

Land Consolidation for Sub-Saharan Africa's Customary Lands – The Need for Responsible Approaches

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Abstract This paper explores the potential of land consolidation for dealing with land fragmentation in Sub-Saharan Africa's (SSA) rural customary lands – where the intention is to increase food productivity. In SSA's customary lands, the use of mechanized farming technology and intensive farming techniques have largely failed to increase food productivity. This is despite foreign investment and the interest of the farmers to do so. In many cases, neither the farm parcel structure nor the land tenure arrangements support the use of, or investment in, mechanized equipment. This implies a strong need to deal with the land fragmentation situation. Although land consolidation is argued as an effective response to land fragmentation; its application in SSA's customary lands has either not been successful, or it has ended up breaking down the customary land tenure arrangements. We argue that past attempts at land consolidation in SSA's customary lands have failed mainly due to the transfer of European strategies without adequate consideration for the local factors in the planning and implementation, as well as inadequate land information. Land consolidation strategies in Europe have shown that responsible approaches continually considered the changing local factors. There has been a recent push for more responsible approaches to land reform and planning activities that consider social, cultural, and economic factors that were previously not considered. In this paper, the nature and causes of land fragmentation in customary lands will first be explored, then current approaches seeking to increase farm productivity are reviewed. Analysing the problems of land fragmentation in customary lands, the failure to adapt land consolidation approaches in customary lands in the past, and the potential of participatory land administration as an enabling tool, we conclude that responsible approaches are an important component of increasing food productivity in sub-Saharan Africa.

Keywords: *land consolidation, land fragmentation, food productivity, land administration, rural customary lands*

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1. Introduction

Food security is a crucial global challenge that has received much attention over the past two decades from international bodies, particularly in relation to sub-Saharan Africa. From June 20 to 22, 2012, the Heads of State and Government around the world met in Rio de Janeiro, in a meeting organized by the United Nations to, among other things, renew their commitment to sustainable development. With the Millennium Development Goal (MDG) 1C target of halving the world population suffering from hunger not reached, food security was high on the agenda. This resulted in the strong determination to formulate a resilient post 2015 development agenda. The resulting document the "Open Group Proposal for Sustainable Development Goals" sought to build upon the foundation laid by the Millennium Development Goals, to accomplish the unachieved Millennium Development Goals, and face the

new challenges that have arisen, through an integrated, indivisible set of global priorities for sustainable development was adopted by the General Assembly of the United Nations on the 10th of September, 2015. The SDG emphasizing the importance of food security, elevated it from a target under a goal, to a goal - to achieve food security and promote sustainable agriculture through the creation of an enabling environment using an all-inclusive, participatory, and committed approach.

Food productivity is a key component of food security. Attempts to increase food productivity in SSA have mostly taken the form of mechanization and fertilization. However, the farm parcel structure and the land tenure system have largely failed to support these attempts to increase food productivity to the optimum. This is largely due to the mismatch between the farm holding and parcel structure and the attempts at improving the farming technology and methods. This is termed as land fragmentation. Despite being successful at dealing with land fragmentation in Europe and some parts of SSA, attempts at applying conventional land consolidation in

SSA's customary lands have largely been a failure. This paper introduces the potential of land consolidation for dealing with land fragmentation in Sub-Saharan Africa's customary lands – where the intention is to increase food productivity. The paper starts by providing an overview of SSA's customary land tenure and the nature and causes of land fragmentation occurs in the region. This is followed by an examination of the attempts, both past and present, at increasing food productivity on the region. The provision of land information and the need for responsible approaches, two issues that militate against the use of land consolidation in customary lands are then discussed. The paper ends with a summary and conclusion on the need for responsible approaches to land consolidation as well as the support participatory land administration can provide.

