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**Contesting Institutional Engineering for Decentralized
Natural Resources Governance in Malawi**

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Introduction

Since 1980s, devolution of responsibility and control over natural resources from government to user groups has become a widespread policy in many developing countries (Meinzen-Dick, Raju and Gulati, 2000; Shaw, van Koppen, Merrey, de Lange and Samad, 2002, Ferguson and Mulwafu, 2004). Founded on the rationality of citizen participation and democracy, devolution policies have not only challenged the morality of centralized systems of resource governance as theorized by Hardin (1968), but also questioned its very efficiency, effectiveness and sustainability. In general, devolution policies contest the state's incentives and capability to manage local natural resources efficiently, sustainably and equitably (Agrawal, 2001; Meinzen-Dick, Raju and Gulati, 2000). Inter alia, experience with centralized natural resources management has revealed that that the approach is not only inefficient but is characterised by a number of vices including being unresponsive to the local needs, increases social inequality, destroys indigenous natural resource management knowledge and lacks flexibility about resource use (Mawaya, 1999; Lee, 2002). The participatory school of thought in particular recognizes the limitations of the state in financing managing natural resources management under common property resources (CPRs) and consequently advocates reducing the size of government (Restrepo, Vermillion, and Munoz, 2007; Meinzen-Dick, Raju and Gulati, 2000). CPRs, defined as resources held by an identifiable community of interdependent users in which these users exclude outsiders while regulating use by members of the local community (Adhikari, 2001), pose a management challenge because they are non-excludable and rivalry; attributes of public and private goods respectively (Ostrom, 2000; Carpenter, 2001; Ahdikari, 2001).

Thus, there has been preference of community-based natural resources management (CBNRM) over centralized state management since embracing decentralization policies in early 1980s. Besides the positive theoretical arguments in support of decentralization of CBNRM (Ribbot, 2002), the new approach is uphold by the evidence that local people have the capacity to manage their commonly owned local resources efficiently, sustainably and equitable (Katz, 2002; Ostrom, 2000). Decentralization trend also emanates from the theoretical shifts in the game theories and democratic governance, though practice is largely driven by the later (Blaikie, 2006; Agrawal, 2001). Democracy literature in particular in particular is a good tool to achieving the trinity of good governance, development and poverty reduction (Chinsinga, 2005). The drive for

decentralization was also strengthened by disappointing record of centralized development planning and justified on the basis that political governance cannot be separated from economic governance (Bardham, 2002). Suffice to mention that current wave of decentralization has not only varied and interrelated objectives, but has also given rise to different dimensions. In natural resources management, decentralization is perceived to achieve efficient, effective and just resource management (Ribot, 2002).

However, while theoretical claims predict a successful decentralized natural resources management, empirical evidences from both local and international CBNRM projects have highlighted mixed outcomes with some being more optimistic (Ostrom, 2000; Katz, 2002; Agrawal, 2001); while others arguing that its outcomes remains disappointing (Mulwafu and Ferguson, 2004, 2007; Blaikie, 2006). To what extent then do the theoretical claims about the success of decentralized natural resources in practice? In other words, what is the congruency between theoretical claims and practice on the ground.

Historically, Malawi inherited and continued with strong state intervention into natural resources management as backed by the colonial masters thinking who doubted the ability of local communities to efficiently manage their resources (Fairhead and Leach, 1995). Thus, most natural resources including forests, game and water resources were under state control. In the area of irrigation, specifically, farmers were under strict guidance of government employed extension workers on how to manage irrigation water resource. However, a plethora of factors, including financial constraints, rendered state management ineffective (Blaikie, 2006; Fairhead and Leach, 1995). In line with global political moves towards decentralization and public participation in resource management, the government of Malawi promulgated policy legislation for community management of irrigation of public irrigation schemes. The National Irrigation Policy and Development Strategy (2000) and Irrigation Act (2001) aim at devolving all public irrigation schemes to water users through water user association (WUA). Institutional type and structures in the schemes were based on the principles of democracy. Thus, irrigation schemes were managed by elected members and local chiefs were barred from being actively involved in the management of irrigation schemes. Disappointing outcomes of irrigation schemes outcomes reveal that, inter alia, institutions guiding natural resources governance are failing. Has institutional engineering for natural resources governance failed?

