Improving Land Tenure Security through Customary Boundary Demarcation- A Case Study*

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Abstract

In sub-Saharan Africa, one of the barriers to development and wealth creation in the peri urban and rural areas is land tenure insecurity. This is mainly due to a number of factors including the absence of clear unambiguous boundaries between allodial owners and the absence of credible documentation of land rights. This research sought to establish and document over 190 km of the boundary of Juaben paramouncy in a manner that ensured peace, harmony and tenure security. Disputes were resolved through less costly *Alternative Dispute Resolution* (ADR) mechanisms and *Customary Land Secretariat* (CLS) that catalogued and maintained up to date register on the land. This resulted in conflicts that have raged on for decades, sometimes leading to injury, property destruction and loss of lives come to an end. The benefits of this improved land tenure security are enhanced agricultural productivity, wealth creation for rural dwellers, peace and stability. Boundary demarcations and documentations established were important steps in the process of reformation and improving land tenure security in the rural communities. Information retrieval was simplified and transaction cost made cheaper.

Keywords: Land Tenure Security, Customary Boundary Demarcation (CBD), Alternative Dispute Resolution (ADR)

1 Introduction

Land Tenure Security

Land tenure security refers to the right of individuals and groups of people to effective protection by their government against forcible evictions. It also refers to the status of individuals or groups in relation to property (Anon, 2007). It can be freehold, leasehold, conditional, collective and/or communal (Boudreaux and Sachs, 2009). Land tenure security is critical for agricultural productivity and economic development (Scheere, 2009). In the rural settings in sub-Saharan Africa, land tenure is often insecure especially for the poor. Achieving land tenure reform is by no means an easy or quick process. However, its long term benefits can lead to substantial gains for smallholder farmers' competitiveness (Anon, 2008). Land tenure security improves confidence in the land market and boosts investment in land related development such as agriculture, manufacturing and real estate.

Customary Boundary

In Ghana, stools, skins, clans, families and individuals own lands. Customary lands form about 80% of the total land area (Larbi, 2006). Customary land ownership refers to the communal possession of rights to use and allocate land by a group showing the same cultural values. Land ownership in Ghana has its own origin in absolute "allodial" or permanent title from which all lesser titles on customary lands take their roots. Customary lands support the daily living of majority of the people in the country and they will be insecure the moment the land is affected by disputes. Land ownership conflicts and disputes over land boundaries impede a countries' development because there is high uncertainty surrounding titles and tenure in such areas. In particular, poor people and disadvantaged groups in these areas live in fear of losing their land (Adams *et al*, 1999).

Land tenure security increases the legal and practical security of owners and users. It improves the effectiveness of land markets. As a result, the issues of customary tenure and associated problems have been receiving increasing attention in policy and scholarly circles over recent decades. Also, international organisations such as United Nations Food and Agricultural Organisation and the World Bank are making frantic efforts to address issues arising from land tenure insecurity. In Ghana, the Land Administration Project is one of the World Bank's interventions. Most of the customary lands have lost their boundaries because landmarks and features (e.g. trees, rivers, footpaths), which were used as boundaries are lost over time. This has resulted in weaknesses such as:

(i) indeterminate boundaries;
(ii) insecurity of tenure;
(iii) complex land acquisition processes;
(iv) land disputes;
(v) delayed development/unproductive land use;

(vi) economic/revenue loss; and
(vii) general indiscipline.

Ensuring customary boundary demarcation can improve tenure security and address the weaknesses in the land tenure system and also enhance socio-economic development.

This study therefore aims at providing clear, unambiguous boundary between Juaben paramouncy and her neighbours through:
(i) the demarcation and establishment of boundary pillars which can stand for centuries;
(ii) resolution of boundary conflicts through Alternative Dispute Resolution mechanisms; and
(iii) documentation of boundary records.

2 Resources and Methods Used

2.1 Materials

The location for this research is the Juaben paramount stool area which is within the Ejisu-Juaben Municipal area (Fig. 1). It shares boundaries with major paramount stools like Ejisu, Agona, Kona, Kuntunase and other smaller stools under Kumasi traditional authority. The boundary stretches over 190 km and consists of streams, rivers and wetlands. The Juabenhene has allodial title to the Juaben stool lands. Many sub-chiefs fall under the Juaben paramouncy.

The materials used for the study were dual frequency GPS receivers, a total station with accessories, a Trimble Total Control Software Version 2.7, Garmin handheld GPS receiver and Sokkia GPS processing software. These form the stock of technological tools employed in the data capture and processing. Existing topographical and photomaps of the area were also used. Other materials used were survey beacons and special shrubs (referred in local parlance as *ntome)*. The survey beacons were of high quality reinforced concrete material, constructed with coarse aggregates, iron rods, portland cement and water of appropriate proportion. Two types of pillars were provided for the boundaries. Pillars for the natural boundary defined by rivers or streams (Rb) having dimensions of 30 cm x 30 cm x 60 cm; and the Imaginary or Defined boundary (Db) which defined the boundary on land having pillar dimensions of 30 cm x 30 cm x 120 cm. Other local tools like cutlasses, shovels and pickaxes were used to cut the boundary and plant the pillars.
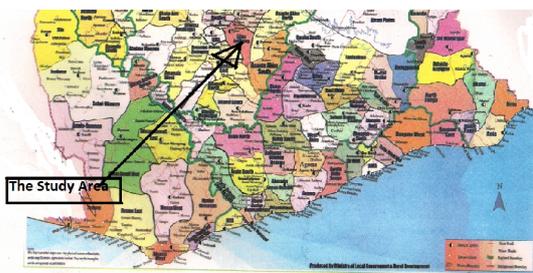

