farmers and farmers’ groups who need advice and training. To explain how extension officers deal with the scarcity of resources, we have to turn to the other variables of our theoretical framework: the formal administrative system and informal institutions.

With respect to the formal administrative system, there is a remarkable difference between the formal rules that regulate the relations between central and local governments on one hand, and the formal rules that regulate the relations between local governments and their field extension workers. The former leave local governments little autonomy to set their own priorities, especially when financial resources provided by central government are in play. The latter, with some differentiation between local governments, leave field extension officers ample discretion to choose any strategy to meet the requirements of their job. We found this claim on a number of features of the way field officers were instructed and monitored in the two cases included in the research. First, the strategic plans and annual development plans that were developed by the two local governments only served as a general framework for the departments of agriculture and livestock. The plans contained a limited number of special projects that were funded out of the Agricultural Development Fund. Apart from the special projects, the plans did not formulate priorities or specific activities that could guide the activities of the extension officers.
Second, the departments for agriculture did not issue specific instructions to field officers with respect to the kind of activities they must carry out or the type of farmers they are supposed to visit. The fact that extension officers give priority to service individual livestock keepers and charge farmers for their services is well known to the management of the departments, as the development of informal guidelines for tariffs in Hai District shows. But the management makes no effort to correct this and direct the attention of extension officers to the assistance of crop growers. Supervision of the activities of field officers has a general character. As long as officers can show they have been active, the heads of the local departments are satisfied. There is a difference between the two districts included in the research. In Hai, the officers must fill in daily registers of their activities, and the district extension officer makes occasional field trips to check whether services have actually been delivered by the village extension officers. In Morogoro Municipality, daily registers are absent and the district officer who supervises the field officers completely relies on the monthly reports. Nevertheless, overall the field officers enjoy a large degree of autonomy to fill in their working day.

Given the large amount of discretion field extension officials enjoy, what is it that guides their behavior? Which informal institutions play a role? If we look at the patterns of behavior extension officers display one is tempted to conclude that self-interest is the prime motivator. A sense of duty, considerations of social justice or the urgency of relieving the situation of the poorest farmers do not seem to play a role in to whom they administer their services. Officials preferably render services to paying clients. In the literature, the latter strategy has been labeled as a cost sharing strategy used to offset the decline in real wages earned in the public sector, which started in the 1970’s. By 1994 real wages were only slightly more than half their 1969 level (Mutahaba 2005:4-5).

However, after 2008, with the second phase of the Public Service Reform Program, salaries in the public sector have risen substantially. Extension officers are relatively well educated and relatively well paid. The income of a field officer lies between 125 USD and 430 USD a month, depending on educational level and experience; while the farmers they are supposed to serve, have an average monthly income of approximately 26 USD. So their behavior cannot simply be explained by the need to survive. Although personal gain cannot be ruled out as one of factors that play a role, our research shows that amongst extension officials there is a wide spread and shared belief that public service delivery is not a duty but a favor. And a favor deserves a favor in return, preferably in hard cash or at least in something material. Extension officers do not exploit their position to the limit; they do not ask excessive compensation for their activities; and they take the wealth or poverty of the client into account (“what can you give me?”). But something in return for their services is expected.
What is more, farmers accept or at least do not challenge the rule that they must give in order to receive a public service. This shows that, while extension services are attributed a key role in the national agricultural policy of Tanzania, expectations of farmers with respect to these services are low. In Morogoro Municipality we found that individual farmers are not always aware of the existence of extension services, and less of the fact that extension officers are supposed to visit them from time to time. Farmers’ groups that have been set up by the extension officers themselves may claim assistance, if they feel they are neglected, but they simply accept the extension officers’ explanation that the number of groups has increased and that he cannot find the time to service all.

We found the expectations of farmers to be somewhat higher in Hai district. In the periodic meetings of members of the villages (in rural areas) and streets (in urban areas) in Morogoro Municipality issues related to agriculture and extension services are rarely addressed. In Hai District, the meetings actually serve as a platform for farmers to articulate their need for support and training by the extension officers. We also found that individual farmers in Hai do not hesitate to seek confrontation with extension officers if they feel they are being over charged. Higher expectations of the farmers in Hai can be explained by a relatively high degree of organization and the fact farmers seem to be better informed. Nevertheless, also in Hai district, the rule that extension services are not rendered for free, that some kind of compensation is in order, is not only upheld by extension officers, it is accepted by the farmers as well.

Our analysis shows that dominant patterns in the delivery of agricultural extension services can be attributed to a combination of the formal local administrative system and social rules in place that guide the behavior of extension officers. A formal system that leaves officers ample discretion and social rules that depict service delivery not as a duty and right, but as a favor that requires some kind of compensation, together result in the flaws we found. The combination of a somewhat tighter formal regime and a slightly different set of social rules, can be held responsible for the fact that overall, the delivery of extension services in Hai district scores better compared to Morogoro Municipality: extension officers are more prudent in their dealings with farmers’ groups and more actively seek to increase their resources through cooperation with NGOs.

7.5.3 Formal procedures and interactions are undermined by an omnipresent present social rule

Our research encompassed a number of practices: the decision-making on planning and the role of councilors and administrators; the operations of field extension officers and their interaction with farmers; the interaction between the research institutes on one hand and local governments and other stake-
holders on the other. In many cases these practices are ruled by formal procedures that prescribe meetings, group sessions or other types of interaction in which the actors involved are supposed to meet face to face to discuss, confer, negotiate, teach or learn. One of the findings of our research is that the delivery of agricultural services is hindered by the social rule that no meeting, no workshop, no field school, no visit outside the office can take place if the councilors, officials or farmers involved do not receive an allowance, in the form of a sitting allowance, a per diem or some compensation in kind.

In our research, we found that this rule had a negative impact on different parts of the system of service delivery. One was the interaction between the research institutes, municipalities and NGOs, interactions that should result in demand driven research and the transfer of new knowledge to extension officers. Over the past years, the two institutes did not hold stakeholder meetings in which farmers, extension officials and private organizations could discuss the research agenda with representatives of the institute. The reason given by the institutes was that there were no funds to pay allowances to the participants, and that ‘you cannot organize a meeting if you have no money for food and drinks.’ In Morogoro it was argued that extension officers could not maintain contacts with the research institute, and that the liaison officer of the research institute could not visit the municipality because there were no funds available to pay allowances for these activities.

The social rule mentioned also affects the interaction between extension officers and farmers. Extension officers used to receive an allowance for special projects. Since these allowances were abolished, they have reduced the visits to farmers. Furthermore, the research shows that farmers expect allowances for lunch and drinks when extension officers organize training and that they are only motivated to participate in a field school when seeds or fertilizers are promised. Despite the fact that training sessions and field schools benefit the farmers, the absence of allowances or material compensation for their presence results in low participation and sometimes causes the vanishing of farmers’ groups that were established for these purposes.

The importance given to allowances perverts the system of service delivery in still another way. In Hai district a substantial budget was reserved for the improvement of the extension service. But the major part of the budget did not go into what obviously is one of the main problems – a lack of means for transport – or into working tools, but into sitting allowances for officials participating in workshops and training sessions. Moreover, these workshops were especially targeted at senior officials and not at field workers, an indication that the training was not meant for enhancing knowledge of new technologies but for getting per diems and allowances.

All in all, there is ground for the conclusion that the rule that allowances must be paid for the very fact that actors involved in the delivery of services are prepared to stand up from behind their desk or leave their home, has a negative impact on the delivery of extension services. It is used as a
justification to set aside formal procedures that are meant to facilitate the exchange of information and the coordination of activities. More in general it hinders interaction between the different actors involved.

Summarizing the above allows us to formulate a general answer to our research question, which inevitably passes over details and necessary differentiations. We started this section with a recapitulation of the quality of the process of the delivery of agricultural extension services and its output under the administrative regime that has been labeled as decentralized. On all criteria, that we have used to evaluate the quality of service delivery, the results fall short of the expectations attached to decentralized systems of public administration. Concerning the role of the formal administrative system, informal institutions and the availability of resources, three major conclusions can be drawn.

In the first place, the formal relations between central and local government are to a large extent centralistic, despite the rhetoric of decentralization. This limits the possibilities for local government to control the volume of financial and human resources, and allocate resources according to local preferences. But central control over local planning and budgeting actually materializes because decision-makers at the local level, both councilors and administrators, share the social rule that they are primarily accountable to central government, and not to the local community. This culture of upward accountability finds its roots in the centralistic setup of the management of local human resources and the centralistic character of political parties. Together these factors explain that representative and direct democracy fall short, local plans and budgets do not reflect local preferences and that cost efficiency is not something local governments bother with.

Secondly, the central control over decision-making about extension services is to a large extent limited to the allocation of financial resources to specific extension projects. These projects only make out a small part of the activities local agricultural and livestock departments and extension officers engage in. With respect to their daily activities, the local administrative systems leave field extension officers a large degree of discretion. As a consequence, the actual delivery of services is to a large extent guided by the social rules in place, and these determine how field officers deal with resources that are too scarce to service all farmers in an adequate way. The rules include the notion that service delivery deserves to be compensated by the farmers, and allow for an allocation of time and effort to farmers who pay for services not forming part of the formal job description of extension officers. Up to a certain point, these rules are accepted by farmers. The combination of the formal system, the social rules and scarce resources result in a distortion of allocative efficiency, a low-cost efficiency and standardized services.