This study responds to these questions by examines the process of crafting institutional framework for decentralized natural resources governance; and highlight performance challenges associated with decentralized natural resource governance . Employing Domasi and Njala as case studies, (Domasi irrigation scheme has formally recognised constitution while Njala has not finalized the process of constitution making) the study's crucial questions to be addressed are; what were the guiding principles in crafting formal irrigation scheme institutions? What institutional factors affect decentralized irrigation scheme management? In general therefore, the study intends to explore the adequacy of formal institutions in contributing to effective and sustainable decentralized natural resource governance in Malawi as guided by the following variables:

- *Access and Equity* – the distribution and allocation of irrigation plots and water resources
- *Empowerment and democratic governance* – the distribution of power and status among local farmers as evidenced by participation in decision making and in elections; observance of farmers rights, and respect for farmers democratic views
- *Conflict resolution* – fair handling and resolving of conflicts and disputes over resources among local farmers and other surrounding local and national entities and interests.
- *Sustainable utilization* – the utilization of water resource in ways intended to maintain the long-term availability of these resources for present and future generations

There have been some studies before in the area of natural resource governance in Malawi (Ferguson and Mulwafu, 2007; Veldwisch, Bolding and Wester, 2009); most of these studies have, however, concentrated on outcomes of CBNRM and not the institutional analysis. Again, most if not all, studies in Malawi have not responded to the theoretical claims that have ushered in decentralized natural resource governance. This gap makes this study unique.

Defining Decentralization

There are numerous and at times contradicting and confusing definitions of the term decentralization (Smoke, 2003; Adamolekun, 1991). Defined broadly, decentralization is the transfer of political, administrative and legal authority or responsibility for planning, decision-making, resource allocation and administering public functions from the central government to its field, district and regional administrative units; semi-autonomous and parastatal

organizations or even non- governmental organizations or voluntary associations of people; and private entities (Hope and Chikulo, 2000). This definition covers the political, economic, administrative and even planning aspects. Inconsistencies and contradictions over the concept of decentralization arise from the fact that the concept encompasses different forms, types within the forms and dimensions. Consequently, different authors present either the forms, types or even a mixture of the form and types and decentralization (see Smoke, 2003; Mbeye, 1998; Adamoleku, 1991; Kayuni and Tambulasi, 2007). Thus, it is important that this paper clarifies this confusion.

Generally, there are four forms of decentralization namely: political, administrative, spatial and market (Cohen and Peterson, 1996). These forms of decentralization are classified on the basis of objective. Political decentralization is concerned with transfer of decision making power to lower level of government units or to citizens or their elected representatives. A good example of political decentralization is devolution, which refers to transfer of governance responsibility for specified functions to sub national levels outside direct control of the central government. Spatial decentralization entails efforts at reducing excessive urban concentration in a few large cities by promoting regional growth poles that have potential to become centres of manufacturing and agricultural marketing (Cohen and Peterson (1996). Market decentralization is creation of conditions that allow goods and services to be produced and provided by market mechanisms sensitive to the preferences of individuals. This form has become prevalent with global establishment of liberalization and privatization policies. Market decentralization shifts the responsibility of providing public goods from the state to private firms, community groups, cooperatives and NGOs. Finally, administrative decentralization is the hierarchical and functional distribution of powers and functions between central government and non-central government. There are generally two major types of administrative decentralization namely: deconcentration and delegation. Deconcentration is the transfer of administrative responsibility for specified functions to lower levels within the central government bureaucracy (Tambulasi and Kayuni, 2007). In other words, it is the redistribution of government administrative responsibility within central government ministries or agency and involves sharing central government with offices outside the national capital. In a deconcentration, local staffs do not possess any authority to make decision on their own, but are under the technical supervision and control of the central government. Delegation is the transfer of government decision-making

and responsibilities to organisations and institutions which enjoy varying degrees of autonomy vis-à-vis central government ministries such as parastatal or public corporations (Adamolekun, 1991; Cohen and Peterson, 1996).

Decentralisation-Development Debate: A Theoretical and Empirical Perspective

There is a strong theoretical argument for decentralization. Notwithstanding the confusion arising from the challenges of defining development (Sen 1999; 1977; Sapru, 1994), there is a renewed belief that decentralization is a better path to achieving socio-economic progress (Cross and Milton, 2001). The link between decentralization and development lies in its ability to achieving the goals of good governance, development and poverty reduction. Theories of liberal democracy in particular underline the need for bringing government closer to the grassroots to make it more representative, accountable and responsive (Chinsinga, 2005). On the other hand, post modernism development theories underline the role of participatory development strategies in achieving sustainable development (Chambers, 1983). It should however be pointed out that the greatest impetus for decentralization in Africa is connected to the early 1990s wave of democratization which called for political participation (Cross and Kutengule, 2001). Nonetheless, decentralization process provided an environment to experiment with re-emerging bottom-up development approaches in a new environment¹. This cause was strengthened by disappointing record of centralized development planning and justified on the basis that political governance cannot be separated from economic governance (Bardham, 2002). This entails that decentralization has varied and interrelated objectives, giving rise to different dimensions as well (Smoke, 2003; Chinsinga, 2005, Adamolekun, 1991).