2. Land Fragmentation, and Sub-Saharan Africa's Customary Land Tenure

Land Fragmentation, is defined as the spatial dispersion of a single farm holding into several distinct parcels over a wide area usually separated by other farms, as well as a high density of land users on a small farm [1,2]. Van Dijk [3] points to two dimensions of land fragmentation – the spatial (physical) aspect, and the tenure (legal) aspect. Based on these two dimensions, four forms of land fragmentation are shown – fragmentation of land ownership, fragmentation of land use, ownership-use fragmentation, and internal fragmentation. Land ownership fragmentation characterizes the situation where several persons own one parcel of land. The second form of fragmentation, land use fragmentation, refers to a high density of land users on a small sized farm. These land users may be tenants or land owners. The third form of fragmentation, ownership-use fragmentation refers to a high proportion of land users being tenants therefore the land owner-land use relationship is broken. The fourth form of fragmentation, internal fragmentation, has received the most attention. This form of fragmentation deals with the shape and size of the parcels as well as the distance between the parcels. A cursory look over the four forms of fragmentation shows the first three dealing with the legal aspect, and the fourth looking at the physical aspect. Demetriou [4] observes that Western Europe mostly deals with fragmentation of land use and internal fragmentation. The ownership fragmentation and the ownership-use fragmentation is however a problem in Central and Eastern Europe (CEE), stemming from the privatization process after the fall of communism. This section reviews the nature and causes of land fragmentation in SSA's customary lands, to provide a background for the need for land consolidation in customary area.

Land fragmentation has always been prevalent in the agricultural system of SSA's customary lands, however its emergence as a problem is a recent occurrence [5,6,7,8]. Many studies have examined land fragmentation in SSA's customary lands, with recent studies focusing on the mechanisation of farms [9-13]. The combination of two characteristics of customary lands has been identified as the causes of land fragmentation – the customary land tenure system and the agricultural system.

The customary land tenure system is identified as one of the major causes of land fragmentation [14,15,16,17]. Customary tenure describes the form of land tenure that is based on the customs and traditions of a group of people, reflecting the socio-cultural, and spiritual connection among generations; present, past and future [18,19] (Asiama, 1981; Elias, 1956). This fuels the belief that the current generation is merely a caretaker, steward, or protector of the land. Two main interests in customary land tenure – the Allodial/Paramount title, and the Customary Freehold interest are identified [20,21]. The allodial title is held by the community and managed by its leaders. Customary freehold/ usufructuary interest is held by the members of the land-owning group based on their inherent right to use any vacant land within the confines of the customary area. Although the modes of acquiring the land include the clearing of an unencumbered land followed by uninterrupted settlement, conquest and occupation, or as a gift or purchase; inheritance is currently the most common means of land acquisition [21,22,23]. The customary freehold is held in perpetuity except for situations of abandonment, forfeiture, or want of successor; in which case, the land reverts to the allodial title holder [22,24]. The customary freehold is held in perpetuity except for situations of abandonment, forfeiture, or want of successor; in which case, the land reverts to the allodial title holder [22,24]. The nature of the customary freehold restricts farmers from expanding as contiguous parcels' holders are unwilling to sell their parcels to hold the land for the future generation. This causes land fragmentation because to expand their operations, farmers must move parcels further away from their primary parcels.

Shifting cultivation, as the predominant agricultural system of customary lands, is another key cause of land fragmentation in the area [5,16]. This system however moves to a more intensive system as the population density grows. Shifting cultivation, which thrives on land fragmentation, involves farming a parcel of land for a period and then leaving it to fallow whilst another area is farmed. The system favours the acquisition of land by forest clearance as it uses the natural fertility of land, small farming equipment as well as small parcels, resulting in low productivity [5,6]. Since one of the manners of the land use rights acquisition in the customary land tenure system is the clearing of unencumbered land, after using the cleared land, the farmer keeps his use rights to be transferred to his heirs. Shifting cultivation allows for the tilling of the farms one after the other gradually causing land fragmentation. The fragmented parcels is not a problem at this point as population numbers are low, the farmers uses small equipment and it deals with the critical seasonal labour bottlenecks [25,26]. As the population increases, more intensive agricultural systems such as the annual cultivation and the multiple cropping farming systems which need intensive weeding and ploughing emerge. Higher returns to labour offered by the industrial and service sectors, as against the farming sector, substantially reduces the available pool of labour that can be hired, resulting in the farm labour being determined by the household size. The labour reduction necessitates the

adoption of large farm machinery which is difficult with small, scattered farms. The simultaneous farming of the fragmented parcels with the use of the rudimentary farming equipment still resulted in lower productivity experienced with the shifting cultivation.

