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Struggle for Water

An inquiry into legal empowerment and property rights formation in Meru area, Tanzania

By Ellen Hillbom

1. Introduction

The *legal empowerment approach* is a recent attempt to be specific about the role of institutions for the future eradication of poverty. This is a broad concept that includes not only the national formal judicial system in a country, but all formal and informal institutional structures providing the rules of the game of human interaction in any given society. It has invited a lot of debate as to what the role of the law is in relation to other institutional structures, how the concept of empowerment is to be understood and how the two enhances the process of poverty reduction and economic development (see e.g. Banik 2008; Bruns 2007; Moore 2001; Sengupta 2008; Singh 2009). In this paper we will discuss legal empowerment as it was summarised and presented by the *Commission of the Legal Empowerment of the Poor* (CLEP) in their rapport *Making the Law Work for Everyone* (2008).

According to the commission 4 billion people around the globe are presently being excluded from the rule of law. This exclusion disempowers the poor and perpetuates poverty. The remedy is a transformation of society including comprehensive legal, political, social and economic reforms whereby the poor are legally empowered. A well functioning rule of law is the foundation on which all institutional structures promoting economic growth and development rests, e.g. commodity markets, financial markets, contracts and fiscal policies. With the rule of law for all members of society all individuals can reach their full potential as economic actors and resources will be allocated with maximum efficiency. This provides the poor with the opportunity to work their way out of poverty. In order to care for the interests of the poor states have to bring them in as co-designers of future legal structures (CLEP 2008).

Focus in this paper will be on one of the four pillars of legal empowerment presented by CLEP, namely property rights. The promotion of the fourth pillar as a key to poverty reduction and economic growth and development rests on the assumption that it is generally the poor who are lacking the legal support for their property. Legal protection of their assets is

regarded as the first concern of the poor and such protection would secure livelihoods and give incentives for investments (CLEP 2008: 51). *The first aim is to critically examine the basic assumptions on which CLEP builds its policy recommendations for the formation of property rights and to investigate how it differs from former and present policy agendas.*

The main contributor to the property rights debate in CLEP is the Latin American economist Hernando de Soto who was one of the leaders of the commission. To better understand the commission's arguments on processes of property formation and the outcome of having legally protected assets it is necessary to go deeper into other writings of de Soto. In *The Mystery of Capital* (2000) he states that legally protected formal property rights are the most important institutions for economic growth and development. These property rights have developed over centuries in the Western world and in the process informal rights to assets, recognised by the general public, have been adapted into a formal economic system under the supervision of a legitimate nation state. Property rights are important because they make up the foundation for individuals ability and opportunity to create capital. They allow us to ascribe our assets with a number of qualities such as who is in control of the asset, who gains the future income from the asset, what is its value, how it can be used as a collateral for credit, and so on. All of these qualities transform assets from being "things" or "wealth" that are static, to being "capital", which constituted the dynamic force driving the capitalistic economic system. De Soto argues that having access to legally regulated formal property rights and thereby being able to create capital is the only way that poverty can be reduced and eventually eradicated in the developing world. *The second aim is to critically examine de Soto's theory on successful property rights formation and to investigate what is new in his claims regarding the relationship between legally regulated formal property rights, market transactions and economic growth.*

The applicability of both CLEP's policy recommendations and de Soto's theory will be scrutinised using alternative theory and a case study. One of the greatest challenges for poverty reduction in the world today is the issue of how to achieve agricultural development in sub-Saharan Africa. In a world that has gone through massive global poverty alleviation paired with economic growth and development during the last half century 75 per cent of the world's poor live in rural areas. Rural poverty rates in sub-Saharan Africa remains among the highest in the world with an average of 51 per cent, while the absolute number of rural poor has reached almost 250 millions (World Bank 2007: 45). If CLEP and de Soto are to truly contribute to development policy and theory they should be of relevance to the agrarian sector in Africa. *The third aim of the paper is to relate CLEP and de Soto to a specific case of*

property rights formation and power struggles over agricultural resource in a rural sub-Saharan African setting, namely irrigation water among the Meru of Tanzania.

As land productivity increases by the double with irrigation water is a key resource for future agriculture production and productivity increase, but only 4 per cent of agricultural land in sub-Saharan Africa is under irrigation (World Bank 2007: 9). Understanding the fundamental principles behind well functioning property rights regimes is crucial for achieving quantitative and qualitative improvement of irrigation resources in Africa. The Meru farming system shares great similarities in physical features as well as social organisation with a number of historical and contemporary irrigation systems in East Africa (Spear 1997; Sutton 1990). Such similarities are, for example, intense farming methods, intercropping, gravity irrigation, low levels of technology and communal ownership of resources combined with private user rights. As the area is not unique in its allocation and management of agricultural resources it can constitute the basis for generally valid conclusions on how water resources for irrigation are allocated, controlled and managed.

The paper will start with a brief background to water as an agricultural resource, a presentation the case study area and an account of the empirical material. Thereafter, the organising principle of the paper consists of the main concerns that the author has with the arguments of CLEP and de Soto in regard to property rights formation and its applicability to the agrarian sector in sub-Saharan Africa. Consequently, section 3 presents the essence of legal protection of property rights and legal pluralism. Divers arguments for private property rights as the most appropriate for creating sustainable economic growth is discussed in section 4, followed by an investigation into the potential and pre-conditions for market transactions in section 5. In section 6 the complexity of power and exclusion is discussed. Section 7 concludes.