There are three main objectives of decentralization namely: administrative, political and economic objectives. Administrative objectives are mainly concerned with the best approach to organizing development activities in order to achieve administrative convenience and efficiency. Administrative convenience is concerned with making appropriate decision while administrative efficiency is about best resource allocation. The argument is that local governments are better placed to achieve administrative convenience and efficiency than central

¹ Bottom-up development approaches have a long history. It is related to community based natural resources management under local authorities and chiefs in sub Saharan Africa. Again, past decentralization efforts were not guided by democratic values but schools of public administration (see Chinsinga, 2005; Blaikie, 2006 and Agrawal, 2001).

government because they are more sensitive to the needs of local communities and can thus better identify priority local need. To this end, they can modify and avoid duplication of service provision. Equally important, local governments can better raise local revenue to implement local projects as local communities will be motivated to fund and monitor their own development cause. Allocative efficiency may also achieve equitable distribution of resources as it is engineered under local communities' priority needs objective (Smoke, 2003; Adamolekun, 1991). The major political objective of decentralization is however concerned with achieving democratic governance and good governance. Good governance signifies creation of proper law and order, elimination of unnecessary government interference and establishment of corrupt free public administration as a means of achieving socio-economic progress. It differs from democratic governance in the sense that the later recognizes political, civil rights and citizen participation as basic values and development ends in themselves (Abdellatif, 2003; Elahi and Danopoulos, 2004). Suffice to mention that, depending on their aims, different governments and international organisations vary in their orientations to these two concepts. The economic objective of decentralization, which focuses on creating a conducive environment for the achieving economic growth and development, centres around three things namely: economic efficiency, resource mobilization and increasing service and product quality. Decentralization increases economic efficiency as citizens become committed to development plans they have been involved in identification. Resource mobilization on the other hand is improved as people become motivated and willing to contribute to local development programmes. Finally, quality of service and product increase as a result of competition and choice among local government units. The assumption is that citizens would choose where to locate themselves to take advantage of the quality and costs differentials (Adamolekun, 1991; Smoke, 2003). It should, however, be pointed out that the administrative, political and economic objectives of decentralization can hardly be fully achieved isolation. It is also strongly argued that if devolution occurs on its own, it strengthens top down political dominance (Mbeye, 1995).

Theoretical arguments for decentralization notwithstanding, decentralization should not be taken as a panacea to development because of two main reasons. First, decentralization has inherent theoretical flaws in accounting for its benefits, especially when applied to developing countries. Again, while devolution has its merits, it has the potential of promoting a sense of belonging to the locality or region than to the nation-state (Smoke, 2003, Adamolekun, 1991).

This is likely to cement already hostile ethnic and regional grouping that characterize most African countries, including Malawi; and continue to provide a platform for neo-patrimonial tendencies. Second, conditions within developing countries do not allow full enjoyment of the benefits provided by decentralization. For instance, high poverty levels in most countries limit preference differentiation making the question of administrative efficiency irrelevant. Equally important, the economic objective of quality service provision is defeated by the fact that costs in developing countries are not related to competing local governments and citizens do not really have choice of jurisdiction (Adamolekun, 1991; Smoke). In addition to these two theoretical and conditional blocks, decentralization suffers from design and implementation problems such as budget deficits, fiscal irresponsibility and local elite capture of the development agenda (Smoke, 2003).

Objectives of Decentralized Natural Resources Governance

Decentralized natural resources governance has four main objectives namely: as a means to decentralization and local empowerment. This objective is mainly supported by international organizations and financial institutions who perceive participation as a sure way to local empowerment (Lee, 2002: 20; Blaikie, 2006: 1945). To this end, CBNRM has involved radical institutional reform in line with the principles of democracy and decentralization.

Second, decentralized natural resource governance is a means to reducing government expenditure on resource management. It is mainly argued by scholars that the main impetus towards decentralization came from the fiscal crisis of the state (Meinzen-Dick, 2000; Blaikie, 2006; Restrepo, 2007). Global economic crisis especially in the early 1980s resulted in governments failing to meet the costs of monitoring resource use and maintaining resource facilities. Decentralized natural resource governance is also aimed at instituting sustainable utilization of local resources, which rises from a growing realization that state management of natural resources has been unsuccessful. Thus, it is designed to achieve resource sustainability through social and economic incentives to local users who have for long time been blamed for resource depletion and destruction. Rather than being new, decentralized resource governance is therefore a modern attempt to revive the old established traditional cultural and institutional mechanisms for managing and conserving the natural environment (Kellert, 2000). There are widespread claims that the main objective of decentralized natural resource governance is poverty reduction of the local people by increasing their access to resources. This objective has

gained ground with the present understanding that poverty does not only relate to lack of physical assets but also social and political capacity (Lee, 2002; World Bank, 2002). In other words, the approach improves the local people's wellbeing physically, socially and politically through improving their access to resources, social interaction and good local governance respectively. There is however a growing scepticism about the real objectives of decentralized natural resource governance (Blaikie, 2006; Mulwafu and Ferguson, 2007), arguing it is a ploy to pacify local communities into accepting the broader aim of protecting local resources from which they would continue to be excluded (Musumali et al, 2007; Blaikie, 2006).