Studies into land fragmentation in SSA mainly focused on the spatial of internal fragmentation, with little attention paid to the land tenure fragmentation [14,15,27]. However, the other aspect of fragmentation – tenure has not been adequately investigated. Van Dijk's [28] attempt to characterise land tenure fragmentation into three categories, does not apply in customary lands. This is because unlike Western Europe, which deals mostly with fragmentation of land use and internal fragmentation, and Central and Eastern Europe (CEE) that deal ownership and ownership-use fragmentation stemming from the fall of communism, customary lands' land tenure does not fall under any of these categories of land fragmentation because the land tenure system in Europe is mostly individual tenure, where customary lands have a group ownership with individuals having use rights. The nature of land fragmentation in customary lands is described in terms of the relationship between parcel ownership and use in Figure 1. The differences are shown, in a more generalized manner, among the three contexts, where A, B, C, and D, are land owners and 1, 2, 3, and 4, are tenants/users. In Figure 1, three current dominant forms of relationships between parcel ownership and use are presented. The first situation (i) shows where owners use the lands themselves, with the accompanying spatial fragmentation. This is a situation identified in the Western Europe. The second situation (ii) is seen in CEE and Western Europe where the farmlands are leased out. The third situation (iii) is found in SSA's customary lands.

3. Attempts at Reducing Land Fragmentation and Increasing Food Productivity in Sub-Saharan Africa

Land consolidation, in various forms, has been successfully used in Europe to curb land fragmentation and increase food productivity, and further develop rural areas. However majority of land consolidation attempts in customary lands in sub-Saharan Africa have either failed or broken down the customary land tenure in the areas [12,17,29,30]. These attempts at land consolidation were predicated on the assumption that land consolidation was needed as an approach to developing the agricultural sector, even though land tenure and agricultural systems did not favour it [13,31,32]. Makana [32] however notes that land consolidation in some customary lands rather yielded positive results in terms of increase in food production, despite the breakdown of the customary land tenure. Various reasons have been advanced for the success and the failures of these land consolidation schemes. One group attributes the fortunes of the process to the participation of all the parties involved, whilst another is the failure to adapt the land consolidation scheme to the conditions of the customary area [30,33]. In Malawi, land consolidation was started in the 1940's, and

although the government was successful in consolidating 81,000 hectares of farmlands, complete with infrastructural improvements, the programme still failed because it was solely run by the colonial government, after being prematurely rolled out without consideration for local factors and conditions [12]. Kenya's land consolidation was also started by the colonial government; however, a major objective was a complete overhaul of the land tenure system that was to do away with the customary land tenure and replace it with individual titles, as customary rules were seen to be a militating factor against the benefits of land consolidation and a well-functioning land market [29]. Here the land consolidation planning was participatory, with the plans being drawn by the government officials together with the clan elders. However, the last step of the plan was to grant individual titles, thus effectively ending the coverage of customary land in these areas.

The most recent of the land consolidation activities in Sub-Saharan Africa is from Rwanda, which undertook a new form of land use consolidation. Land use consolidation is the procedure of putting together small plots of land in order to manage the land use in an efficient manner so the land is more productive [34]. With the prime objective of increasing agricultural production, the reasoning behind this is to be able to undertake a land consolidation programme that does not alter the land tenure relations [35].

Recent approaches to increase agricultural productivity in SSA have largely focused on intensive cropping of farms, use of fertilizers, and mechanized farming [11,36]. These attempts to increase agricultural productivity through mechanization took a prominent place on the development agenda of the governments of many developing countries in the 1970's and 1980's. Mechanization at the time was supported by several governments through the direct importation and financing of farm machinery to extend the service to smallholder farmers. The investment in mechanized farming was largely influenced by the donor-driven development strategies that largely characterized the SSA's economies after their independence and during structural readjustment programmes to increase food productivity. However, during this period of state-led push to mechanization, there was low demand for the farm machinery leading to the failure of these programmes despite the desire of farmers to increase their farm productivity. This led Pingali [36] to conclude that mechanization is not necessarily a driver for intensifying agriculture. Recently, there has been an increase in the demand for mechanized farming equipment [9,37,38]. Diao et al. [39] assign the key reason for this as the widespread labour constraints, which are mostly due to rural-urban drift and the demand for labour from non-agricultural sectors on the economy. Mechanization is linked to expansion of farmlands as in other parts of the world [27,40,41]. However, because the expansion of land to a contiguous parcel in customary lands is not easy, the farmers have no option but to find land further away from the farm parcels to expand their farms worsening the land fragmentation situation. This necessitates the consolidation of lands in order allow for the use of the mechanised farming equipment.