2. Background to the case study

2.1 Water

Clear definitions of property rights governing the distribution, allocation and management of water resources are often fundamental to the value of land and real property in agricultural societies (CLEP 2008: 36). In many instances water is foremost an economic good, and it is becoming increasingly valuable in economic terms as it is being overused and misused, resulting in alarming scarcity. Water consumption is, consequently, often regulated by economic incentives (see e.g. Kay et al 1997). Notwithstanding, water is also a life-supporting

natural resource and is regularly treated as a public good. Further, the economic and social aspects of life in developing countries are usually not neatly separated and property rights institutions contain both.

The sensitivity of allocation and governance of water resources is further complicated by the natural characteristics of water as a non-fixed resource. The seasonal aspect of water, for example, means that when the demand is the greatest the supply is usually the lowest. Data availability on seasonal flows in rivers and irrigation furrows and the potential seepage and evaporation from open water sources is also often poor in developing countries. Before existing amounts are mapped and known it is difficult for government officials to fairly allocate water rights. De Soto (2000) claims that measuring assets is not a problem for setting up secure property rights, but insufficient data easily leads to conflicts over distribution and excessive exploitation of scarce resources. As the state moves in to be the principal guardian of all national water resources it needs correct information in order to serve diverse economic interests such as agriculture, industry, hydropower, and urban areas (see e.g. Chenje and Johnson 1996). To accommodate the non-fix characteristic of water and the poor information about availability it is necessary to have flexibility in property rights institutions governing water resources and it is questionable if the same principles guiding allocation and property rights to other agricultural resources can apply to water (Carlsson 2003).

2.2 Meru

The Meru of Tanzania inhabits the southern and eastern slopes of Mount Meru, an extinct volcano 4,565 metres above sea level in the northern part of the country. Their area covers roughly fifty square kilometres and is located five kilometres east of the Arusha town. The mountain slopes have fertile soils of volcanic origin. It has a tropical climate moderated by altitude and a bi-modal rainfall pattern with an average precipitation of more than 1,300 millimetres per annum, though there are significant local and seasonal differences (Assmo 1999: 78-79; Larsson 2001: 112).

During the 19th and beginning of the 20th centuries the Meru became increasingly geographically locked in. In the 1830s the Arusha people arrived and settled on the mountain slopes to the west. With the establishment of the German colonial administration in the 1890s land on Mount Meru above 1,600 metres was declared a forest reserve and at the same time land to the south of Meru was allocated to European and South African settlers. These boundaries were not significantly changed by the take-over of either the British colonial administration in the 1920s or the Independence government in 1961. Due to geographic

limitations the Meru early on developed strategies for improving land productivity through intensification of farming methods (Larsson 2001: 102-103; Spear 1994: 3). The first furrows were constructed towards the end of the 19th century. Irrigation was at the onset intended foremost to increase security, making smallholders less dependent on seasonal rains, and to save on labour efforts (Larsson 2001: 185; Puritt 1977: 93). Due to intensification of farming methods, induced by local population increase and growing land scarcity, the need for irrigation water has steadily increased in the area over the last 100 years. The demand has escalated during the last two decades, especially on the lower slopes where rainfall is more erratic and scarce (Carlsson 2003, Larsson 2001).

2.3 Fieldwork

General information on historical background, legislation, government policies and registration of water rights was collected in 1998 through interviews with government officials and NGOs at national level in Dar es Salaam and regional and district level in Arusha town as well as key informants in Meru.

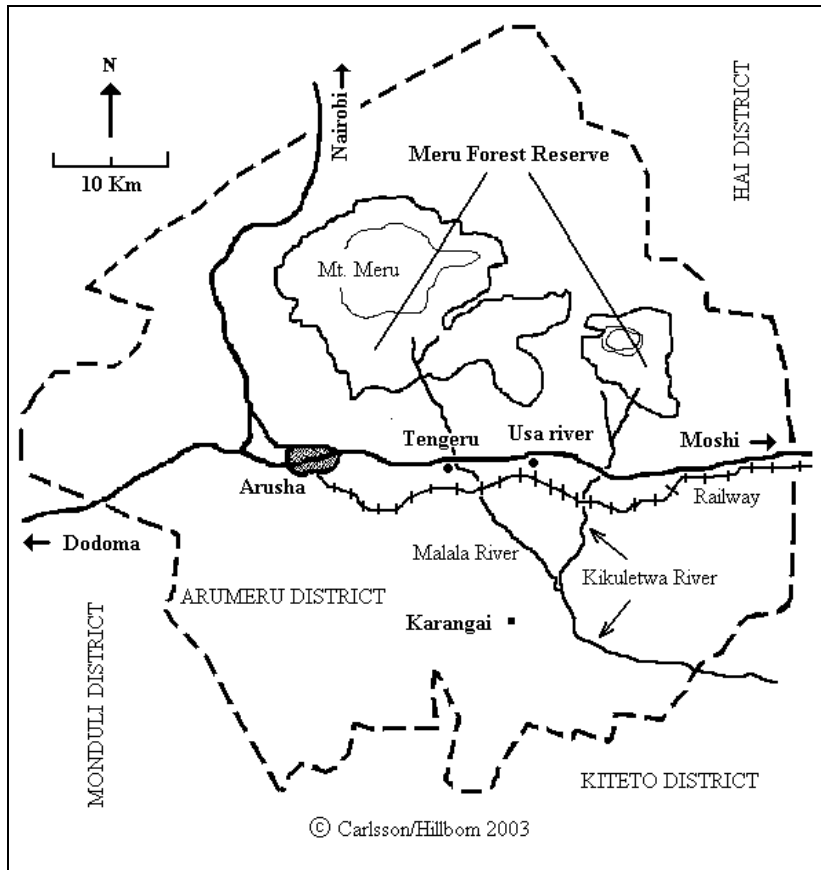
In September 2000 Malala River was selected for a further in-depth study. The river has a history of more than 100 years of continuous construction of irrigation furrows and it covers multiple agricultural practices and property rights institutions. Along the river there are eight irrigation furrows, five of them constructed by African smallholders and three constructed by estate owners. Three of the furrows are shared by more than one water rights holder, and in the extreme case there are as many as five water right holders sharing one of the furrows. Out of the total of 15 water rights, nine are held by formally recognised water committees with smallholders as members and yet another is about to become the tenth. The remaining five water rights are held by three estates, one catholic mission and one former estate that is today a Ministry of Agriculture Training Institute. Eighty-five water users were interviewed representing a mix of water rights, wealth, gender, marital status and age.