A third conclusion relates to the presence of a rule that seems to pervade the system of public administration, if not society as a whole. Councilors,
administrators and farmers alike sustain the notion that activities that do not belong to the very core of their job, deserve to be compensated by allowances in money or kind. As a consequence, scarce resources become even more scarce, as all actors involved agree that funds have to be reserved for allowances and cannot be allocated to basic requirements for the delivery of services, such as working tools or means of transport. Moreover, because funds for allowances are also scarce, a lack of funds is used as a justification to ignore formal procedures and guidelines that are meant to regulate the interaction between different actors involved in the delivery of extension services. All in all, the system of allowances creates sand in the machinery of planning, service delivery and support of local government by the research institutes.
Chapter 8

Reflections and recommendations

8.1 Introduction

The last chapter of this book reflects on the outcome of the research. First, we address the possible contribution of the research project to the theory on decentralization and discuss the issue of generalization. The second part of the chapter deals with the practical implications of the research, and asks how the insights into the functioning and performance of the administrative system for the delivery of agricultural services can be translated into recommendations for its improvement.

8.2 A contribution to theory on decentralization

The purpose of our research was to contribute to the theory on decentralization, i.e. to enhance the insight into how different factors influence the process and output of decentralized systems of public administration. The analysis presented in the previous chapter aimed to show how different factors influence the process and output of the delivery of agricultural services in two local governments in Tanzania. How do our findings relate to the existing body of knowledge concerning factors that determine the performance of decentralized systems of public administration? What new insights have we gained?

In the first place, our findings support claims made in the literature that one of the obstacles for success of decentralized systems in developing countries is that they are only decentralized in name and are actually to a large extent centralistic. If, as is the case in the system of service delivery we researched, local government for the services it has to deliver largely depends on conditional grants; if the budgets, plans and projects local government develops are subject to scrutiny and supervision by central government or its agencies; and if local government proposals for plans and projects are only approved if these are in line with central government policies; then the possibilities for local government to plan for and actually deliver services that reflect the preferences of the local community are severely restricted. Centralistic features as these also have a negative impact on direct and representative local democracy. This is in line with insights provided by the literature (Crook & Manor 1998:294; Conyers 1999; Faguet 2001:11; Ribot 2003; Smoke 2003 & Ahmad et al. 2005:1-2). One aspect that has not received
much attention in the literature is the impact of the fact that central government appoints and pays for the permanent local administrative staff, and determines both their number and the functions they fulfill. As a result, there is no incentive for local councils to increase the cost efficiency of service delivery, for example by changing the relation between management or policy officers on one hand and field officers on the other, or by reducing the number of field officers. The proceeds of such measures would not go to local government.

Secondly, our findings are in line with another major obstacle pointed at in the literature: the transfer of tasks and responsibilities from central to local government is not accompanied by the transfer of the corresponding financial and other resources (Prud’homme 1995:208; Johnson 2001:524; Smoke 2010:197-198; Mollel 2010) Our research has shown that the local governments in question have to deal with a scarcity of resources to render the required services, of tools, means of transport, up-to-date technical expertise and resources to finance other operating costs such as sitting allowances. Limited resources obviously restrict the possibilities to deliver services that satisfy needs of the local community and tailor services to individual or local circumstances. In addition, we found that uncertainty about financial resources also has a negative impact. Uncertainty can be the result of substantial variations in the allocation of resources to local government or of cash flows that trail behind. It makes it difficult for local government to plan projects. If financial commitments are not honored, it jeopardizes the commitment of citizens.

In the third place, we found a number of social rules that affected the process of service delivery. The literature suggests that a lack of a local culture of accountability can be the cause that local representative democracy and allocative efficiency are not realized (Prud’homme 1995:208; Barnett et al. 1997: 8-9; Oyugi 2000; Luckham et al. 2000; Johnson 2001; Devas & Grant 2003: 307; Ribot 2003; As- Ahmad et al. 2005; Lange 2008:1125; Saber 2009:56). Our research provides grounds for a specification of this assertion. We found that local administrators and politicians held themselves to be accountable to central government and their national political leaders, which prevented them to even try and develop policies that reflected local preferences. The literature further suggests that a bureaucratic culture can prevent local administrations to identify the specific needs and circumstances of the population and address these accordingly. In our case, we did not find a bureaucratic culture; there was no excessive focus on rules and regulations directing the delivery of services. But our research has made clear that other social rules can equally exert a negative impact on the quality of the process and output of service delivery. This was the case with the rule that any public activity that falls outside the very core duties or task of a person, must be compensated by an immediate and tangible reward, even if the activity itself is beneficial to the person or the organization he or she belongs to. Or the
rule, which can be considered is a specimen of the former, that you cannot expect a civil servant to service citizens if he is not somehow compensated for his efforts outside his normal salary. These findings are in line with reports on the negative effects of systems of allowances (for example Smith 2003; Vian 2009; Ridde 2010).

All in all, these findings concerning the role of different factors included in our theoretical framework confirm and sometimes specify the results of earlier research on the performance of decentralized systems of public administration. Our research also shows that and how these factors can interact. We found two instances in which such interaction reinforced the impact of the separate factors. The first instance concerned the phenomenon that the high degree of administrative, fiscal and political centralization bred a culture of upward accountability amongst both administrators and politicians. A limited administrative discretion, a high dependency on central government grants and the fact that both local administrators and politicians depend on national political leaders and government officials for their career has bred a social rule that local plans and budgets must conform to central government rules and priorities, and that it is not appropriate to challenge the latter. The second instance concerned the relation between the rule that no meeting can take place without offering the participants a sitting allowance, food and drinks on one hand and the scarcity of resources on the other. The rule in question forces those in charge of budgeting to reserve financial resources to pay for sitting allowances. This makes scarce resources even more scarce, and prevents budget from being used for indispensable expenditures, for fuel, working tools, or media to disseminate new technologies.

We also found instances in which social rules, in combination with the scarcity of resources, undermine or neutralize existing formal rules. The formal administrative system in place contained a large series of procedural requirements for the development of agricultural plans or the planning of research activities: to organize meetings, to consult stakeholders. However, these requirements were simply set aside with the argument that you cannot organize a meeting without funds for allowances, food and drinks, and that - alas – central government had not provided funds, or the funds that had been promised were not released. An argument that is generally accepted without discussion. In the same vein, it is accepted that field officers invoke the lack of fuel, the absence of working tools, or even the lack of time as reasons not to visit farmers or farmers’ groups, even if they live nearby or no specific tools are necessary. In this way, the formal right all farmers have to be assisted by extension officers is neutralized. And it creates leeway for extension officers to service paying clients.
All together we think we made a sound case for our argument that to fully understand the functioning and performance of decentralized systems of public administration, it is necessary to take into account the formal administrative system, informal institutions and the availability of resources, both as separate factors and in their mutual interaction. The question remains to what extent it is possible to generalize our findings. Obviously, there were limitations to our research: it included a selection of two local governments in one country, three wards in each of the local governments and concerned a specific public service. Does the same or similar combination of formal institutions, social rules and availability of resources in other contexts – municipalities, countries, policy sectors - result in the same or similar processes and output? Or are the mechanisms we found not operative in other contexts? We can only formulate a tentative answer by pointing at a number of research findings in other policy sectors in Tanzania, and in other African countries that share a number of characteristics with the case we researched.

In Tanzania, all local governments are subject to the same system of public administration, with slight variations between urban and rural municipalities. Planning and budgeting systems in other service sectors such as education and health to a large extent present the same centralist features as the system for agricultural extension services, and the recruitment and promotion of administrators proceeds in the same way. Research by Mollel (2010) suggests that in these sectors public officials (‘facilitators’) who are supposed to assist the local community to articulate their preferences and support the process of bottom-up planning, in practice operate as if they represent central government. The combination of a series of restrictions and conditions set by central government and – in our terminology - the upward accountability of local officials results in the frustration of direct democracy and in local plans that reflect central government priorities (Mollel 2010). Social rules about the duties of service providers and the rights of clients can vary according to the policy sector. But research suggests that in other sectors such as the health sector, service providers charge for public services that should be offered free, or give priority to clients who pay an unofficial surcharge, thus distorting allocative efficiency. And that they can do so because of a lack of instruction and supervision (Madani & Banger 2004; Tibandebage & Mackintosh 2005). A similar combination of factors results in similar effects on the quality of decision-making and service delivery.

As for other developing countries, findings from African countries such as Senegal, Uganda and Kenya suggest that the mechanisms we found between formal and informal institutions, the availability of resources and the quality of service delivery are also at work in other national contexts. At least, the ingredients are the same or similar as we found in our research. The three countries mentioned have all transferred tasks and responsibilities to local government, but central control over services is still substantial, and local administrators and politicians depend on national administrators and
leaders for their respective appointment and nomination. Limited local budgets and equipment result in a low working morale. Systems of sitting allowances are in place, which induce officials to go for the meetings where they can receive such allowances and neglect their key duties. Not only can we find similar ingredients, also the quality of service delivery in these countries is considered to be poor (Azfar 2001:19; As-Saber et al. 2009:63).