Fig. 1 Demographic Map of Southern Ghana Showing the Study Area

2.2 Physico-Geological Settings

The area is within tropical humid climatic settings It is underlain by rock units of the Birimian Supergroup. The Birimian is a broad based structure containing meta-sedimentary and meta-volcanic beds associated with veins of quartz units. Granitic intrusions expose the sedimentary sequence and frequently occur as complex structural zones (Kesse, 1985).

The granitoids mainly the Dixcove type (G_2), is non metaluminous and typically dioritic to granitic in composition (Milesi, 1991).

The zone is located in the transition belt between the high rain forest and the moist semi-deciduous humid forest. The vegetation around the area has however been reduced to secondary cover leaving remnant virgin forest dotted around. The climate is characterized by low to high rainfall pattern. The land-use is basically for agricultural purposes. A number of streams traverse the area thus, rendering the area of good agricultural potential. Access to the surrounding communities is generally not too difficult as the entire catchment area has been linked by an all-weather tarred and untarred roads.

2.3 Methods Used

The main method adopted was a case study approach involving direct field measurements, stakeholders' forums, education, sensitisation and interviews, documentation and approval of plans. Case study research allows the exploration and understanding of complex issues. The method becomes more prominent with community-based problems. Most cases, case studies select small geographical area as subject of study. Such research method could be defined as an empirical enquiry that investigates a contemporary phenomenon within its real life context. If the boundaries between phenomenon and context are not clearly evident, multiple sources are used. In some case studies however, in-depth longitudinal examination of a single case or event is used. By including both quantitative and qualitative data, a case study helps explain both the process and outcome of a phenomenon through complete

observation, reconstruction and analysis of the cases under investigation..

2.4 Stakeholder's Forum

Public forums with stakeholders were held for sensitisation and education (Fig. 2). Key amongst the stakeholders were chiefs and their elders, town development committees and caretakers. It is necessary to let stakeholders understand clearly the benefits of having a secure, established and documented boundary.

Fig. 2 Stakeholders Forum at Ejisu Municipal Assembly Hall

2.5 Reconnaissance Survey

Through reconnaissance survey and with the aid of satellite images and photomaps, elders of adjoining paramouncies showed their boundaries (Fig. 3). Disputed boundaries were marked for dispute resolution.   Three types of boundaries were identified.
   a) Imaginary Boundary on land referred to as Defined Boundary (Db)
   b) Natural boundary (Rb) defined by rivers or streams
   c) Disputed Boundaries (Dp) were defined where representatives showed different boundaries.

Fig. 3 Reconnaissance   Boundary   with   a   Topographical Sheet and Photomap

Direct measurements were applied to achieve the derived spatial results. The social dimension of the project required education and sensitisation of beneficiary communities prior to the fieldwork stage. The fieldwork was also planned and coordinated to avoid controversies and mistrust from the communities. Two base stations were adopted for GPS survey. One was the Geodetic Reference Network (GRN) station on the campus of the Building and Road Research Institute at Fumesua in the Ejisu Juaben Municipality (Fig.4). The second was a GPS station at the Ejisu Government Hospital.

Fig. 4 GRN Station at BRRI Campus

2.6 Boundary Demarcation

Two teams, comprising six people in each team were created. Each team was made up of a representative of the chiefs from the towns owning the adjoining lands. The first team was used as an advance team in clearing the boundary at 2.5 m wide and planted pillars at selected stations (Figs 5 and 6).
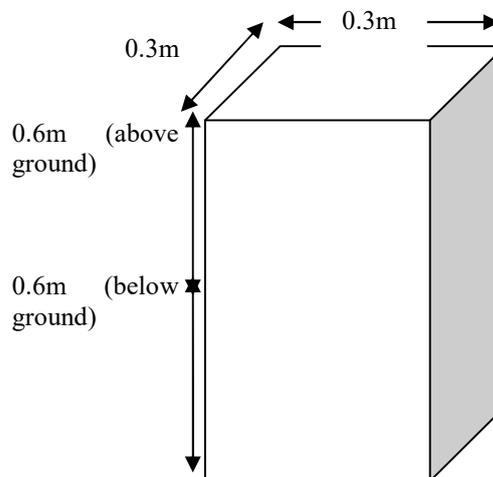

Fig. 5 A Typical Pillar Dimension

Where the boundary line hits an economic tree such as cocoa or timber, the tree was avoided.
Most of the labour was recruited from the local communities so that such people could serve as "institutional memory for the project". The second team undertook the survey observations by means of GPS and Total Station, where necessary boundary monument on Defined boundary (Db).