The outcome of the first two studies was a Ph. D. thesis on property rights formation and long-term property rights change¹. Follow up studies were conducted in November 2007 and September 2009 with the purpose of mapping changes in property rights institutions. They included return visits to meet government officials and NGO representatives in Arusha as well as interviewing key informants, water committee members and village officials in

¹ Ellen Carlsson (2003) *To Have and to Hold: Continuity and change in property rights institutions governing water resources among the Meru of Tanzania and the BaKgatla in Botswana; 1925-2000.*

Meru. The purpose was to map and analyse any changes in property rights regimes in the case area. This paper is the first time that the results from the follow-up studies are presented.

Map 1: Arumeru District and Malala River



3. Legally protected formal property rights

There is a general agreement on the necessity of having secure property rights. The disagreement comes with the debate whether or not there are alternatives to private rights that can still hold a sufficient amount of security to satisfy the needs of the property holder. In the writings of de Soto (2000) the need is dictated by the potential gains of creating capital that can lead to improved incomes for the individual and economic growth and development for society at large. De Soto makes a simplified distinction between formal rights backed up by a judicial system supported by the national authorities and informal rights supported by social structures outside the formal legislation. This is an over-simplification because it ignores the existing variations in property rights and it presupposes that there can only be one formal judicial system at the time. It is condemning legal pluralism, but without understanding the complexities of it.

The true benefit of “property” is the right that people hold over the future incomes that it can give them. Property rights award individuals the long-term benefit streams from a natural resource, or any other asset, which his fellow men/women become excluded from (Bromley 1997). All property is subject to different forms of social recognition such as monitoring and enforcement, exclusion, social acceptance of claims, and external authorities. It is made up of the relationship between people in relation to an asset (Hodgson 1988). Further, having a right is closely connected to the issue of enforcement because, unless a right is temporarily taken by force, it is something that the individual holds with the support of an authority system. The authority system that defends the right of behalf of the property holder can be the government of a local village, or it could be a national government (Agarwal 1994: 1459; Bromley 1997: 3). The security of each type of property right is determined by the institutional context in which both rules governing the social relationship defining individuals’ property and authority systems protecting individuals’ rights are found.

The existing complex property rights systems found in rural sub-Saharan Africa includes several aspects. Firstly, there are four categories of property rights: *private* (characterised by partial or full concentration of benefits and costs assigned to an individual), *state* (the public sector or the government is responsible for management of resources), *communal* (a group of individuals, sometimes as large as the whole community, sometimes small and exclusive, hold the exclusive right over a resource), and *open access* (rights are left unassigned, and there is an absence of property relations). Secondly, distinctions can be made between *ownership*, *user rights*, or *access*. Although ownership usually carries with it stronger rights concerning utilisation than is the case with user rights, there is no definite correlation. Access signifies an informal concession being rather a socially recognised and enforceable right. Thirdly, legally recognised formal rights are termed *de jure* rights and in property rights theory it is generally taken for granted that *de jure* rights give an indisputable legitimacy to a claim. A *de facto* right is rather a presentation of the right as it is accepted and controlled in real life, and it often depicts an adaptation to social requirements or is the result of property holders not enforcing their rights.

On top of that there are in most African countries also two competing judicial systems – statutory and customary law. Ever since the colonial days the agricultural sector has had to deal with the problems of legal pluralism. The Natural Water Supply Regulation Ordinance No. 4 in 1923 was the first legislation in Tanganyika (TNA 3495 vol. I). However, it did not formulate any principles taking into account specifics of the Tanganyika conditions, and in their absence English Customary Law was applied. This statutory legislation primarily

included regulations for water within the Crow Land, land occupied by the colonial administration of by settlers. In the law it was stated that customary law and customary rights were recognised, but they were not specified. As in other British colonies the idea was to separate Crown Land and statutory Law from Native reserves, land occupied by the African population and to leave that land to be governed by local Customary Law (Kanthack 1936; TNA 471/w.2/8 vol. I: 4-5). Thereby a dual legal system governing allocation and management of water was created.