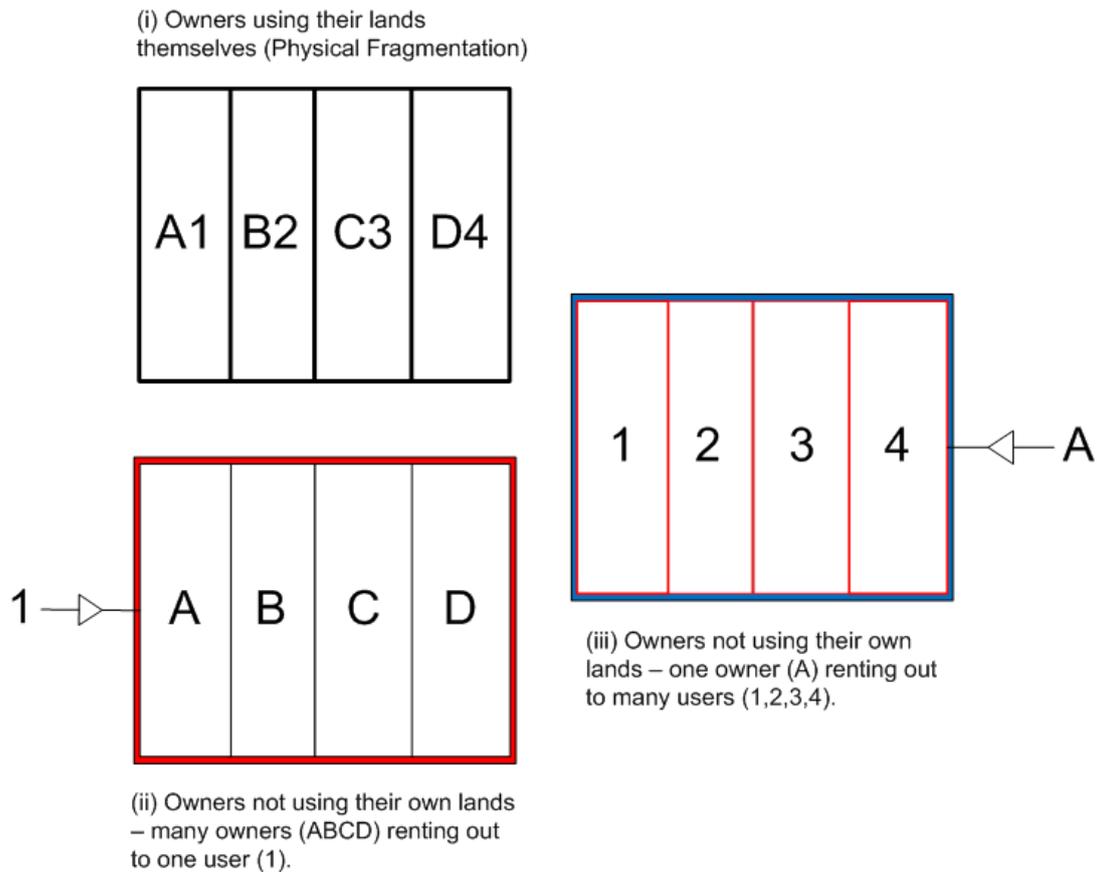


Figure 1. General Representation of the predominant types of land fragmentation in the Europe, and Sub-Saharan Africa (Author's Construct)

4. Land Consolidation and Participatory Land Administration in Customary Lands

A basic requirement for land consolidation is a well-functioning land administration system with an up-to-date land information system [42]. Although many western countries began contemporary registration of their lands in at least 1808 (Based on Napoleon's Cadastre) and have covered the entire countries with an effective land administration system, this is not the same for Sub-Saharan African countries [43,44,45]. Land administration processes serves important prerequisites for undertaking land management activities such as land consolidation. However, most sub-Saharan African countries with customary lands undertake land administration processes in order improve land transactions, and create a market economy [46,47]. They attempt to replicate the conventional style of land registration that favours individual rights, leading to the exclusion of secondary rights holders. The conventional land administration processes are also slow and expensive and do not serve the goal of aiding land management activities. There is therefore the need for innovative processes, approaches, and technologies to remedy the situation.

Land consolidation as a land development tool within the land administration perspective is, dependent on data about land, as many aspects of the land need to be changed, whereas others must be maintained. A basic requirement of land consolidation is therefore a well-functioning land administration system.

Van Dijk [3] considers six aspects of land banking procedure, four of which require land administration, although these aspects also apply to land consolidation in general. These aspects include the land acquisition, the size of the land holdings, the land tenure situation, and the parcelling structure. The land acquisition process becomes an important aspect of land consolidation especially when land banking is included. The land bank seeks to provide additional land to farmers who lose out on certain aspects in the reallocation process. The size of the farm is an important aspect of the process as this is one of the main reasons why it is undertaken. Land information provides the necessary support to ensure that the sizes of the parcels before and after the land consolidation remain the same, and where they are not, the land bank aids in remedying the situation. The land tenure situation is also a vital issue especially when dealing with customary lands in sub-Saharan Africa which is characterized by overlapping interests in land and legal pluralism. It is necessary to ensure that the land tenure type remains the same before and after the process.