Although the above lends provisional support to our theoretical findings, it is only through in depth research that our assumptions about the mechanisms that relate formal systems of public administration, informal institutions, the availability of resources and the quality of service delivery can be put to the test. Since our research covered one policy sector, such research should include other policy sectors and countries. No doubt, variations will come to the fore because of the differences between policy sectors and different national contexts. Nevertheless, we expect our findings concerning the role of formal and informal institutions and the availability of resources in the performance of decentralized systems to be a good starting point for further development of the theory on decentralization.

8.3 Recommendations

8.3.1 Agricultural extension services: public or private?

The public delivery of agricultural extension services in developing countries has been under much criticism for many years, and there have been many attempts to reform the way they are delivered. Decentralization was one of the strategies promoted. Based on our research, the evaluation of the delivery of agricultural extension services in Tanzania is not favorable. Before we turn to possibilities to address some of the flaws in the system of public administration, we must briefly reflect on the question whether agricultural extension services should be rendered by the state at all. The privatization of public services has been one of the main themes of the neoliberal inspired public sector reform agenda that came up in the 1980s, and was also suggested as a way to overcome failures in the public provision of agricultural extension services (Rivera & Cary 1997; Alonge 2004). It was also considered as a solution for the withdrawal of donor support for developing countries, which would make extension services unsustainable (Saliu & Age 2009: 162-165). However, building on theory concerning political economy, it can be deducted that there are obvious risks and drawbacks to the privatization of extension services, and we should at least differentiate between different services that are provided. We present part of the argument developed by Hanson and Just (2001).

Much of the knowledge that is the subject of extension is general in character. It can relate to new technologies, methods to use existing resources better, or how to access markets. In many developing countries with low
education levels this type of knowledge is vital to improve production and income. But this knowledge can be freely passed on from one farmer to another, so there would be no reason for farmers to pay for it, or for providers to offer it. This type of knowledge is non-rival and non-excludable: in the absence of public provision the extension service would not be provided at all. Other services are excludable (for example expert advice completely tailored to an individual farm), or rival and excludable (for example pest monitoring services carried out on a specific plot). For market transactions to take place, farmers must be aware of the value of the service and of its possible benefits, which in the context of developing countries or immature markets will not be the case. In our research, we have seen that it is difficult to motivate farmers to participate in field schools, as they do not see their immediate benefits. On the other hand, we have seen that farmers are willing to pay for the immunization of their crop or the treatment of their cattle. In fact, in these cases a market transaction takes place between the public officials and the farmers.

Even if extension services are rival and excludable, and market information about value, benefits and price is available to the farmers, there are still risks to privatization. For reasons of cost efficiency, private providers may concentrate on large scale farms and concentrations of farms, neglecting small scale farms and dispersed farms in remote areas. And also important for a government that seeks to reduce poverty, there is the issue of affordability: small holder farms engaged in subsistence farming will likely not be able to pay for services, even if the benefits are clear to them (Ajieh et al 2008:345; Saliu & Age 2009:162-65; Jiyawan et al. 2009:65).

So far, the policy of the government of Tanzania is that extension services that relate to the transfer of knowledge, new technologies, training and advice must be provided by public extension officials. The services are considered to be crucial for the increase of agricultural production and the number of extension officials has increased over the past years. Contracting out services to NGOs or private companies is considered a possibility, but judging by our research rarely takes place except in the area of research. The immunization of crop and the treatment of cattle - services farmers pay for - do not fall within the job description of extension officials, and, according to central government policies, should be provided by the market. It is possible to make a case for the public provision of these services. Large cooperatives can afford to hire their own extension expert, but for dispersed small holder farms the market does not offer immunization and veterinary services at affordable prices, if at all. Public provision can offer these services, and in fact actually does. But then, it would be advisable to elaborate explicit policies to that effect, build sufficient capacity and expertise and to establish tariffs taking into account different incomes of the farmers involved. This would make these services part of the regular extension activities of local governments,
and would avoid that they supplant the extension services proper, i.e. the transfer of knowledge, new technologies, training and advice. There is no discussion that the latter are and must remain a public responsibility. We now turn to the question how to address some of the flaws in the public provision of extension services.

8.3.2 The culture of upward accountability

One of the key findings of our research is that in the field of extension services representative and direct democracy at the local level to a large extent fail to materialize. As a consequence, the agricultural development plans and the allocation of financial resources to projects do not reflect local preferences. This is due to the fact that administrative, fiscal and political decentralization are very limited, which not only leaves local government little discretion, but also breeds a culture of upward accountability. Local administrators consider themselves as the watchdog of central government policies and priorities and local councilors do not even attempt to challenge these. It would be too simple to plea for radical administrative and fiscal decentralization, i.e. reduce supervision on local plans and budgets, eliminate conditional grants and increase the local tax capacity. Macro-economic policies and consideration of income redistribution justify central government policies and the involvement in local governance and service delivery (Musgrave 1959; Oates 2005). Moreover, with regard to decentralization, the often limited and varying organizational and technical capacity of local governments must be taken into account. No simple blue print is available and decentralization should be taken step by step and with regard to the state of local government (Prud’homme 1995:208, 214; Smoke 2010:197). Therefore, we should look at ways to make local governments more articulate, i.e. to speak out and defend local interests. More articulate local governments would not only make use of their so far limited discretion; they could also become a partner to be reckoned with in the debate on decentralization. To make the local administration more ‘local’, a first step should be to reduce the culture of upward accountability of officials and councilors.

8.3.3 How to reduce the upward accountability of officials?

Our analysis suggests that the upward accountability of local officials is at least partially based on the fact that they are recruited by central government and that their salary, career and promotion depend on central government, i.e. on the loyalty they show to the national politicians and top officials of the ruling party. One may be tempted to think that a simple solution as at hand, i.e. to make local governments responsible for the recruitment of senior officials and entrust them with all the powers relevant for their management. The decentralization of the recruitment of local officials was on the agenda of the
Decentralization by Devolution project and steps were taken to implement this plan with the establishment of local recruitment boards, although these were never involved in the recruitment of senior staff. As mentioned before, the 2007 Public Service Act established a centralized regime for the recruitment of all permanent local staff. In recent years, central government launched new proposals to decentralize the recruitment of local staff. The oscillation between centralization and decentralization of the Human Resources Management of local staff reflects the pros and cons of both arrangements, which are especially manifest in developing countries (Munga et al. 2009).

Decentralization on one hand can foster the loyalty of local staff to elected politicians and thereby support the downward accountability of local government. On the other hand, it involves a number of risks. Nepotism at the local level can easily result in the appointment of unqualified staff and local administrative systems prone to clientelism and corruption. Moreover, from a national perspective, it can lead to the unequal distribution of scarce qualified staff, leaving areas that are unattractive for highly trained professionals without the necessary human resources (Njovu 2001; Munga et al. 2009; Lodestone & Deo 2011; Kinemo et al. 2015). Centralized recruitment intends to avoid exactly these drawbacks, and to provide for an equal distribution of staff that meet certain standards of qualification. Our research suggests that the upward accountability of officials is a downside of centralized recruitment. Moreover, centralized systems of recruitment can be time consuming and result in a mismatch between the local working environment and the preferences and qualifications of appointed officials (Kinemo et al. 2015; Njovu 2013; Munga et al. 2009). Lastly, centralized recruitment is not immune to nepotism, especially when it concerns highly ranked local officials.

In view of the above, the arrangement for hiring and firing of senior local staff should give both local and central government a significant role. In relation to the 2007 Public Service Act, the role of the local council in the recruitment of senior staff should be enhanced. One way to do so would be to involve the council (or a council committee) in the selection procedure; for example, to interview candidates proposed by central government, and to give the council the right to nominate or choose a candidate from a shortlist provided by central government. This would give central government the possibility to safeguard an equal distribution and the qualifications of senior local staff, and it would make the local officials clear that in the end, it was the local council that endorsed their appointment. In the same vein, the role of the local council in disciplining senior local officials and in their remuneration and promotion should be enhanced. One could give local councils the authority to impose disciplinary measures in the case of obvious misconduct, to let them decide on performance bonuses or to introduce the rule that a
A senior official cannot be appointed in another public office without an honorable discharge by the local government he or she served.

All these provisions would make it clear that the elected council is the highest local authority and that senior officials are there to serve the local community and its elected representatives. Enhancing the role of the local council in the hiring and firing of senior officials does not in any way alter the fact that central government can issue guidelines and establish national priorities to which local governments have to abide, if these are deemed necessary in the national interest.

8.3.4 How to reduce the upward accountability of local councilors?

Our analysis suggests that the upward accountability of local councilors is at least partially related to the structure of the political parties of which they are a member, and to the procedures for the nomination of candidates for local elections. Loyalty to national programs and national leaders is a prerequisite for anyone with ambitions in politics. Now, a certain degree of party discipline is necessary in order for political parties to fulfil their function to integrate and articulate the interests of the people they represent and to generate political power. But party discipline becomes dysfunctional if it precludes members to articulate the specific preferences of the local communities they are part of, and members and local representatives become puppets of national party leaders. As with the issue of the recruitment of local officials, the challenge is to strike the right balance. The literature suggests a number of steps to foster that representatives articulate local preferences and make themselves accountable to the local community (Sisk 2001).