Among scholars there has been great concern with turning customary rights into statutory rights. The argument has been that in such a process the wealthy farmers would be given an unfair opportunity to use their knowledge about the bureaucratic procedures involved. The losers would be poorer smallholders, women, and other groups of weaker economic, social and political power who are at the moment more protected by customary structures and social networks (see e.g. Agarwal 1994, Chimhowu and Woodhouse 2006; Toulmin and Quan 2000). On top of arguments that an individualisation of communal customary rights leads to exclusion of socially and economically weak groups it is further questioned whether registration of statutory rights would really mean increased investments and improved productivity (Migot-Adholla et al. 1991). It is argued that the causal relationship between tenure system and investments are much more complex than just a dichotomy between the formal and the informal. It is instead argued that this has to be understood in the context of various institutions controlling labour and land (Place 2008). One way forward could, however, be the formalisation of existing communal customary rights, which could in the future lead to private property rights (Denninger 2003).

Already in the 1920s government officials in the Northern Province realised that the existing legislation was not satisfactory when it came to solving problems of legal rights to water in a situation of high demand relative to supply causing scarcity. The need for a more elaborated legal and administrative machinery, to deal with issuing and monitoring water rights and to prevent abuse, became increasingly obvious especially in areas such as Meru with a higher population density and where Africans and European settlers were to share water resources. When the new Water Ordinance of 1948 was finally brought into effect in 1954, however, it lacked any profound reform (TNA 471/w.2/8 vol. I). The colonial authorities passed a final water ordinance in 1959, but in practice the power to grant property rights to water and water ways, and the control over water works continued throughout the colonial era to be divided between the colonial administration and the African authorities (TNA 471/w.2/8 vol. I; interview with key informant 1998).

The first post-independence water legislation was the Water Utilization Act No. 42 (1974), which was rather a continuation of the previous colonial legislation. In the first decades after independence the government officials were more concerned with land reforms in the form of rearrangement of land ownership, principally the creation of *ujamaa* villages and had less time to deal with mapping, development and distribution of water resources. Water, together with all other natural resources, was nationalised and placed under the jurisdiction of the national government and hence officially an end was put to the dual system of shared jurisdiction between tribal and colonial authorities. The new national jurisdiction did not, however, solve the issue of the dual property right system since old customary rights that had been issued by tribal leaders continued to exist side by side with statutory rights issued by the colonial administration. Statutory water rights, was easily registered with the new authorities while the customary rights were recognised in principle. The problem was to register all customary rights with the new administration and thereby to gain knowledge and control over them. Although it has been the intention of the post-independence authorities for several decades, many water sources that were granted customary rights, among them traditional irrigation furrows in Meru, have only recently been registered or remain unregistered. This poses a problem for the local authorities when they are to consider applications for construction of additional furrows. Slowly the number of furrows registered with the national authorities has increased and at present all furrows except one along the Malala River were registered with statutory, formal water rights (interview with water users 2000, November 2007, September 2009).

It is important to recognise Customary Law as a formal legislation in the Native reserves during the colonial era. African smallholders in Meru were obeying the formal legislation and they were obtaining legally protected formal property rights. After Independence customary rights were recognised in statutory legislation and management of furrow and allocation of water resources were delegated to water committees regulated by their own by-laws. The drawn-out process of registering smallholder furrows has not been due to smallholders escape from the formal to the informal sector, but the result of a weak state's problems in reaching out with legislation and policy to its citizens. Legal pluralism is not about the formal vs. the informal, but of competing judicial systems that the state has been unable to merge.

4. Private vs Communal Property

De Soto (2000) is not aiming for legally formalised and secure property rights of any sort, but private property rights specifically. His claim that legally protected formal private property rights to assets is a development towards more efficient property rights structures allowing for secure ownership, market transactions, contracting, and so on, has been argued before in both theory and policy. Aristotle (384-322 BC) wrote that a privatisation of communally held resources would give the right incentive structure to create an efficient and sustainable economy and that private property should therefore be encouraged (Landreth and Collander 1994: 27). Aristotle set up a scenario where a resource is used in common by individuals who are all led by utility maximising behaviour and who will in time exploit the resource beyond the optimal level for sustainability (Buchanan 1993: 1-2). This argumentation coincides with the concept of “the tragedy of the commons” launched by Garrett Hardin (1968), which has had heavy policy implications throughout the twentieth century. The tragedy is that when there are no rules and regulations governing the natural resources the result will be overuse and collapse of the resource.