Theoretical Framework

This study was guided by the formal-informal institutional interaction model as constructed by Helmke and Levitsky (2004). This model, within the institutional theory, explains the nature and outcomes of interaction between formal and informal institutions. Institutions are defined as rules of the game or humanly devised constraints that shape human interaction in society (Knowles, 2006; Helmke and Levitsky, 2004). Though institutional theory can help understand the outcomes of decentralized natural resource governance, it is limited in a history where none of the two exists in isolation (Mamdani, 1996). Again, there is a strong belief that many rules of the game that structure and guide people's life are informal institutions that are created, communicated and enforced outside of officially sanctioned channels (Helmke and Levitsky, 2004; Knowles, 2006). Thus, formal-informal interaction model is critical to explaining institutional outcomes. In decentralized natural resource governance, the application of this model is empirically supported by Meinzen-Dick et al (2000), who note that collective action for natural resource management does not necessarily require a formal organisation.

Informal institutions are defined as socially shared rules, usually unwritten, that are created, communicated, and enforced outside of officially sanctioned channels; while formal institutions are rules and procedures that are created, communicated, and enforced through channels widely accepted as official. In the case of natural resource governance, this mainly relates to state recognised constitutions, laws, regulations and organization rules (Helmke and Levitsky, 2004; Knowles, 2006). Formal-informal interaction model bridges the dichotomous functional-dysfunctional view about informal institutions. Formal-informal interaction model produces four typologies of informal institutions based on convergence and divergence and of

institutional outcomes and effectiveness of formal institutions namely: complementary, accommodating, substitutive, and competing. Complementary informal institutions combine effective formal rules and convergent outcomes and fill the formal institutional gap. Accommodating informal institutions combine effective formal institutions and divergent outcomes by creating incentives to alter the outcomes of formal rules. Competing informal institutions combine ineffective formal rules and divergent outcomes, producing competing informal institutions such as clientelism, patrimonial, clan politics, and corruption (Merry, 1988). Substitutive informal institutions combine ineffective formal institutions and compatible outcomes. Formal-informal institutional interaction model is very relevant in the study of natural resource governance that are experiencing power and responsibility transfer from government to communities. In Malawi, devolution of responsibility from government to local farmers to has been associated with establishment of formal rules and regulations that are formally recognised by the state² (Mulwafu, 2004). Therefore, as theorized in the Helmke and Levitsky typology of informal institutions, the success of the community management of irrigation schemes depends on the complex interaction between formal and informal institutions.

Methodology

The aim of this paper is to examine the process of crafting institutional framework for decentralized natural resources governance; and highlight performance challenges associated with decentralized natural resource governance. The analysis is guided by formal-informal institutional model as theorized by. In this study, formal institutions refers to a set of rules and regulations guiding decision about common resource use, distribution and control as outlined in the WUA constitution. Informal institutions on the other hand are resource governance rules, regulations and practices outside the constitution. Most of these informal institutions are deeply rooted in local tradition (see Kambewa, 2005). Data gathering was conducted between January 2008 and May 2009, which ensured that data was collected during rain-fed farming irrigation, dry season farming irrigation and periods when farmers are selling their produce. The following methods were employed in collecting data:

² In Malawi, Water User Associations are legally recognized by government after producing and registering their constitution with the office of the Registrar General. Registration means that they are not only recognized by the formal state judiciary, but can transact with formal economic institutions such as credit institutions.

- Household survey: 106 and 50 household heads were randomly selected and interviewed at Domasi and Njala Irrigation schemes respectively using semi-structured questionnaires. This was done to establish the socio-economic characteristics of the farmers.
- Key Informants Interview: in depth interviews were conducted with WUA leaders, local chiefs and faith groups' leaders around the irrigation schemes.
- Focus group discussions (FGDs): 8 and 4 FGDs were conducted with irrigation farmers at Domasi and Njala respectively, specifically designed to assess farmers' mode and equality of access to irrigation plots and extent of collective action in irrigation management.
- Document study: WUA constitutions from Domasi and Njala were studied to assess the role of formulated institutions in irrigation management.
- Participant and field observation: A number of WUA meetings were attended to understand the nature of interaction between WUA leaders and farmers. In addition irrigation fields were visited during both farming and harvesting.