One suggestion is to enhance the involvement of the local community in the nomination of candidates for local elections. Because the Tanzanian electoral system implies that councilors are elected as representative of a ward, the administrative subunit of local government, this involvement should be organized at the ward level in which villages and street members should be given opportunity to discuss the nomination of candidates for election. The discussion should not be limited to the nomination of candidates, but should also concern the issues and priorities of the local population, such as the need for health services or education, so that the nominated candidate is informed about what he or she is supposed to address. In addition, the discussion should not be left to influential members representing the interests of national party leaders, but should be extended to ordinary people, who form part of the local community.

A second suggestion would be to alter the timing of local elections. Currently the election for the local council is held concurrently with the election for national parliament and the presidential election. Elections for village and street councils are held separately. If all local elections (local council, village
and street council) would concur and be held separately from national elections, this would increase the chance that local themes and issues would dominate the debates, instead of national issues and national party leaders. If local councilors are chosen because of their views on the development of the local community, it would put pressure on them to give account of their success and failure to the local community.

It is generally accepted that candidates and elected representatives tend to be more responsive to the preferences of their community as political competition increases (Hiskey 2006; Lankina 2008). Although Tanzania actually has a multi-party system, the requirements to establish a new political party are quite strict and the legislation in place does not provide for the possibility to start a local political party to articulate and defend local interests. Nor does legislation allow citizens to stand for political office as an independent candidate, although this provision is included in the draft of a new constitution. Allowing for more political competition at the local level may induce local politicians to be more accountable to their local community.

A last suggestion is to improve the facilities for local councilors. In the Tanzanian context, councilors meeting for committee or full council meeting must travel from their village, but they must also read the reports and prepare themselves for meetings. Although councilors enjoy a sitting allowance, they are not facilitated in terms of transport from their village or compensated for other costs they make. Better facilities can help councilors to make more of their representative role.

8.3.5 Improving actual service delivery

Our analysis shows that in their day-to-day activities field extension officers enjoy a large degree of autonomy. Instructions are general and, with some differentiation between the two cases, we found supervision to be limited. Confronted with scarce resources extension officers are guided by the social rule that extension services are to be considered a favor that deserve a favor in return; a rule that is accepted by their clients, who have low expectations regarding this public service. Here also we found some differentiation between the two cases. Together the different elements of the institutional context result in a distortion of the allocative efficiency concerning the transfer of knowledge, new technologies and the training of farmers, in high costs and in deficient coordination with other service providers.

Our analysis provides a number of clues to improve service delivery by extension officers. First, we address the scarcity of resources, the prime argument used by policy officials and field officers to explain the flaws in the delivery of extension services. Earlier, we claimed that the scarcity of resources up to a certain point is a matter of priorities, and that it is also used as an excuse not to act or perform. Nevertheless, there is no doubt that resources are also scarce in an absolute sense: transport and working tools are essential
for extension officers to be able to provide their services. Leaving aside the obvious – central government providing more resources for transport and tools - two strategies seem available to increase resources or make better use of them.

First, there is room for improvement of the coordination between local governments and NGOs. Classic theory indicates that coordination is likely to occur when two organizations are interdependent and can achieve their goals better through the exchange of resources or the coordinated use of resources (Levine & White 1961; Pfeffer 1972; Benson 1975). Our research shows that NGOs are sometimes dependent on the assistance of public extension officers to recruit farmers to participate in projects, but that extension officers are not always prepared to cooperate because it does not bring them any benefits. On the other hand, NGOs sometimes operate on their own, because they believe cooperation with the local government would mean they would have to give up their own priorities. The somewhat more proactive approach we found in Hai district shows that cooperation with NGOs can enhance the resources available for extension services as a whole. Cooperation can be promoted by creating incentives. Active support offered by the public service can help NGOs make their projects successful and create an incentive for NGOs to discuss their projects and objectives with the local government to direct services where they are most needed. To promote active support by local governments the collaboration with NGOs should somehow be rewarded, for example through the allocation of extra financial resources, tools or training facilities by central government. Benefits that at least in part should be channeled to field extension officers in order to make it attractive for them to assist in NGO projects.

A second way to deal with scarce resources is the effective use of new technologies. The number of farmers that have access to modern communication technologies like cell phones, radio, television and even the internet is rising. Investments in radio and television programs, and in the development of instruction videos to be disseminated through the internet or by DVD can be very profitable in the sense that large numbers of farmers can be reached, even the ones living at large distances from ward offices. Videos are also an effective way to educate farmers with a low level of literacy. In the same vein, these new technologies can be used to transfer information from the Research institutes to local governments and to train local extension officers. The use of modern means of communication would overcome one of the main problems in the delivery of extension services in Tanzania, i.e. transport over large distances. Evidently, investments in new technologies and the development of instruction material should be undertaken by central government and the research institutes. We have seen this type of initiatives in the Selian ARI, but so far scarce resources limit the institute in these activities.
Although the enhancement of resources may relieve some of the pressure on extension officers, up to a certain point resources will always be scarce. Then the question is, given the limited availability of resources, how to improve the responsiveness of extension agencies. One strategy would be to increase the social accountability of the service providers. The literature suggests that empowering citizens and civic organizations, providing knowledge and information about the performance of public organizations and allow citizen participation in decision-making about services increase the social accountability of public institutions and officials, and have a positive impact on their performance (Ackerman 2004; Knox 2009; Schatz 2013). Our research shows that well-informed farmers can put pressure on field officers to provide services and not over charge them. This suggests it would pay to inform farmers about their rights to receive extension services. Here modern means of communication could help. In Hai case, the Boma Radio is already in use and some programs discussing farmer’s problems are in place. But media like the radio or television could also be used to disseminate information about the existence of extension officers, their specific knowledge, the issues they can assist farmers with, time and place for consultations. This could raise farmers’ expectations and demands regarding extension services.

In the same vein, farmers’ organizations could contribute to a situation in which farmers consider extension services as a right they are entitled to. National farmers’ organizations like MVIWATA and its local networks are established to defend the interests of farmers. They themselves are active in collecting and disseminating knowledge on innovations, farmer-to-farmer knowledge exchange and the contracting of agricultural services. But so far, they do not operate as actors who structurally monitor the extension services rendered by local governments. Farmers’ organizations that present themselves as a worthy interlocutor of local government are not only in a position to articulate preferences with respect to plans and projects, they can also serve as a watchdog and report on evident flaws in the delivery of services.

A second and more direct strategy for the improvement of service delivery would relate to the management of the extension agencies. If flaws to a large extent can be traced back to the combination of a large autonomy and a poor service moral of extension officers, one way to address the issue is to resort to stricter management: more and more detailed instruction and tighter supervision. It would help to formulate more specific targets with respect to visits to farmers’ groups, training sessions and field schools. Not only will this force local government itself to set priorities, it can also serve as a frame of reference for extension officers. It would provide the basis for a more goal-oriented supervision of extension officers. Our research shows that a somewhat tighter supervision – the case of Hai District - does work in the sense that extension officers take their job more seriously. However, the literature suggests that compliance based approaches to induce desired behavior of
employees have their limitations and drawbacks (Anechiarico & Jacobs 1995; Frederickson 1997; Pullen & Rhodes 2014; Nygaard et al. 2015). Therefore, balancing is important, as strict supervision against the background of a more elaborate program of activities for extension officers could result in high enforcement costs and not necessarily in effective control. In the case of stricter management, instead of using negative sanctions, one may consider the introduction of positive incentives, rewarding the field officers who service a large number of groups, are successful in reaching farmers and groups in the outskirts of their area, or perform well in terms of any of the priorities set by local government.

Given the limitations of compliance based approaches and the fact that some autonomy of the field officers is required so that they can adjust their repertoires to the circumstances in their area and the characteristics of the farmers they service, a value based approach seems promising. The key element would be that core values of the organization are transmitted with the objective that these are internalized by the members of the organization, so that they guide decisions that are at their discretion (Paine 1994; Weaver & Trevino 1999; Maesschalck 2004; Huberts et al. 2008; Webb 2012). The literature offers many ideas, procedures and instruments to promote a culture that reflects the core values of the organization, such as communicating expectations, training and codes (Huberts et al. 2014). But one element stands out: the senior management of an organization must show its commitment to these core values, and demonstrate exemplary behavior (Kaptein 1998; Lasthuizen 2008; Menzel 2012; Lawton et al. 2013). When we take the context of Tanzania into account it is not self-evident that senior managers of public agencies will act as leaders who promote a high public service morale. On the contrary, the system of sitting allowances c.a. that pervades the Tanzanian public administration reflects social rules that resemble the public service morale we found amongst extension officers. We cannot expect to change the latter if we do not address the former.

8.3.6 Reforming the system of allowances

One of the findings of our research is that politicians, administrators, researchers and farmers involved in the decision-making about or the actual delivery of services subscribe to the rule that any activity that does not fall within their strictly circumscribed job description will only be undertaken if they receive an allowance, in the form of a sitting allowance, a per diem or some compensation in kind. The rule has a negative impact on the system of service delivery.

Paying allowances on top of regular salaries is a practice seen in many countries. The original idea is that allowances can serve as an incentive for employees to participate in professional activities or to work hard. The literature shows that in developing countries the payment of allowances also has
serious drawbacks. It creates a negative organizational culture where people expect to get paid for every activity. It leads to changes in the allocation of time and to the neglect of management tasks or services not linked to allowances. It fosters the manipulation of work practices, for example slowing work and overscheduling trainings (Vian et al. 2012:4-5; Soreide & Williams 2014:197-199). When big allowances are paid to directors and senior officials, the quality of service becomes skewed in favor of the proliferation of committee meetings, writing workshops or field trips (Policy forum 2009:1-2). It can create conflicts between those who receive and those who do not receive allowances, and discourage the latter category of employees to undertake certain activities. These findings to a large extent coincide with what we have observed in our own research. The question is, how can this culture be reversed?