Advocating for privatisation of non-regulated natural resources as the only way to achieve economically efficient incentive structures and mixing up communal property rights with open access has continued to be common. Harold Demsetz (1967) put forward the claim that the process of changing the property rights structure is initiated when the gains from an internalization of externalities become larger than the cost of realizing the internalization. He referred to the transformation of non-exclusive resources into private and state ownership. Demsetz did not make a distinction between non-exclusive and communally held resources and setting up exclusive communal property was not considered an option. Steven Cheung (1970) and Yoram Barzel (1989) also understood communal ownership as free and non-regulated access for all members of a community. This pre-conception had implications for their further arguments on the opportunity of contracting. They departed from an assumption of financially and socially independent actors seeking maximum gains and entering into specific clear-cut contracts of their own free will. Unfortunately, there is a great difference between such actors and African subsistence smallholders depending on social networks for opportunities and assistance.

The advocates for private property have for decades been criticized by those adhering to a different understanding of how property rights regimes, and specifically communal property rights regimes can be successful. Although communal resources that are regulated poorly or

not at all run a great risk of ending up in a “tragedy of the commons” scenario extensive fieldwork from around the world has shown that communal property rights regimes can be successful as a whole even if there are individual free-riders. Exercising one’s rights to communally held natural resources is generally neither automatic nor without restrictions and principles guiding communal property rights regimes seldom imply free access for all community members to resources. Instead, communal property rights are conditioned and rights are limited and the scarcer the resource the stricter it is being governed (see e.g. Adams 1997; Andelson 1991; Bromley 1992; Carlsson 2003; Dahlman 1980; Ostrom 1990; Peters 1994). The dichotomy between private as successful against communal as a failure has proven to be far too simplistic. It appears that CLEP has been taking in some of that critique and their definition of the type of formalisation has become smoother than in de Soto’s original writings (CLEP 2008; Singh 2009).

In policy the agenda of centralised authorities changing existing local property rights regimes from above, as advocated by both CLEP and de Soto, is not new to the African continent. Already in the 1930s the colonial administrations showed concern regarding the property rights structures governing agricultural resources in the African communities. It was argued that existing property rights did not offer smallholders the incentives neither for surplus production, nor for applying environmentally sustainable farming methods (see e.g. Sumberg 1998). These arguments were repeated over and over during the last decades of colonial rule and they resulted in several large scale attempts to introduce changes in existing property rights regimes. The most well known example being land tenure reform in Kenya from the 1950s (Musembi 2007).

With the introduction of Structural Adjustment Programs (SAP) in the 1980s resource management was affected by universal arguments and trends behind the privatisation of all sorts of property and the deregulation and liberalisation of the agricultural sector. It was considered that privatisation of natural resources, particularly land, was essential in order to provide the right incentives for farmers to invest in agriculture and for creating credit markets (Friis-Hansen 2000). As the privatisation policy promoted by the World Bank became increasingly criticised in the 1990s it ceased to be central to the bank’s policy recommendations. The results were meagre just as they had been in earlier attempts by largely disconnected central authorities to impose top-down institutional change (see e.g. Assies 2009; Musembi 2007). The realisation that there was no empirical evidence that strict privatisation in itself automatically leads to increased private investments rubbed off on policy recommendations. However, a property rights focus, implying that a change in

property rights structures governing natural resources in sub-Saharan African countries in necessary in order to achieve growth in the agricultural sector remained (Friis-Hansen 2000). CLEP (2008) shows that in contemporary policy recommendations there is still a belief in the formalisation of property rights, although with some openness to such formalisation being adjusted to existing local conditions.

The Meru Paramount Chief, the *Mangi*, was put in charge of administering Meru land, first by the German and later by the British colonial administration. Consequently, whoever constructed furrows on Meru land during the colonial era was expected to approach him as he was responsible for allocating rights to construct irrigation furrows and making sure that their extensions did not interfere with other farmers' agricultural activities. As the first wave of smallholder furrows were constructed in the late nineteenth and early twentieth century property rights were developed along two different paths. One scenario was that the construction was initiated by a leader figure in the village who would get villagers involved. In return for the labour put into construction and maintenance work, farmers received a share of the water according to established schedules. The communal effort directly turned the furrow into communal property although the initiator could acquire the position of water committee chairman. In other cases the construction was carried out by a village strong man who used paid labour and the furrow was then considered to be the property of that individual. There were, however, restrictions to his ownership as any farmer living along the stretch of the furrow who wanted access to water could approach the "owner" and ask for allocations. In return for the use of water, farmers would pay the "owner" in the form of gifts (Spear 1996: 221; interviews with key informants 1998). The African smallholder furrows were never registered with the colonial administration and have in some cases stayed unknown to government officials to this day. As long as they have not been registered, they have also not obtained formal water rights according to national statutory law. Instead they have continued to hold customary water rights given to them by the *Mangi* in his capacity as the administrator of the Native Reserve (interviews with key informants in 1998; water users in 2000).

Meanwhile, estate owners also constructed irrigation furrows around the same time using labour from their farms or digging the channel system in a joint venture with neighbouring Meru smallholders. Depending on the arrangements around the construction, they considered part or the whole of the furrow to belong to them as private property. Unlike the Meru, the estate owners turned to the colonial administration in order to obtain permission to construct furrows and receive a water right for the furrow (interview key informants 1998). Their private rights were later recognised by the Independence government.