Study Sites

This study was conducted in two smallholder irrigation schemes of Domasi and Njala in Southern Malawi. Domasi scheme is 500ha while Njala scheme is 45ha. The two areas were considered appropriate for this study because of two reasons. Firstly, both of them were under state management and have devolved management responsibility to farmers following the promulgation of the 2001 Irrigation Act. Thus, they present good examples of natural resources under local management. Second, their institutional arrangement fit into the desired analytical design for assessing decentralized natural resources governance (Domasi has formally recognised constitution while Njala's Constitution is not recognised). There are 1560 and 240 irrigation farmers at Domasi and Njala irrigation schemes respectively. Both Domasi and Njala irrigation schemes are located in the Lake Chilwa Wetland Area, which is the largest wetland in Malawi and one of the internationally recognized RAMSAR site in Africa. It is also one of areas with highest population densities in Africa (Binauli and Chipeta, 1999). These areas demand good natural resources management because provide livelihood to the local population and are important centres of biodiversity.

Findings

Institutional Framework for Irrigation Scheme Management at Domasi and Njala

Both Domasi and Njala Irrigation schemes are managed by Water User Committee (WUA) comprising the following committees: The Executive, Discipline, Health, Water, Finance, Auditing, Marketing and Natural Resources. All the committees are supposed to be elected by the farmers at a General Assembly every three years. All management issues are supposed to be guided by the schemes constitution. However, while farmers at the two irrigation schemes managed to come up with a written constitution to guide resource use, it is doubtful if the broader objectives of decentralized resource governance will be met. For instance, the constitution does not put a limit on the number of plots owned by one farmer, which is subject to abuse by those in authority. An examination of the irrigation farmers mode of plot access at the two sites reveals the following pattern.

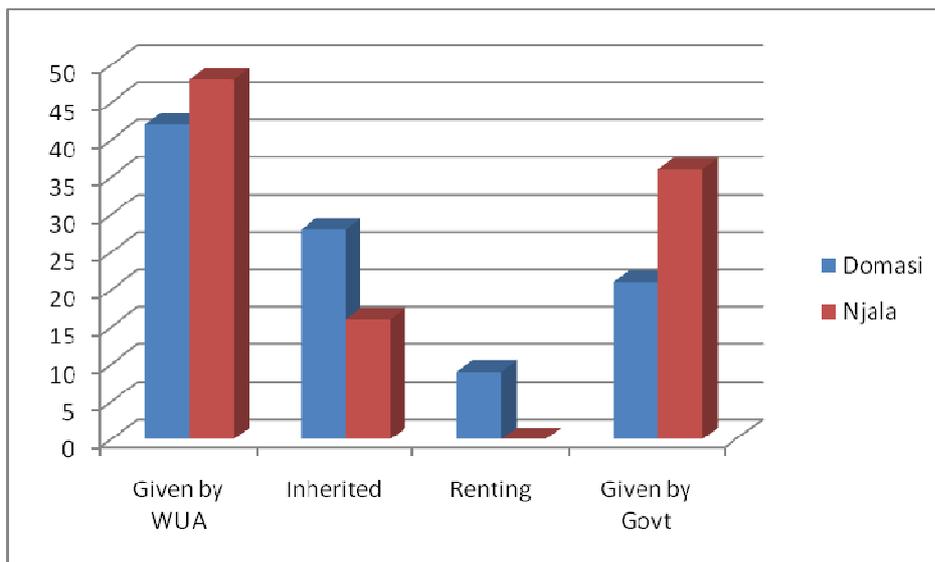


Figure 1: Households' modes of access to irrigation plots at Domasi and Njala by %

From Figure 1, major modes of accessing plots are through application to WUA executive, inheritance and those that maintained plots allocated to them by government before transferring management to farmers. Some farmers at Domasi are also renting plots against a constitution stipulation, which stipulates that any farmer who fails to cultivate his/her plot should surrender it to the committee so that it should be given to those who can cultivate. In other words, the