In Tanzania, the system of allowances dates back to the period after independence when a socialist regime was in place. Civil servants received very low salaries and citizens were expected to contribute to public services on a voluntary basis. The allowances were then used as a motivator: to assist civil servants to take care of their families and to entice citizens to contribute to society. Since the 1980s, there have been many efforts by the government to reform the economy in order to cope with the global changes. One concerned reforms of the way civil servants are paid; these have been going on from 1990 to date. The salaries of civil servants were adjusted and some officials receive substantially higher salaries than in the past. Nevertheless, despite the consolidation of wage bill, the system of allowances is still in existence. In many sectors of the public service, employees are paid allowances even if they are carrying out work in their own department and performing tasks that are part and parcel of their job (Policy forum 2011:1-2).

Obviously, it will not simply do to abolish allowances. Apart from the social upheaval such a measure would cause, it would not change the social rules concerning allowances and would probably result in the demotivation of civil servants. However, a combination of a series of measures could work.

A first measure could be to replace sitting allowances with a system of reimbursement of actual costs for travel, lodging etc. If officials or farmers have to travel and stay overnight, it is fair that actual costs be reimbursed, not that they be paid an allowance that is much higher. Although this might be challenging in a Tanzanian context due to the presence of village hotels, which have no receipts, or food venders who do not offer receipts, there is a possibility of reimbursing the costs depending on the amount charged for such cost in a particular context. The government can establish rates for meal and accommodation for various rural and urban areas.

Second, certain types of allowances paid to agricultural extension officers like the training allowance can be abolished and regular pay can be increased in turn. This measure would be beneficial for the lower cadres, as these are
normally not in the position to lay their hand on allowances, contrary to the higher officials. If this type of allowances would be abolished, senior officials will be demotivated to attend the training simply for the sake of allowances; it will give lower cadres the chance to attend the trainings that they need and deserve.

A third measure could be to replace (certain types of) allowances with a performance bonus. This is tricky, because it is sensitive to fraud and unfair allocation. Nevertheless, if it is organized in the right way, it may help to improve service delivery. It would have to be related to direct performance, for example a bonus for the number of field schools organized, the number of farmers’ groups visited, the number of extension officers trained or visited by the liaison officer of the research institute. We already suggested this as a strategy to improve the quality of service delivery: the abolishment of funds for allowances can provide the means for it.

These are all structural measures; they pretend to dismantle the system of allowances. However, it must be noted that the system reflects social rules and expectations that seem to be deeply embedded in the public administration of Tanzania, which makes reform a tall order. For a reform to stand a chance to be carried through, at least two conditions must be fulfilled. One is that the politicians responsible for the design of the system of public administration are fully aware of the perverting effects of the system of allowances. The second condition is that they can set aside short-term individual interests and organize enough power to overcome resistance to change. The current government has expressed the intention to do away with a culture of paying allowances that are not related to performance, but so far, concrete measures have not been taken. We know from experience that good intentions are not enough to bring about change.

8.4 To conclude: The importance of agricultural extension services

For many developing countries, agriculture is a crucial sector in the economy. As discussed in chapter four, in Tanzania it contributes considerably to GDP and more than 75% of the population depends on agriculture for their livelihood. Given its importance and following the pressure from the World Bank and other international organizations, Tanzania and other developing countries have implemented decentralization reforms in the agricultural sector in order to increase productivity and to eliminate hunger. The reforms also extended to agricultural extension services. The provision of assistance and advice to smallholder farmers on the use of modern agricultural technology is considered an important means to improve their farming. Despite the reforms, agricultural extension services delivery to smallholder farmers seems to be performing poorly in Tanzania, and in many other developing countries for that matter. Our research has provided more insight into the factors that determine the success and failure of the decentralization reforms.
We also suggested a number of ways to improve the system. It is now up to the policy makers in developing countries to take action to improve the quality of extension services. The importance of agriculture in general, and of agricultural extension services in particular, is well worth the effort.


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URT 2008b: United Republic of Tanzania/MAC, Ministry of Agriculture Food and Cooperatives (ASDP) northern zone agricultural research and development institutes, call for proposals to be funded by the northern zone (ZARDEF).

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Introduction, conceptual framework and research question

Over the past decades, many developing countries have adopted decentralization reforms. Frequently, these reforms were induced or enforced by international sponsors who subscribe to the theory that the proximity between the government and citizens promotes local democracy and accountable government, which will establish policies and render services that reflect the preferences of citizens. In some cases, decentralization has increased the quality of governance resulting in better access to services such as education and health care. In other cases, however, decentralization has failed to fulfill the high expectations. Services do not reflect the preferences of the citizens and their intrinsic quality has either declined or remained unchanged. Overall, in developing countries, the failures outweigh the success of the reforms that were undertaken. The literature offers a series of different explanations for these failures. However, so far, the available literature offers pieces of the puzzle, it does not paint the full picture. The goal of the research was to gain an in-depth understanding of the performance of decentralized systems of public administration, of the relative importance of different factors, and of how these interact or work out in combination in a specific context.

In order to guide the research, we developed a conceptual framework founded on the basic assumptions of sociological institutionalism. We distinguished between three independent variables: the formal system of administration, i.e. rules established by a public authority that define the tasks and competence of public organizations, regulate intergovernmental relations and establish decision-making procedures; informal institutions, i.e. rules with an informal character that give meaning to reality or create a common understanding of what is appropriate behavior in a certain situation; and the availability of resources which determines opportunities and constraints for policy-making and service delivery. The key assumption of the research was that these factors, separately and in interaction, determine the process, i.e. the interaction of actors involved in the delivery of services, and its output, i.e. the quality of public services. To evaluate the practice and output of service delivery, we used a number criteria that are frequently put forward as the possible benefits of decentralization: the democratic caliber of local decision-making; allocative efficiency, i.e. the extent services reflect local preferences; and the extent services are delivered in a coordinated way, are cost efficient and are tailored to local or individual circumstances.
We selected the delivery of agricultural extension services in Tanzania as a suitable area for our research. Agricultural extension services include the transfer of technological know-how to farmers, the assistance to farmers’ groups with projects to enhance production or improve marketing skills, and the collective training of farmers in field schools or workshops. In 1999, the responsibility to deliver these services was transferred from central to local government. Since then, local governments have been criticized for their failure to realize services that reflect the needs and preferences of the farmers and take local and individual circumstances into account. The quality of the services rendered has been presented as substandard. To gain insight into the functioning and performance of the administrative system for the delivery of agricultural extension services the following research question was formulated:

*How does the decentralized system of agricultural extension service delivery in Tanzania function and perform, and how can the formal system of public administration, informal institutions and the availability of resources explain the process of delivery and its output?*

**Methodology**

A literature review conducted with the help of our conceptual framework provided a series of insights into the role of features of the administrative system, of certain informal institutions and of the availability of resources in the delivery of services. However, it did not offer a basis for hypotheses about the relative weight and interaction between different factors. Therefore, we adopted a qualitative research approach as a suitable means to unravel the presumed complex relationships between the variables of our model. A qualitative approach would allow for a precise reconstruction of the planning process in local government and for a detailed study of the actual delivery of services by field extension officers.

We chose to conduct two case studies and to research the delivery of services in the urban municipality of Morogoro and in the rural Hai District. In these two local governments, the process of decision-making about plans and budgets for extension services was reconstructed. Moreover, in each of the two cases, the involvement of farmers in the planning process and the actual delivery of services by field officers was studied in detail in three wards, i.e. administrative subunits of local government. Finally, we studied the role of agricultural research institutes, whose task it is to support local governments.

In each of the case-studies, we used a variety of data collection techniques: content analysis of policy documents and reports; formal and informal interviews with members of the local councils, local government officials, field extension officers, officials from the agricultural research institutes and from the ministry of agriculture, representatives of NGOs active in
the field, representatives of farmers’ associations and individual farmers; focus group discussions with farmers’ groups; observations of meetings and field trips.

Main empirical findings

The research conducted resulted in a series of key findings concerning the decision-making about local plans and budgets for agricultural extension services, the actual delivery of services and the relation between research institutes and local governments.

In the decision-making about local plans and budgets for agricultural extension services non-elected officials play a dominant role. Local officials draft five-year strategic and annual plans, and they do so in such a way that they fit central government priorities laid down in national plans and meet the conditions attached to grants provided by central government. Following procedures for the development of strategic plans, stakeholders were consulted before a draft was tabled to the local council, but their input was not included in the plans. In the same vein, in both local governments, farmers were involved in the development of annual plans and could suggest extension projects. But extension officers were leading in the consultation process and were decisive at the moment of compiling village plans into ward plans and a district plan, which in the end reflected the priorities of central government.

Before plans are submitted to the councils, they are reviewed by the regional secretariat of central government to ensure that they do not conflict with national policies. In their subsequent deliberations, council committees in the two local governments did not question the priorities or measures included in the plans, nor did they articulate local preferences; the full councils approved the plans such as they were put to them without substantial debate. All in all, the transfer of the delivery of extension services to local government did not result in decision-making in which elected representatives or societal stakeholders determine which extension projects are financed and which services are rendered. As a consequence, plans and the allocation of budgets do not reflect the preferences of the local community.