As already observed, western countries, when embarking on land consolidation, did not focus on the collection of land information much. This is because in these regions, there were well functioning land administration systems to support the process. The same cannot be said of customary lands. The undertaking of projects that have to deal with parcel changes are looked upon with great precaution, particularly with the poor, and marginalized who are usually powerless [33]. For such a project to be acceptable to them, the plan should either ensure that their access to land is not altered, or their land

tenure is not altered. With the first option, there must be an absolute certainty that they will not lose their access to land; in other words, the project will not alter any aspect their lands, physically and legally. These concerns are valid as land consolidation has already been demonstrated by the Swynnerton Plan as a tool capable of being used to dispossess owners of land in the customary lands [13].

With respect to the second option, this brings focus to the Rwandan Land Use Consolidation (LUC). The LUC as a policy is aimed to place the focus solely on agricultural production rather than looking at the legal and spatial arrangements of the farms in removing the effects of land fragmentation. This is seen by its umbrella programme, Crop Intensification Programme (CIP). The LUC and CIP have the goal of raising agricultural production of high potential food crops in order to provide food security [35]. The LUC allows farmers to increase productivity, but it has also enabled the expansion of farm parcels, and its coupling with the villagization programme – a resettlement programme to aid the development projects, shows the potential role of land administration in the policy, however, no study has so far been conducted to determine whether the LUC had any effect on the land tenure security and arrangements in the area, and whether this would in any way improve the situation.

5. Towards Responsible Land Consolidation

Although land consolidation has been quite successfully undertaken in Western Europe for the past four centuries, and in Central and Eastern Europe for the past two decades, attempts to use it to combat land fragmentation in Africa has been largely a failure and little is known about how to adapt land consolidation to the conditions of customary lands. These failures have been mostly attributed to top-down approaches that are not suited to the local conditions, and little available land information. New insights and technologies have been emerging that have the potential to open new possibilities for customary lands to be able to develop flexible ways to tackle land fragmentation.

The gap that this research seeks to fill is the relationship between land consolidation and land administration processes within the context of customary lands. Agricultural productivity in many sub-Saharan African countries is not at optimum output [48]. Approaches to dealing with low productivity have mainly taken the path of intensively cultivating the farmlands. These include the use of mechanized farming equipment and fertilizers, with support from the governments. However, the use of mechanized farming equipment was a failure in the 1970's and '80's due to the low demand from farmers. Recently, the demand for mechanized farming equipment has increased, with many farmers willing to hire them. But the demand alone for the equipment is not enough for productivity to increase. The structure of the farms in customary lands poses a hindrance to the mechanization of farms since they are too small and scattered around. The reasons for this are mainly the inheritance practices as well as the mode of farm expansion.

To tackle the problems posed by land fragmentation, European and Asian countries use land consolidation. This

has been successful in those areas, especially in Europe, where it has been in use since the 14th century. Land consolidation has therefore evolved with the countries' development process to suit their social, economic, and cultural contexts. However, attempts to replicate land consolidation in customary lands have not been successful [17,49]. Although many reasons have been advanced for the failure, including the customary system and the economic conditions, the commonality among these reasons is the inadequate consideration for the local conditions.

In the case of sub-Saharan African customary lands, this problem is aggravated by the inadequate land information. Land information is identified as an important pre-requisite for land development functions – including land consolidation. However 70% of the world is not covered by a form of land administration system capable of supporting the land administration functions [45]. Most of these areas fall in sub-Saharan Africa, posing a threat to the use of land consolidation. The registration of land in these areas is slow and expensive and is therefore not attractive to the rural populace. Furthermore, since the land administration system does not have much land administration functions that are directly used especially in rural areas, there is no incentive for the landowners to register their lands.

Despite the seeming compelling evidence of the need for land information in the undertaking of land consolidation, recent approaches to land consolidation seemingly without the use of land information has been successful in Rwanda in terms of the primary goal, increase in food productivity. However, little is known about the effect of this process on land tenure security and investment in land.