constitution is against renting plots. Modes of farmers access to irrigation plots reveals that the process of devolving irrigation management to farmers may not change past plot ownership inequalities as championed by government. This is especially true taking into consideration that 68% and 96% of the farmers at Domasi and Njala respectively indicate that the irrigation constitution and rules were formulated by WUA executive committee, which is, as will be explained later in this paper, a grouping of the local elite. Thus, formulation of rules was in the hands of a particular network of influential people whose broad aim was to protect their interests in the scheme. For instance, certain modes of accessing plots such as maintenance of plot allocated to farmers by government and inheritance were aimed at safeguarding plots owned. This should be understood from the view that state management of irrigation schemes favored the local elite who could read and write, had the ability to adopt modern methods and were usually well to do by the local standards. To be specific, the groups of people with high numbers of plots are the chiefs and those connected to the chiefs by blood or social ties. These are people that were threatened by decentralization as it not only undermined their way of doing things, but also their decisions. This paper argues that institutional engineering for democratic decentralized natural resource governance undermined the role of local chiefs in averting and diverting the objectives of democratic decentralized natural resource governance. The thinking was that by leaving them out of institutional structure, the chiefs would be at the periphery of decision making and thus their dictatorial tendencies overcome. Suffice to mention that the debate about whether local chiefs are democratic is beyond the scope of this paper, but it should be highlighted that dictatorial tendencies of African chiefs is not inherent but a product of institutional disorientation (Assimeng, 1997; Zungu, 1997; Mamdani, 1996). Over the time scholars have changed their stand about the local leaders, arguing local leaders and chiefs are dictatorial is evidenced based rather than theory based. This paper argues that as long as the institutional terrain makes local chiefs subordinate to other democratic institutions, chiefs will be dictatorial to firstly safeguard their interests and secondly serve the interest of those in democratic institutions as long as they do not interfere with their interests. For instance, even though the constitution at both sites forbids renting, the practice is informally practiced among those with more plots who are usually the local chiefs and wealthy class. However, informal renting may not be source of plots to most farmers with low social status as it is selective and not dependent on willingness to rent but on connectedness to those having plots (Meinzen-Dick, 2000). This is exactly what is turning out to be at Domasi. Key informant interviews at Domasi

revealed that plot renting is so informal and occurring mostly among blood and close social relations. Figure 2 below summaries plots owned by households at Domasi and Njala.

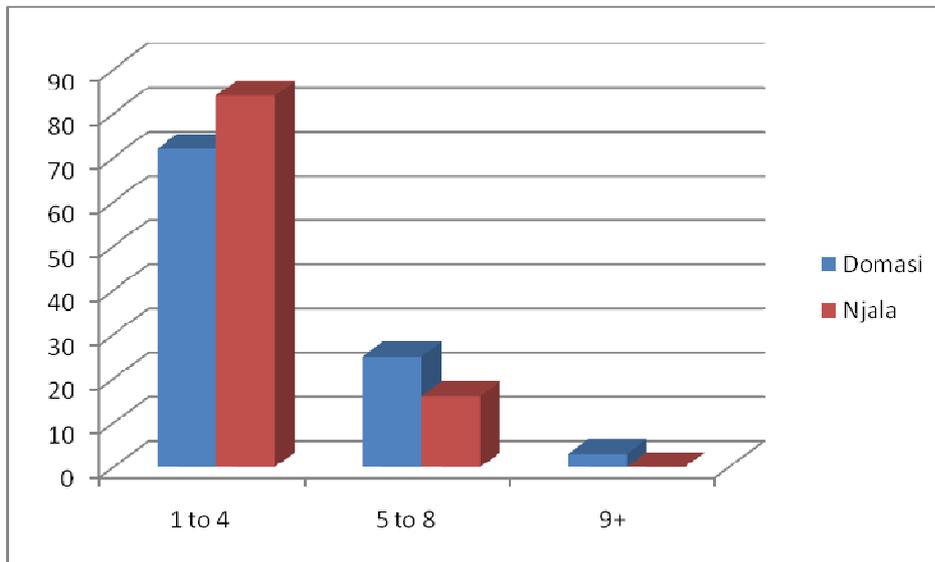


Figure 2: Number of Irrigation Plots owned by Households at Domasi and Njala by %

From Figure 2, most farmers cultivate between 1 to 4 plots. However, 25% and 16% of farmers at Domasi and Njala respectively own more than 4 plots. Unequal irrigation plots ownership at both sites is rooted in history where some farmers were given more plots (Ferguson and Mulwafu, 2007). However, there are current social and political power relations that perpetuate the inequalities. In particular, FGD with farmers revealed that plot and water allocation by WUA executive is highly influenced by social and power relations that exist between WUA executive members, chiefs and farmers. The social relation refers to the individual farmer's relationship with the chiefs while the political relates to farmers' relationship with individuals in the WUA executive. Local chiefs occupy a social and not a political role because WUA constitutions do not provide local chiefs any role in the management of the scheme. Thus, the influence of local chiefs is because of their inherent social standing in the societies. FGDs with farmers and key informants revealed that relationship with local chiefs and WUA executive highly increases individual's chances of acquiring a plot. It should also be pointed out that there is weak boundary between social and political leaders referred to herein above. This is so as there is either strong blood relation between influential WUA executive members and the local chiefs or the local chiefs themselves are WUA executive members. At Njala for instance, the vice

president of WUA is the group village head while at Domasi the president of WUA is a brother to one of the most influential chiefs in the area. It is, therefore, unlikely that inequalities in irrigation plots ownership at Domasi and Njala can be addressed within these social and power relations.