The research suggests a number of explanations for these findings. First, local councils formally establish plans and policies and services are rendered by local officials, but in many other aspects the formal administrative system is still centralistic. National policies define priorities, local governments heavily depend on earmarked grants to finance extension activities and central government agencies supervise local decisions. The room for local governments to set their own priorities is limited. Secondly, local administrators and local councilors share a culture of upward accountability; they are guided by the rule that you cannot and must not ignore the guidelines and priorities set by central government. For local administrators, this culture of upward
accountability finds its origin in the fact that they depend on central government for their recruitment and promotion. In turn, local councilors are confronted with hierarchical structures of their political parties, which makes their political career dependent on their allegiance to national party manifestos.

The actual delivery of agricultural extension services to farmers in the two local governments suffers serious flaws. It is inefficient in the sense that fully paid extension officials only dedicate part of their work time to their actual tasks and the rest to paid services that do not fall within their job description. Allocative efficiency is not realized: while there is an evident need for advice to and training of crop growing farmers, most of the time and effort of extension officials goes into the assistance of livestock keepers, who pay for the services rendered. Unless financial resources are allocated to a group project, farmers’ groups are only serviced if they live nearby or have developed a special bond with the extension officer. And lastly, overall, the transfer of knowledge, the field schools and training sessions are offered in a standardized form, and generally do not take into account the different levels of education of the clients. How can the formal administrative system in place, informal institutions and the availability of resources explain the flaws in the delivery of services?

A first explanation is that field officers enjoy a large amount of discretion. Apart from the allocation of budgets to certain extension projects, agricultural plans do not specify the services to be delivered. In both local governments, the responsible departments work with general instructions. Although in Hai District supervision on field officers was stricter than in Morogoro, overall, field extension officers to a large extent decide what services to provide and to whom. A second explanation relates to the scarcity of resources: working tools, agricultural input for field schools, means of transport and fuel are scarce, and are sometimes lacking all together. This makes it difficult to visit remote areas or to address specific needs of farmers. However, the scarcity of resources does not fully explain the dominant pattern of service delivery, i.e. the fact that extension officers preferably service farmers who are willing to pay. Our research shows that extension officers are guided by the social rule that the delivery of services is not a duty but a favor, and that some compensation for their efforts is in order. Overall, farmers do not challenge this rule.

Agricultural research institutes are expected to conduct research that is driven by the demands of their clients: local governments and farmers. Subsequently, their role is to transfer knowledge on agricultural technology to local governments and train their extension staff. The research conducted by the two agricultural research institutes we studied – Ilonga ARI and Selian Ari - is not driven by the demands of local governments or farmers in their zone.
The main reason is that both institutes heavily rely on funds provided by (private) donors. This implies that funds are available for certain research topics, that the public institutes have to orient their proposals to these topics and sometimes compete with private research organizations to obtain funding. In addition, both institutes are reluctant to spend the limited grants they receive from central government to projects requested by local governments: they honor the priorities formulated in national research programs or prefer fundamental scientific research over applied research requested by local governments.

With respect to the dissemination of knowledge and training activities the Selian ARI is significantly more active than the Ilonga ARI, and overall the relationship between Selian ARI and local governments such as Hai district is closer than the relationship between the Ilonga ARI and Morogoro Municipality. Here, the economic importance of agriculture plays a role. In Hai, agriculture is of much higher economic value then in Morogoro, and therefore it is given a relatively high priority by the local government, farmers and the institute.

Our research covered a number of practices: the decision-making on planning and the role of councilors and administrators therein; the operations of field extension officers and their interaction with farmers; the interaction between the research institutes on one hand and local governments and other stakeholders on the other. In many cases these practices are ruled by formal procedures that prescribe meetings, group sessions or other types of interaction in which the actors involved are supposed to meet face to face to discuss, confer, negotiate, teach or learn. One of the findings of our research is that the delivery of agricultural services is hindered by the social rule that no meeting, no workshop, no field school, no visit outside the office can take place if the councilors, officials or farmers involved do not receive a sitting allowance, a per diem or some compensation in kind. If no resources are available for sitting allowances, meetings between research institutes, municipalities and farmers’ organizations, that should result in demand driven research, do not take place. If no resources are available to pay extension officers special allowances for carrying out a project, they reduce their visits. The absence of material compensation for farmers results in a low participation in field schools and training sessions. Overall, the social rule that allowances or compensation are in place for any activity that is not considered to belong to the core of one’s duties, has a negative impact on the process and outcome of the system of public administration.
Theoretical findings and recommendations

Our research confirms and sometimes specifies the results of earlier research on how a formal administrative system, the availability of resources and informal institutions separately influence the performance of decentralized systems of public administration. Our research also shows how these factors can interact. We found two instances in which such interaction reinforced the impact of the separate factors. The first concerned the relation between formal and informal institutions. A limited administrative discretion and the fact that local administrators and politicians depend on national political leaders and government officials for their career has originated a social rule that local plans and budgets must conform to central government rules and priorities. The second instance concerned the relation between informal institutions and resources. The rule that no meeting can take place without offering the participants a compensation for their efforts forces those in charge of budgeting to reserve financial resources to pay for sitting allowances. This makes scarce resources even more scarce.

We also found instances in which social rules, in combination with the scarcity of resources, undermine formal institutions. Procedural requirements for the development of agricultural plans or the planning of research activities were simply set aside with the argument that you cannot organize a meeting without funds for allowances. In the same vein, field officers invoke the lack of fuel or time as reasons not to visit farmers or farmers’ groups, even if they live nearby or no specific tools are necessary. In this way, the formal right all farmers have to be assisted by extension officers is neutralized.

Our findings support our original claim that to gain an in-depth understanding of the functioning and performance of systems of public administration, it is necessary to take the different variables included in our framework into account, both separately and in their mutual interaction. This idea has also inspired a number of recommendations. One concerns the suggestion to involve the local council in the hiring of senior local staff, for example by giving it the right to choose a candidate from a shortlist provided by central government. This could contribute to a reduction of the culture of upward accountability of local officials. In the same vein, we suggest to enhance the involvement of the local community in the nomination of candidates for local elections in order to increase their accountability to the local community. Both recommendations concern a reform of formal institutions to provoke a change in social rules. We also suggest a reform of the perverting system of sitting allowances, but we are aware of the fact that it reflects social rules and expectations that are deeply embedded in the public administration of Tanzania. It would require substantial moral, disinterested and powerful leadership to bring about the necessary change in the ethics of public administration to lay the ground for such reforms.
Annex 1

**Primary sources of data for Hai District and Morogoro Municipal Council**

*Documentary review - Morogoro Municipal Council*

MMC 2011: Morogoro Municipal council, Revenue report for the department of agriculture and livestock.
MMC 2011: Morogoro Municipal Council, minutes of the meeting of finance, and Administration Committee.
MMC 2011: The united republic of Tanzania, prime minister’s office, Regional Administration and Local Government Authorities, Morogoro Municipal Council Strategic Plan
MMC 2011: DADPs documents.
MMC 2012: Morogoro Municipal Council, the farmers training, quarterly report 2012.
MMC 2013: Monthly and quarterly reports.
MMC 2013: Morogoro Municipal Council, minutes of the meeting of the Finance and Administration Committees.
Documentary review - Hai District Council

HDC: Hai District Council, Non-Governmental Organizations (NGOs) Working with Hai District Council
HDC: Hai District Council, district investment profile, District Executive Director and District Commissioners office
HDC 2011: Hai District Council Strategic Plan, the United Republic of Tanzania, Prime Minister’s office, Regional Administration and Local Government Authorities (2011/12 – 2015/16).
HDC 2012: Hai District Council, development budget.
HDC 2012: Hai District Council, agricultural extension staff records.
HDC 2012: Hai District Council (2012/2013), DADPs documents, amended.
HDC 2012: Hai District Council, implementation report for agriculture and livestock department 2012.
HDC 2012: Hai District Council training report.
HDC 2013: Hai District Council, project implementation report of 2012/2013 to June 2013, for the DADPs projects
HDC 2013: Hai District Council, the implementation plan for agriculture and livestock department 2013.
HDC 2013: Hai District Council, farmers voice radio training at Mbagala in Dar es Salaam region, April 2013.
HDC 2013: Hai District Council, the fund received between 2012/2013 to June 2013 under DADPs projects.
ANNEXES

PMORAL –HDC (2013) Hai District Council, minutes of the meeting of the  
PMORAL-HDC (2013) Hai District Council, the minutes of meeting for  
Finance, Administration and Planning Committees.  
ZIELU 2013: Zonal Information & Extension Liaison Unit, Annual progress report of zonal information & extension liaison unit, January to December 2013.