Studies have shown that public administration, and more recently land administration need responsible approaches in order to serve their purpose [50,51,52]. Responsible approaches are described here as practices that tailor the internal processes and resources towards the specific needs of the user and the beneficiaries through the building of collaborative partnerships with citizens, sharing responsibilities and information, and creating opportunities for citizens to engage in government activities [50,52]. Responsible approaches are needed as conventional approaches to land management activities are rooted in western historical notions that do not apply to all areas in the world, most especially customary lands. Responsible approaches align land management activities with the ever-changing requirements, and abilities of individuals, government and the society. Several social, economic, legal, and cultural factors affect a society's make up, their notion of development, their view of capital, as well as their reaction to the government's activities. The failure of land consolidation in customary lands failed to consider these factors through a lack of participation and inadequate land information. The adoption of responsible approaches to land consolidation is therefore needed to be able to align the land consolidation approaches to the conditions that exist on customary lands. There is therefore the need to comparatively study the areas that have already undertaken land consolidation and customary lands, to be able identify their commonalities and peculiarities before a responsible land consolidation approach for customary

lands can be developed. The technological advances in land administration that has paved way for participatory land administration to be aligned to customary lands and used as an aid to combat the problem of inadequate land information. This has led to the conceptual framework that builds up an approach to develop responsible land consolidation for customary lands. It is acknowledged that certain characteristics of customary lands cause land fragmentation and that land fragmentation can be reduced by land consolidation. However, attempts to undertake land consolidation on customary lands have largely failed in the face of inadequate land administration processes on customary lands. There is therefore the need to adapt responsible approaches to land consolidation and land administration to adapt land consolidation. Responsible land consolidation will therefore be defined as land consolidation approaches that continuously align the

internal processes, technical and administration requirements of land consolidation to the dynamic local societal demands, economic conditions, cultural and legal requirements.

In developing a responsible land consolidation strategy for customary lands (Figure 2), it is essential to first determine the factors that militate against the use of land consolidation on customary lands and further investigate how these factors work with existing responsible land consolidation strategy for other areas. Secondly, the inadequate but relevant land administration process need to be bridged, as this is a strong basis for land consolidation [53]. Lastly how these affect land consolidations on customary lands with regards to the land tenure system, farming systems, and social and cultural structures are then examined and considered in developing the responsible land consolidation strategy.

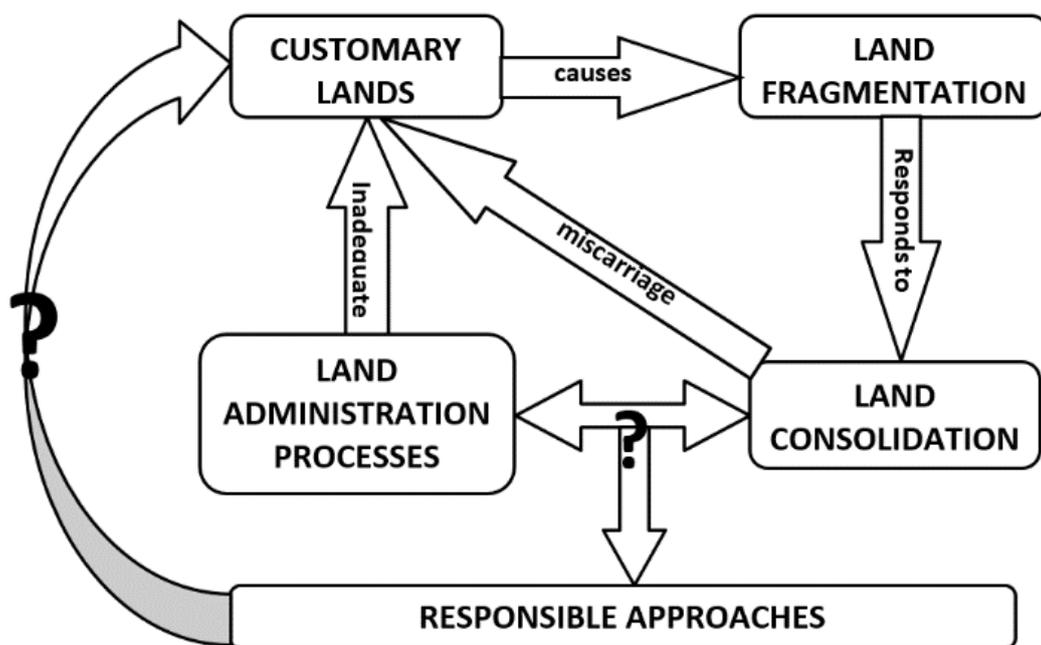


Figure 2. Conceptual Framework for the Responsible Land Consolidation - From the known to the unknown

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