Independence meant the nationalisation of all natural resources. Further, tribal authorities such as the Mangi lost their power and the responsibility for administrating irrigation furrow was instead invested in the village authorities. The new *de jure* state ownership, however, meant no changes in *de facto* property rights institutions. Village authorities delegated water allocation and management to existing water committees who stuck with the previous principles of communal ownership and private user rights. Although village authorities were consulted for the construction of new furrows these were not registered with any district or regional water authorities. It is only during the last one to two decades that the national government of Tanzania have come to show interest in formalising water rights in Meru as part of developing water basin policies. Also smallholders have come to appreciate the gains of having their furrows registered with national authorities and obtaining statutory formal property rights. The formalisation of property rights have not, however, changes the by-laws of the individual furrows (interviews with water users 2007, 2009).

The set-up from the start was then two parallel property rights regimes – customary communal furrows owned and managed by the local smallholders and estate furrows held as private property according to statutory law. Such elaborated and competing property rights structures are common in many societies with furrow irrigation (see e.g. Adams 1990). Neither of these regimes have over the years *de facto* been affected by changes in legislation or policy and their rationales have remained the same. Further, despite the fact that Meru is also an area experiencing significant changes in relative prices between factor endowments due to population increase and land scarcity (Larsson 2001) there have been no from below initiatives to privatise irrigation resources (Carlsson 2003; interviews water users November 2007, 2009). In the midst of theoretical debates, policy changes, farm intensification, agricultural development and improved standards of living traditional communal property rights to irrigation resources has remained strong in Meru (Carlsson 2003; interviews with water users 2007, 2009). It appears that in this case the advocates for privatisation cannot explain the rationales of property formation.

5. Market transactions

To CLEP (2008) and de Soto (2000) legally protected formal property rights are pre-condition for market interaction and access to credit. Functional property rights institutions allow land, houses, moveable property, equity shares, and ideas to be transformed into assets that can be bought and sold at rates determined by market forces. De Soto's main concern is to provide the poor with the opportunity to use their assets as collateral in market transaction, thereby creating capital, which is only possible if they are fixed in a formal property system. It is stated that formal property representation is something different from the actual asset and it is the representation that enables property to be transformed into capital using the market as the mediator.

The claim has been heard before that successful market exchange is dependent on good institutions (Kherralah 2000; North 2005) including optimal information transmission and a framework for mediating transactions and transferring of property rights (see e.g. Coase, 1988). One key explanation given for market failure in rural sub-Saharan Africa is that the institutional structure is unsuccessful in meeting these requirements, which in turn results in high marketing and transaction costs (see e.g. Barrett 2008; Shiferaw et al. 2008: 26). Some have argued that development of good market institutions depend on government involvement and trade promoting policies in order to rectify the inability of the local development of creating market transaction (see e.g. Bardhan 1989; North 1987). Such a top-down approach coincides well with the general assumptions of CLEP and de Soto that a benevolent government is needed for setting up legally protected formal property rights.

In recent years alternative options to traditional theories on market transactions have developed. These are options where water is treated primarily as an economic good instead of a public good and where legally protected formal property rights play a key role, but where property rights are not by necessity private ownership. There is a significant and growing academic literature presenting research on how water markets are increasingly being relied upon to allocate water resources in various regions of the world (see e.g. Bjornlund 2003; Michelsen et al. 2000; Zekri and Easter 2005). Most/many countries have during the last two-three decades shifted their water policies away from 'command and control' constraints and instead they rely on market mechanisms to manage and distribute water resources. The shift can be traced back to the revived belief in market led development as opposed to state led development that emerged with neo-liberal political trends in the 1980s. The shift took place both within economic theory and development policy and was effectuated via projects run by organisations such as the United Nations (UN), World Bank and Organisation for Economic Co-operation and Development (OECD). Changes also occurred as a response to the over-use

of water resources and a search for a maximum use of limited resources. It was hoped that increasing economic costs would motivate farmers to either optimise irrigation or sell off their water rights (Bjornlund 2003). Notwithstanding, in many developing countries local communities have been hesitant towards developing markets for permanent water rights, while markets for short-term leases of water allocations have become more common (Bjornlund 2003; Zekri and Easter 2005).

Within policy alternatives to market exchange of privately owned agricultural resources have also evolved. One such alternative is the creation of Green Water Credits, GWC. Green water represents 60 per cent of global fresh water flows and is defined as water held in the soil and available to plants, primarily rainwater. GWC is a pro-poor market based mechanism to support sustainable water and soil use. The concept is that down-stream water users compensate up-stream water users for water management services. In more elaborated schemes it would be possible with a global facility drawing on international finance. The design is expected to provide incentives for good soil management, which in turn would improve the percolation of green water into the ground thereby recharging blue water resources in groundwater and streams. Further, GWC could offer alternative sources of incomes to smallholders up-stream (Dent 2005; Meijerink et al. 2007).

Groundwater and streams are termed blue water. Payments for environmental services (PES) have been suggested as one way to combine the goals of poverty reduction and sustainable use of natural resources, for example water. PES-schemes are defined as voluntary transactions of environmental services between buyers and suppliers. There is hope that up-stream land and water holders through PES can raise their incomes as they receive payments from down-stream large scale farmers, urban dwellers, hydropower dam owners, etc. The actual PES-schemes can be designed in various ways, depending on the local conditions (Wunder 2008). PES-schemes are still fairly untested and empirical studies of PES-schemes in Africa, Asia and Latin America show mixed results in regard to obtaining economic and environmental sustainable management of blue water resources combined with poverty reduction (Jack 2009; Quintero et al. 2009; Wunder 2008).