Interview guide for data collection

List of questions for interviews with district officials

- Can you tell me how the development and decision-making of district and ward development plans take place?  
- Who starts the process  
- Who are you involved in the process and what do the different parties involved contribute to the development of plans  
- How does decision-making take place in practice?  
- Are the priorities put forward by farmers and farmers’ organizations honored?  
- I have read the structure of extension services delivery in your Municipality/district. It seems there are number of livestock and agricultural extension officers under your supervision. Is there a supervision arrangement for their performance?  
- How is agricultural information and technology transferred to farmers? Could you describe the procedure?  
- How do guidelines from central government facilitate the information transfer to farmers?  
- Do you have contact with research Institute officials?  
- What are the contacts all about?  
- How frequently do you contact them?  
- Do you have influence on priorities for research?  
- Do you have discussion of research priorities with research Institute? Can you give an example?  
- Are you somehow involved in the decision-making about other research projects carried out by the institute?  
- Does the institute normally honor your priorities, if not? Why (not)?  
- It seems there are different farmer’s organization in your Municipality. How do they work and operate?  
- Do you have contact with all of them? How often do you contact them? What are the contacts all about?
• It also seems that the secretary of this organization is also an extension officer. How does he manage to perform these two different roles?
• The documentary review of monthly and quarterly report show that you have a problem of lack of transport and working tools. How does this hinder your performance? how do you cope with inadequacy of this resource?
• Do you have contact with NGO’s?
• It seems you also work with NGOs in extension services delivery. How do you contact them? Is there a formal arrangement for working with them? could you describe the procedures?
• How does training of District Facilitation Team and Ward Facilitation Team take place? Does it include training on agricultural extension services? Can you give examples?
• What are the activities of these teams? Could you describe how their activities relate to extension services delivery?
• How is district Agricultural Development Plan prepared and developed?
• How do you use the development grants?
• How are the agricultural extension grants allocated and disbursed?
• Does the allocation takes into consideration different extension services?
• Do the formal rules in any way hinder the allocation of funds to different extension services?
• How do rules and guidelines from the PMORALG and Agricultural lead Ministries interfere with your need to tailor extension services like livestock and agriculture to local circumstances?
• The idea of decentralization is that plans are developed bottom up; what role do the Agricultural lead Ministries priorities play in decision-making?
• Do you include these in the drafts of the plans? Or do the drafts come from the villages and wards, and what happens if the drafts do not give attention to ministry priorities?

List of questions for interviews with NGO’s

• What are the objectives of your organization?
• How is your organization funded?
• Are there procedures to follow if you want to offer services in the district?
• Do you have to register? Why?
• What does your organization do to support the farmers and their organizations?
• Do you have contact with local government and village extension officials?
• What are the contacts about?
• How do you arrange for the services with village extension officers?
- Do you inform them about your schedule and the working arrangement?
- How do you work with them? could you describe the procedures?
- How do decide on selection of farmers who should receive your services?
- How do you organize training to farmers?

*List of questions for research institutes officials*

- What is your vision as a research institutes?
- Could you please tell me about the research agenda of your institute?
- How do you make decision about your research agenda?
- Do the farmers have influence in deciding about your research agenda?
- Where do you get the fund for the research activities?
- Could you describe the procedures for getting the fund?
- Do you have contact with local government officials in your areas?
- What are the contacts all about?
- How do you transfer the research information to farmers?
- How does the liaison officer of the institute transfer research information to local government extension officials?

*List of questions for interviews with Ward Agricultural Extension Officers*

- According to DADP the implementation at the ward level is facilitated by ward facilitation team and it seems that ward extension officer is a member of this team. How does the coordination of this team take place?
- What do these teams actually do, how do they operate?
- Are you in anyway involved in the activities of these teams? It seems these teams are formed based on the guidelines from the Ministry. Are you happy with these guidelines?
- How does sensitization of farmers and livestock keepers on participatory development program take place?
- How does the planning of field trips take place? does it include the priorities of farmers
- How is it decided, could you describe the process? Which activities the field workers undertake?
- How are the farmers’ field schools organized? Are the activities carried out as planned?
- The documentary review indicates that there is a problem of lack of resources such as working tools and transport. How does this hinder the implementation of field trip activities?
- How do you contact farmers? Who decides on schedule for the field trips?
- Who decides on the venue, contents and time for the meetings?
- It seems extension agents have their own plans to visit farmers. Why farmers are not involved in the development of these plans?
• How do you sensitize and enroll farmers for training programs?
• How do the contents of such training reflect extension services delivery?
• How do you Supervise and assist Village Agricultural Extension Officer on technical issues?
• It seems the district has program to assist farmers through subsidized agricultural input. How do you ensure timely availability of this inputs to farmers?
• How do you Link farmers/Livestock keepers with research information from District Research Canters?
• Do you in any way have contact with NGO’s and CBO’s? how do you work with them in extension services delivery?
• It seems farmers’ groups at the ward level are small and disorganized and they do not have offices. How do you mobilize farmers and help them to form their association?
• How are resources allocated? do extension officers have authority over extension block grants. Why are the working tools insufficient?
• It seems some wards have good report on transfer of information and technology to farmers. Why do you think this is the case? what motivated them?
• How are different extension services like livestock and agriculture financed?
• What problems do you encounter for the treatment of livestock in your ward?
• The documentary review indicates that some of the farmers accept and follow advice from extension officers but some farmers do not follow the advice. Why is this the case?

List of questions for Village Agricultural Extension Officers

• Can you describe a regular weeks’ working?
• What do you normally do during a week?
• How much time do you dedicate to direct contacts with individual farmers?
• How much time do you dedicate to contacts with farmers’ organizations?
• How does the organization of training and actual training proceed? Are the sessions well attended, appreciated etc.; if not why not.
• How does the development of plans take place; what is the actual contribution of farmers themselves, what does the extension officer contribute?
• How does training, facilitation and support of farmer group formation and networking take place?
• How do you assist farmer’s groups / networks to develop project proposals and plans on extension services?
• How do you facilitate farmers to articulate their needs?
• Are you in anyway involved in farm trial? Can you explain how and why in this way?
• How does up-scaling of successful activities and ensuring the dissemination of successful stories take place?
• How do you facilitate farmer’s access to and dissemination of agricultural information?

List of questions for farmers

• Could you describe the types of crops that you grow in your home or farm?
• How do you grow them? Can you describe the procedures from planting to harvesting?
• How do you know the proper way of preparing your farm?
• In which ways do you grow your crops? Do you use modern means or traditional means of growing crops?
• If you use traditional methods or modern methods how do you apply them and why?
• Do have contact with agricultural extension officers?
• What types of contacts do you have and what do you learn from them?
• What kind of fertilizer do you apply for your crops?
• Do you experience any livestock or crop diseases?
• Which diseases do you experience for your crops and how do you fight them?
• Where do you get the knowledge from and how do you apply it?
• How do you harvest and store your crops? do you have any market information?
• Do you have farmer’s field schools in your district?
• How do you participate in the farmer’s field schools and training?
• What do you think you need to improve your crops growing skills?

Observations - Morogoro Municipal Council
Observation of street meeting 02/02/2013
Observation of WDC meeting 07/03/2013
Observation of field trip of Kichangani WAEO 04/03/2013
Observation of the field trip of Bigwa WAEO 06/03/2013
Observation Kilakala training session and field trip 08/03/2013
Observation of Internal Program Review meeting 19/12/2012 & 20/12/2012
Observation of full Council meeting 20/02/2014
Observations - Hai District Council
Observation Rundugai village meeting 10/05/2014
Observations Masama Kusini and Kaskazini VAEO field trips 20/05/2014
Observation full Council Meeting 21/05/2014
Observation Kware VAEO in Masama Kusini meeting with farmers 22/05/2014
Observation of field trip Uduru VAEO Machame Kaskazini 29/05/2014
Observation Program Review Meetings of SARI 08/09/2014
Annex 2

List of respondents for interviews; focus group discussions and observations

Morogoro Municipality

District level officials - interviews
Grace Macha  Agricultural Extension Officer (MAO)  30/10/2012
Eunice Kingai  Municipal Agricultural Extension Officer (MAEO)  30/10/2012
Epiphania Matafu  Municipal Agricultural Officer (MAO)  01/11/2012
John Chilongola  Budgeting Officer of the Department (A & LDBO)  01/11/2012
Issa Khama  The head of department of Agriculture and Livestock (HoD A & LD)  02/11/2012
Philemon Magesa  HoD Human Resources  03/11/2012

Ward level officials - interviews
Nasib Mkama  Bigwa Ward Agricultural Extension officer (WAEIO)  04/11/2012
Jane Kailembo  Kilakala (WAEIO)  07/11/2012
Vero shyao  Kilakala (WAEIO)  07/11/2012
Mary Shoo  Kichangani (WAEIO)  07/11/2012
Andrew Hebert  Bigwa (WAEIO)  09/11/2012
Juma Makandi  Bigwa (WAEIO)  10/11/2012
Consalata Moris  Street Executive Officer (SEO)  10/11/2012
John Waziri  Ward Councilor (WC)  11/11/2012
Avinus Kapinga  Ward Executive Officer (WEO)  15/11/2012
Mery Juma  Bigwa ward councilor  15/11/2012

Interviews with individual farmers
James Mlowe  MVIWATA chairperson  10/12/2012

Bigwa ward farmers
Timotheo Paulo  11/12/2012
Leah George  13/12/2012
Mama Enock  13/12/2012
Veronica Koba  14/12/2012
Mama Kisungura  14/12/2012
Mama Kizito  15/12/2012
John Waziri  16/12/2012
Agustina Moris  16/12/2012