Inequality to resources at Domasi and Njala is not only manifested in plot ownership. Access to irrigation water resource is another area that is implicitly buried in the existing social and power relations. FGDs and key informants interviews reveal that existing social and power relations have an influence on the location of a plot one receives, that is head-end or tail-end plots. Head-end irrigation plots receive more water than tail-end plot. Farmers at both sites complained that WUA executive committee allocates head-end plots to their relatives and those related to local chiefs.

Decentralized natural resources governance is heralded as a means for poverty reduction with democratic institutions as a tool to this end. However, the scenario at Domasi and Njala paints a doubtful picture on firstly, the extent to which decentralized natural governance can achieve the goal of poverty reduction, and secondly, the extent to which democratic institutional structure can be relied upon in addressing resource inequalities in an area with strong informal institutions. This is so as democratic institutions and their actors have close social and blood ties with informal institutions and their actors. The challenge is that the later have established cultural authority not only over the people but also on the resources (see Mawaya, 1999). Thus, to establish their authority, formal institutions need the support of informal institutions. The challenge is that relations between informal institutions which have over the years turned dictatorial and formal democratic institutions offend public democratic consciousness and crave cultivated and promised by the creation of democratic institutions. FGDs from this study indicate that the general public has lost trust in the created democratic institutions and have resorted to resentment.

Empowerment and democratic governance

Empowerment and institution of democratic governance at the local level is one of the major objectives of decentralized natural resource governance. This involves instituting democratic resource governance characterized by resource users' participation in decision making, regular and democratic election of WUA leaders, observance of resource constitutional users' rights, and transparent and accountable management leaders. Measured against these variables, there is

lack of democratic resource governance at Domasi and Njala. In terms of resource users' participation in resource governance, 68% and 96% of the farmers interviewed during household survey indicated that they did not take part in the formulation of rules governing resource use. Instead, they argued that rules were formulated by the WUA executive and were just told of the rules. Again, while WUA constitutions at both sites stipulate that election for WUA executive would be conducted every three years, elections at both sites were last held in 1999. FGDs also revealed that 1999 elections were not free and fair as other people were prevented from contesting and local chiefs backed and forced certain individuals on the people. In addition, there are no regular financial and audit reports of WUA finance as provided for by WUA constitutions at both sites. In fact, at both sites WUA executive could not provide even a single financial audit report.

The trend of natural resource use governance at Domasi and Njala is expected as the process of institutional engineering was captured by a few powerful local elites. Ironically, institutional engineering at both sites was externally driven with a view to institute democratic culture that was perceived to be lacking locally. Formal institutions were believed to be prerequisite thus the need for a written constitution. However, as earlier indicated most farmers were only informed of the crafted constitutions. Management problems at the two sites should be understood from the way institutions guiding resource use were formulated. Lack of adequate farmers' participation in the formulation of the constitution did not only result into most farmers being ignorant of the constitutional provisions, but also sow seeds of resentment against the constitution. The main theoretical mistake that was made at the conception of democratic institution was that mere creation of democratic institution would lead to democratic practice. By putting local chiefs outside institutional arrangement was considered a proper mechanism to avoid their involvement. However, there is frequent involvement of the chiefs, who are formally not recognised in the WUA constitution, in issues relating to decision making, coordination of irrigation activities and enforcement of formal rules. WUA executive members from the two sites indicted that chiefs help to enforce rules and make decisions on some of the things affecting their people. Thus, informal-formal relationship is helping to achieve some of the objectives of decentralized natural resource governance but in at a cost caused by lack of drafting local chiefs formally into the management structure. For instance, FGDs with WUA executive and in-depth interview with local chiefs has revealed that WUA executive and local chiefs have created a