In Meru there is no selling and buying of water rights for irrigation and there exist no institutionalised water market. As assumed by CLEP and de Soto the local property rights regime made up of communal ownership of irrigation furrows and private user rights to irrigation water is an important part of the explanation. All smallholders who can be reached by the furrows are welcome to join the water committees and as long as they abide by the laws of the furrow they can ask for a water allocation. Consequently, there are other ways for

smallholders to get access to water than purchasing water rights in the market. Further, within this system there are few opportunities for a smallholder to amass water rights. Allocations are distributed fairly equally among water committee members, although there are instances of rule breaking, including theft, and preferential treatment (interview with water users 2000, 2007, 2009). The existing communal property rights regime has been created with the intent of granting opportunities for agricultural production to many instead of turning water into capital for the few. Risk spreading and secure access to water has been prioritised over opportunities for wealth maximation.

In the midst of pre-capitalist structures modest institutional change is occurring and it is only possible to speculate as to where these trends are heading. Instead of institutionalised exchange of ownership of water rights there are occasions of temporary renting out of water allocations. Water committee members who are unable to make use of their water allocations, for example due to old age or off-farm engagements, may delegate the allocation and in return they are compensated with in cash, in kind or in labour (interview with water users 2000, 2007, 2009). There are both economical and physical constraints to these transactions as the renter has to be someone who concentrates his/her efforts in agricultural resources and lives along the same stretch of the furrow. These new opportunities could in the long run mean a modest concentration of water in the hands of the initiated smallholders. Secure rights protected by local authorities are necessary pre-conditions for these exchanges. However, it is happening through other processes of change than the expansion of market transactions, such as increasing landlessness, involvement in the water committee, renting of allocations, and so on.

6. Letting Power Back In

Possibly the most serious critique against both CLEP (2008) and de Soto (2000) is that the complexities of power struggles over resources are unaccounted for (see e.g. Cousins 2009). In *The mystery of Capital* (2000) de Soto makes a point of going back the experiences of the European occupation of the North American continent. The claim is made that policy makers and politicians of today can learn from the US experience when squatters where fighting to have their claims to the land accepted and formally registered with state agencies thereby receiving legally protected formal rights. The European migrants were invited by the US government to settle on land that (according to them as they did not recognise the claims of the Native Americans) was owned by no-one and squatters could therefore count on the

support of the government. The situation is said to be the same in developing countries today where rural and urban squatters alike need to have their property recognised by the law. By assuming a situation of excess land combined with a benevolent government de Soto can paint the picture of a win-win situation and the complexities of power and exclusion can be ignored. This comparison, however, has flaws.

The history of factor endowments in Africa south of the Sahara has generally also been one of abundance of land and scarcity of labour (Iliffe 1995). With the start of general population increase on the continent from roughly the 1930s land, however, became less abundant and labour became less scarce. Smallholders in rural areas are no longer staking claims to unoccupied land. Instead, they are often fighting to get access to resources that have already been appropriated. In their fight over resources it is, further, far from the general case that smallholders have the support of the government. Often they are facing a land owning elite who have been given legally protected formal property rights according to Statutory Law. In the case of estates many property rights may go back to the colonial era, others have been awarded since Independence. These estates are often important to the national economy as they produce cash crops and thereby contribute to national export earnings. Therefore governments usually prioritise property rights claims by estate holders over smallholders. It is not only a fight over resources between estates and smallholder, between Statutory and Customary rights. It is also a struggle within customary property rights institutions between the wealthier and the poorer smallholders (Berry 1993, 2002; Odgaard 2003; Peters 2004).

As assumed by CLEP and de Soto the poor are usually the ones without property rights to resources that they would need to get out of poverty. If policy is to be about forwarding the rights of the poor specifically it has to be acknowledged that this will mean having the political will to also exclude other groups no matter how politically or economically powerful they are. In the US case it was about distribution of resources – in contemporary rural Africa it is about re-distribution of resources and therein lays a great difference.

Once there is recognition that a win-win situation cannot be expected and that a re-distribution in favour of the poor is required, then there is much academic literature to draw on. As pointed out by Singh (2009) there is a difference between inequality and poverty. However, the statement in the equity literature is that inequality perpetuates poverty and redistribution is necessary for poverty reduction. The call for a relatively equal distribution of natural resources within the agricultural sector rests on the argument that there is a causal relationship between equity and agricultural development leading to improved incomes and living standards for the rural population (see e.g. Berry and Cline 1979; Cornia 1985;

Deininger and Squire 1996; Griffin et al. 2002; Kay 2001). The rationale is that the larger the holding of the resource the lesser the value per unit for the property holder who instead attempts to increase output per labour unit as labour in this case is the evasive production factor. Meanwhile, the situation is the opposite for the smallholder who relies on family labour and on increasing output per resource unit. As the relative factor price of agricultural resources increases the resource holder will intensify farming methods, which in turn leads to an increase in land productivity and a decrease in labour productivity. In societies with abundant labour and scarce agricultural resources and capital total factor productivity should increase after redistributive reform since smallholders all in all utilise resources more efficiently than larger ones (Cornia 1985; Deininger and Squire 1996; Griffin et al. 2002).