Kilakala farmers
Kanut Zozo  17/12/2012
Mzee John  17/12/2012
List of participants in focus group discussions Kichangani ward
Ernest Mkude 12/01/2013
Mkwayu Salumu
Ramadhan Sigareti
Ally Dilunga
Angelo Ramadhan
Kulwa Dilunga
Hamad Hassan 14/02/2013
Aklay Nyawale
Rashid Issah
Karista Moris
Baba Mariam
Baba Imma

List of participants in focus group discussions Bigwa ward
Kisungura John 18/01/2013
Rosemary Aloyce
Mama Enock
Mama Kizito
Veronika Juma
Partric Msonga
Lucas Kadig
Bibi Kupila
Juma Haji Kondo 21/01/2013
Shaban Rajabu Mngango
Ramadhan Salumu kichalu
Gisela Mitala
Eva Kulandera
Rukia Juma Omari 23/02/2013
Flora Remi
Halima Huseni gendaga
Ally Rashidi
Simon Mwakalosi

List of participants in focus group discussions Kilakala ward
Petro Hasan Farmers training participant 18/12/2012
Ernest Lwanda Farmers training participant
Kanut zozo Farmers training participant
Yustin Maimba Farmers training participant
List of NGOs respondents for interviews

Jonson Willy  BRAC Director  20/01/2013
Justin John  BRAC coordinator  22/01/2013
Charles Edwin  BRAC Livestock Officer (BLO)  22/01/2013
John Shio  Agricultural Promoter  23/01/2013
Edwin Shio  Livestock Promoter  24/05/2013
Godwin Mushi  Business Development Officer (BDO)  20/01/2013

List of Research Institutes officials for interviews Ilonga ARI

Lilian Grace Mwanga  Liaison Officer (IARILO)  20/02/2013
Amos Chilagane  Farming System Researcher (IARIFSR)  23/02/2013
Mbwelewa Juma  Institute Accountant (IARIA)  24/02/2013
Alfred Moshi  Research Institute director (IARID)  02/03/2013

Interviews -Ministry of Agriculture and livestock

John Banzi  Planning officer (MPO)  20/10/2015
Maimuna Juma  Accountant of the Ministry (MA)  22/10/2015

Hai District Council

List of interviews with district level officials

John Machange  HoD Agriculture and livestock (HoD A & L)  04/04/2013
Freten Mtika  District Agricultural Extension officer (DAEO)  06/04/2013
Eric John  Planning officer (DPO)  07/04/2013
Edith Waya Mela  Agricultural Extension Officer-crops  10/04/2013
David Leakey  Agricultural Extension officer- (AEO)  11/04/2013
Felister Mushi  Rundugai Ward Councilor (WC)  14/05/2013
Faraja Ndatu  Human resources officer (HRO)  18/04/2013
Clement Kwayu  Council Chair (CC)  20/06/2013

List of interviews with ward agricultural extension officers

Adolf Mboya  Masama Rundugai WAEO  20/04/2013
Bureta Flavia  Masama Kusini WAEO  21/04/2013
Julius Kimario  Machame Kaskazini WAEO  22/04/2013
**List of interviews with village and ward officials**

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<tr>
<th>Name</th>
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<tr>
<td>Adolf Mboya</td>
<td>Rundugai VAEO</td>
<td>23/04/2014</td>
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<td>Leticia Sudi</td>
<td>Kwasadala VAEO</td>
<td>24/04/2014</td>
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<td>Francis Mfuru</td>
<td>Warindoo VAEO - Machame Kaskazini Ward</td>
<td>24/04/2014</td>
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<td>Uduru VAEO - Machame Kaskazini Ward</td>
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<td>Chemka VAEO – Rundugai</td>
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<td>Angela Swai</td>
<td>Mungushi VAEO</td>
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<td>Halima Mohamedi</td>
<td>Kware VAEO</td>
<td>26/04/2014</td>
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</tbody>
</table>

**Masama Kusini focus group discussions with farmers**

<table>
<thead>
<tr>
<th>Name</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biluhuda Hamisi</td>
<td>27/04/2014</td>
</tr>
<tr>
<td>Fadhila Juma</td>
<td></td>
</tr>
<tr>
<td>Shamzani Ally</td>
<td></td>
</tr>
<tr>
<td>Mama Doman</td>
<td></td>
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<tr>
<td>Zama Mahundi</td>
<td></td>
</tr>
<tr>
<td>Aidan Munisi</td>
<td></td>
</tr>
<tr>
<td>Mathayo John</td>
<td>Maize grower and poultry keeper</td>
</tr>
<tr>
<td>Halima Mosha</td>
<td>Maize grower and poultry keeper</td>
</tr>
<tr>
<td>Faudhia Ally</td>
<td>Maize grower</td>
</tr>
<tr>
<td>Jackson Swai</td>
<td>Sheep keeper</td>
</tr>
<tr>
<td>Evenlight</td>
<td>Maize grower</td>
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**Masama Rundugai focus group discussion with farmers**

<table>
<thead>
<tr>
<th>Name</th>
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</thead>
<tbody>
<tr>
<td>Mama zainab</td>
<td>30/04/2014</td>
</tr>
<tr>
<td>Maria Mdee</td>
<td></td>
</tr>
<tr>
<td>Daudi Masika</td>
<td></td>
</tr>
<tr>
<td>Avijawa Juma</td>
<td></td>
</tr>
<tr>
<td>Mariamu Hassani</td>
<td>30/04/2014</td>
</tr>
<tr>
<td>Amiri Ally</td>
<td></td>
</tr>
<tr>
<td>Antony Amiri</td>
<td></td>
</tr>
<tr>
<td>Kaduri Hassan</td>
<td></td>
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<td>Mdee Mariam</td>
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**Machame Kaskazini focus group discussions with farmers**

<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Justin Massawe</td>
<td>02/05/2014</td>
</tr>
<tr>
<td>Said Mushi</td>
<td></td>
</tr>
<tr>
<td>Jerome John</td>
<td></td>
</tr>
<tr>
<td>Senyaeli Mushi</td>
<td></td>
</tr>
<tr>
<td>Shiletiwo Mushi</td>
<td>10/05/2014</td>
</tr>
<tr>
<td>Filister Moses Swai</td>
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</tr>
<tr>
<td>Michaela Swai</td>
<td></td>
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<tr>
<td>Wilfred Swai</td>
<td></td>
</tr>
</tbody>
</table>
List of interviews with individual farmers and their leaders

**Machame Kaskazini ward**

- Senyaeli Nkya, Secretary of Makoa Cooperative, 02/05/2014
- Elias Mbowe, Coffee farmer, 02/05/2014
- Alfa Amanga, Farmer, 07/05/2014

**Masama Kusini ward**

- Bashiri Shabani Tarimo, Kimamu farmers’ groups chairperson, 06/05/2014
- Godbless Mathew, Kwasadala village farmers, 08/05/2014
- Ayubu Ndetei, Kwasadala village farmers, 08/05/2014
- Mohamed Mtaki, Chairperson of red apple farmers’ group, 12/05/2014

**Rundugai ward**

- Mama Glory, Rundugai village, 11/05/2014
- Mama zainab, Rundugai farmers group chairperson, 07/05/2014
- Avijawa Juma, Rundugai village, 11/05/2014
- Mama Glory, Rundugai village, 11/05/2014
- Avijawa Juma, Rundugai village, 10/05/2014

List of interviews with officials of Selian Agricultural Research Institute

- Lucus Mugendi, Selian Agricultural Research Institute Director (SARID), 20/05/2014
- Jeremiah Sembosi, Zonal Liaison Officer (SARILO), 22/05/2014
- Dankan Nganki, Selian Research Institute Accountant (SARIA), 23/05/2014
- Philemon Mushi, Farming System Researcher (SARIFSR), 23/05/2014
- Pendo Michael, Farming System Researcher (SARIFSR), 25/05/2014
## Livestock population for Morogoro Municipality

<table>
<thead>
<tr>
<th>No</th>
<th>Type of livestock</th>
<th>Number</th>
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<tbody>
<tr>
<td>1</td>
<td>Indigenous cattle</td>
<td>4,959</td>
</tr>
<tr>
<td>2</td>
<td>Dairy cattle</td>
<td>6,981</td>
</tr>
<tr>
<td>3</td>
<td>Indigenous goats</td>
<td>9,981</td>
</tr>
<tr>
<td>4</td>
<td>Dairy goats</td>
<td>441</td>
</tr>
<tr>
<td>5</td>
<td>Poultry (local)</td>
<td>1,410,530</td>
</tr>
<tr>
<td>6</td>
<td>Poultry(layers)</td>
<td>600,000</td>
</tr>
<tr>
<td>7</td>
<td>Poultry(broilers)</td>
<td>240,000</td>
</tr>
<tr>
<td>8</td>
<td>Sheep</td>
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<tr>
<td>9</td>
<td>Pigs</td>
<td>3,433</td>
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<tr>
<td>10</td>
<td>Ducks</td>
<td>2,125</td>
</tr>
<tr>
<td>11</td>
<td>Dogs</td>
<td>10,500</td>
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<tr>
<td>12</td>
<td>Camels</td>
<td>10</td>
</tr>
<tr>
<td>13</td>
<td>Horses</td>
<td>7</td>
</tr>
<tr>
<td>14</td>
<td>Guinea Fowls</td>
<td>1,736</td>
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<tr>
<td>15</td>
<td>Rabbit</td>
<td>413</td>
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</table>