power sharing mechanisms and benefit sharing that is not provided for in the constitutions. The constitutions at both sites does not allow chiefs to take part in the management of the schemes, something that is perceived by most chiefs as underrating their cultural recognised local authority over natural resources (see also Ferguson and Mulwafu, 2004). In fact WUA executive members at Domasi indicated that local chiefs were at the beginning very hostile but this time play an important role in the management of the schemes. Due to resentment of the local farmers, formal institutions are regressing back to despotic rule through use of local chiefs built authoritative approach. For instance, WUA executive at Domasi reported that they depend on local chiefs to discipline non compliant farmers. In other words, WUA executive, formal institutions, has recognised the jurisdiction of local chiefs. The influence of the local chiefs on the management of irrigation schemes is also enhanced by the fact that, unlike WUA leadership, traditional authorities form part of the district development framework, where they form members of the district development planning system. Decentralized natural resource governance therefore requires a a holistic approach where all institutions interacting with formally created governance institutions need to be not only democratic, but inclusive. It is only when this is done that informal institutions will evolve into a democracy as public consciousness and crave for democracy will not be suffocated and interaction will not be profit seeking but cooperation. For instance, Shackleton (2002) found out that exclusion of traditional leaders from conservation committees in Namibia was counterproductive resulting in conflict and delays until the chiefs were incorporated into committees (see also Bergstrand, 2003). The relationship between WUA executive and local chiefs at Domasi and Njala irrigation schemes can be seen to be constructive by enhancing stability of the management regime, however, it is characterised by a lot of reciprocity and exchange of favours that go against the principles of a democratic organisation. A good example of these favours is a case in which WUA executive at Domasi restricted access to a good market to WUA executive members and local chiefs³. Equally important, local chiefs receive favours not provided for in the constitution such as attending WUA executive trainings and conferences. Institutional arrangements at the two sites, therefore, created good spaces for corruption, bribe and clientelism.

Conflict resolution

³ FGDs with farmers at Domasi

The other rationale for devolving management of natural resources comes from the idea that decentralized natural resource governance reduces conflicts as resource users collectively monitors resource use and compliance to rules. Decentralization also makes resolution of conflicts easier as users employ local values and norms of cooperation. Yet, FGDs at Domasi and Njala reveal that the two sites experience a number of conflicts including farmers' failure to turn up for collective work at the scheme, illegal water diversions in the scheme and farmers failure to clean canals. All these conflicts point to the failure of collective action, monitoring and persuasion. This paper argues that these outcomes are as a result of failure of collective action and conflict resolution mainly due the confusion of created institutional arrangement with informal institutions. In particular, institutional engineering driven by external actors was implicitly guided by the view that in order to create democratic institutions, traditional leaders and their institutions should be left out (see Zungu, 1996). This was misplaced approach as it undermined not only the influence of informal institutions on formal institutions, but also the need to take an inclusive approach to local governance. WUA formal institutions were created parallel to existing informal management structures controlled by local chiefs. This arrangement created potential conflict between local chiefs and WUA executive, making it difficult for the later to resolve conflicts. This is confirmed by the responses of local chiefs who indicated that they are not happy with this arrangement. Instead, local chiefs argue that it is unfair to leave them out of irrigation management as they have a long history in natural resource management (see also Fairhead and Leach, 1995). One clear example of their role is that while WUA executive leaders have the mandate to discipline farmers, they cannot do this without informing and getting the consent from local chiefs. Some offenders are also not disciplined because they are connected to influential local chiefs. Revelations from Domasi and Njala point to the idea that decentralized natural resource governance loses a lot by neglecting traditional structures and customary law. Mawaya (2009) argued that formal recognition of local bye-laws and rules can be useful in enforcing compliance. This can however be achieved if local chiefs are formally recognized, and not in opposition to the established democratic structure. I

Sustainable utilization

The objectives of sustainable utilization are closely related to biodiversity protection (Kellert, 2000). In Malawi, the traditional concept of sustainability is closely related to the conservation of resources for the needs of the present and future generations. According to Malawian tradition,

resources belong to the dead spirits, the living and the unborn; and chiefs are custodians of these resources in trust (Mawaya, 2009). Thus, by mismanaging resources, you offend firstly the dead spirit and the unborn; and secondly the living. This means that any resource utilization decision should be based on conservation rather than present needs. However, natural resource utilization at both Domasi and Njala has not incorporated these ideas largely because there is more emphasis on scientific methods as championed by formal institutions. This scenario paints a doubtful on the extent to which decentralized natural resources can bring about sustainable resource use within formal institutional structure.

Conclusions and Recommendations

The shift to decentralized natural resource governance ripe and essential taking into account the shortfalls in centralized natural resources management in Malawi, in particular, and in Africa in general. There are currently high theoretical expectations that, unlike the failed state fences and fines approach, decentralized natural resource management present the best alternative to managing these resources. However, outcomes of decentralized irrigation scheme management at Domasi and Njala reveal that the positive contribution of democratic institutional structure, while hard to refute, is challenged by a number of factors. Firstly, the transition from centralized natural resources management to decentralized governance requires institutional engineering that can allow informal institution to evolve rather remain static. The only way this can happen is when they are included formally in formal institutional arrangement rather being left out. This paper argues that the future and success of decentralized natural resource governance depends on the extent to which informal institutions will be allowed to evolve together with formal institutions.

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