An unequal distribution of agricultural resources in turn reflects an institutional inequality that characterises society at large (Engerman and Sokoloff 2002; World Bank 2005). In societies with institutional inequality government policies tend to favour elites in various ways while denying the majority of the population equal opportunities. Groups and individuals with wealth and high social status influence institutions and distort them in their favour, further enriching themselves. Political and economic inequality, thus, go hand in hand and unequal political power leads to an institutional structure that perpetuates inequalities in power and wealth (World Bank 2005: 107-108). The property rights reforms suggested by CLEP and de Soto in reality means taking on a power struggle against such structural inequality and most likely also against the interests of those controlling the government. It is suggested by critics that CLEP avoids the complexities of state led redistribution of resources by instead advocating market-assisted forms of redistribution. The market is preferred compared to compulsory acquisition as it is less politically sensitive, but unfortunately it has also proven to be prone to elite capturing (Assies 2009). Further, that the ability of those who wield power to bypass the rule of law as well as struggles between the classes and are underestimated (Cousins 2009).

Negotiability within the customary property rights system is possibly slowing down the process of exclusion (Berry 2002; Odgaard 2003). Meanwhile, negotiability is also part of a process of increased exclusion and polarisation (Peters 2004). It is a general trend on the continent that the present elite have continued to support and maintain the customary institutional system. The consequence has been considerable and growing inequality, a polarisation process within the framework of prevailing customary property institutions (Carney and Farrington 1998; Platteau 1996, 2000; Ribot 2000).

In Meru the number of water users has increased as has the demand for and scarcity of water, but the property rights regimes stay according to the old model with communal furrows and private user rights where farmers along the furrows can get access to water in return for contributions in money, kind, and labour. The system has been non-exclusive, and it has been and continues to be of an open attitude so that farmers find it easy to gain user rights and access (interviews with key informants 1998; water users 2000, 2007, 2009). In this case the poor manage to continue to access a scarce resource and the room for negotiations within customary property rights institutions have not been overly negative.

The explanation for this does not lie in an inherent African unwillingness to privatise, because there has been a parallel *de facto* privatisation of land. Instead, our understanding of the process should be based on the practical difficulties with exclusion along such a long waterway (Ostrom 1990), and on the community's acceptance that access to irrigation water is the key to many farmers' existence and survival. The water committees are, however, facing an increasing number of difficulties in managing the furrows and dividing the water, and as a result the by-laws of each furrow are becoming more elaborated and more effort is put into enforcement (Interviews with key informants 1998; water users 2000, 2007, 2009).

The real example of how population increase has altered property rights institutions is in the case of private irrigation furrows owned by estate holders, which are slowly being taken over by communities of African farmers and thereby becoming *de facto* communal property. Contrary to orthodox property rights theory, the increase in resource users and consequent augmented price of water have not led to a privatisation, but rather to a *de facto* de-privatisation of water sources. The explanation for this development is the same as the one telling us why African furrows have not become more exclusive – monitoring and enforcing property rights are extremely difficult and African farmers consider themselves to be entitled to access irrigation water for their survival. When the demand for water could not be met by an increased supply of water resources, it instead turned into a demand for institutional change giving small-scale farmers access to already existing irrigation furrows (interviews with water users 2000).

Here is a case where agricultural resources having the legal protection of formal Statutory Law are being lost in a power struggle against customary communal property rights institutions. Partly, this is then a case that is in complete opposition to the theoretical assumptions and policy recommendations of CLEP and de Soto. Meanwhile, the winners of this power struggle are the poor smallholders who benefit by taking over estate resources. In that sense it is an example of the readjustment of property rights institutions in accordance

with aspirations of legal empowerment of the poor and pro-poor reforms. Smallholders are gaining because legally protected formal property rights are not respected and their gain is impossible without a power struggle over resources.

7. Concluding remarks

Throughout this paper we have shown that both the policy recommendations of CLEP and the grand theories of institutional change for economic development presented by de Soto resonates with previous policy and theory. The basic ideas that the promotion of legally protected formal private property rights brings efficient and sustainable use of resources have been heard since the days of Aristotle and it has been intensively repeated during the last five to six decades. There is general agreement on the importance of the rule of law in general and secure property rights in particular for long-term economic growth and development and for eradicating poverty. However, the conclusions and the remedies of CLEP and de Soto echoes old statements rather than bring new level of understanding of what good institutions really are and how they develop. The CLEP response to this critique would probably be that previous theories on property rights have been focussed on governing natural resources, while legal empowerment is a larger concept embracing all aspects of society (Singh 2009).

Still, it is argued in this paper that CLEP's policy recommendations and de Soto's grand theory both are stuck in old tracks. Much research has been produced on legal pluralism, the possible success of communal property rights regimes, alternative forms of exchange other than transactions in traditional markets as well as the complexities of redistribution of resources. The empirical case of property rights institutions governing irrigation resources in Meru, Tanzania has been used as an illustration of the shortcomings of CLEP and de Soto as well for presenting the usefulness of alternative analytical frameworks. We have come far enough to evolve the concept of legal empowerment beyond CLEP and to expand our understanding of the principles of property rights formation beyond de Soto.

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