Fig. 6 GPS Observation Over a Pillar along the Boundary

2.7 Conflict Resolution Mechanisms in Disputed Boundaries

Land tenure security has been affected by boundary disputes. Disputes bring about insecurity and under development. The parties in dispute remain antagonistic. Conflict resolutions along customary boundaries are critical for land tenure security.

2.7.1 Alternative Dispute Resolution (ADR)

ADR is a concept of dispute settlement, which uses techniques other than litigation to reduce or resolve conflict. It involves bringing together parties in disagreement to participate in joint decision-making processes, which seek win/win solutions (Fig.7). A third party process person is commonly utilized to assist parties in resolving conflicts. The application of ADR techniques in the fields of natural resource management is relatively new. A study of environmental disputes found that 78% of the cases where ADR techniques were used resulted in settlement (Bingham, 1986). This study adopted procedures based on Moore and Priscolli continuum of ADR procedures. The process involved:

   (i) information exchange by parties;
   (ii) cooperative/collaborative problem solving
   (iii) cegotiations;
   (iv) facilitation;
   (v) mediation; and
   (vii) arbitration.

The various methods of ADR were used to resolve four major boundary conflicts. The use of ADR was lower in cost than the formal court system and provided an accommodating climate for resolution. Time for adjudication was also reduced in ADR. In this project, however, representatives of adjoining paramount stools showed their boundaries. Where there was agreement on the boundary, a line of 2.5 m width was cut; pegs were put at intervals of 100 m along straight routes and at turning points in preparation for planting pillars. Where there was disagreement on location of boundary, each party was made to cut their boundary separately. A handheld GPS was used to capture the 2 boundaries and plotted. Evidence in the form of maps, documents and oral submissions were requested from parties for resolution to begin by the ADR team.

Fig 7 Parties Agree on Start of Boundary Point

2.7.2 Customary Land Secretariat (CLS)

Bugri (2012) demonstrated that Customary Land Secretariats (CLS) are vital to land governance in Ghana and that capacity building is crucial to their ability to deliver services. The lack of records on rural and peri-urban lands often give rise to conflicts. This is even more pronounced along boundaries of stools and paramouncies. In many places, it is not clear who owns the land, how long they have used the land or if they have any formal claim to the land (Augustinus and Deininger, 2006). Cataloging land use rights is a critical step in the reform process because it documents claims to land and determines who has which rights to land (Deininger, 2003). Once the land is cataloged, it must be placed in a registry to make administration easy. This should make retrieving information easier and less expensive. Customary land secretariat as part of Ghana government policy reform on land administration was used to undertake the following functions between the factions;

(a) reach agreement with neighbouring communities on the boundaries of the customary land area;

(b) identify and resolve overlapping claims of rights among landholders and establish simple registers to record land allocations, transactions and land use-planning decisions;

(c) develop more effective dispute resolution procedures, including the adoption of record keeping to help establish precedent.

(d) consolidate and develop landholding rules and develop public land allocation and transaction procedures to limit double or multiple allocations;

(e) develop forms of certificate or entitlement, which precisely reflect the nature of rights over the property awarded and the terms and conditions;

(f) methodically identify, adjudicate, demarcate and register holdings in the customary area, without formal survey input as appropriate; and

(g) develop mechanisms which improve the security of those identified as most likely to be vulnerable, women, very poor and landless families in the community and strangers and tenants.

2.8 Processing of GPS Data

The reference pillars KMSI on the campus of the Building and Road Research Institute (BRRI) and SG/GPS2/06/13 at the Ejisu Government hospital were adopted reference points for the study. Processing was done with Trimble Total Control Version 2.7. Data was processed in formats prescribed by the Survey and Mapping Division of the Lands Commission. The data was integrated into the new Geodetic Reference Network (GRN), after which a map was generated in AutoCAD. The data was imported into Arc Map for the needed spatial analysis. The positions of all the boundary markers were shown on the map.

3 Results and Discussion

3.1 Map Production

Maps were produced at a scale of 1: 50,000 and 1:25000 for a validation workshop with stakeholders. This was participated by all neighbouring stools.

3.2 ADR Outcome

Generally, four disputes were peacefully resolved through ADR (Fig. 8). Only one outstanding issue was referred to the Asantehene, the overlord of the Asante kingdom to whom all the chiefs swear allegiance to resolve. The outstanding one, which was the Obogu boundary, was ruled on and the chief finally destooled

Fig. 8 ADR Team Initiate Resolution with Maps

3.3 CLS for Juaben

A CLS for Juaben was formally established as part of this project. The secretariat keeps records of rights, conveyances and relevant documentation. In spite of the challenges facing the CLS, the secretariat has made significant improvements in land acquisition processes and documentation. This has tremendously improved tenure security and improved the rights of indigenes to the use of land.

3.4 Details of Boundary Demarcation

The boundary passed through a number of towns and communities under different paramount areas (Fig. 9). 0ver 190 km of boundary could be established. Boundary pillars along stream and rivers were captured in a manner to show their courses clearly
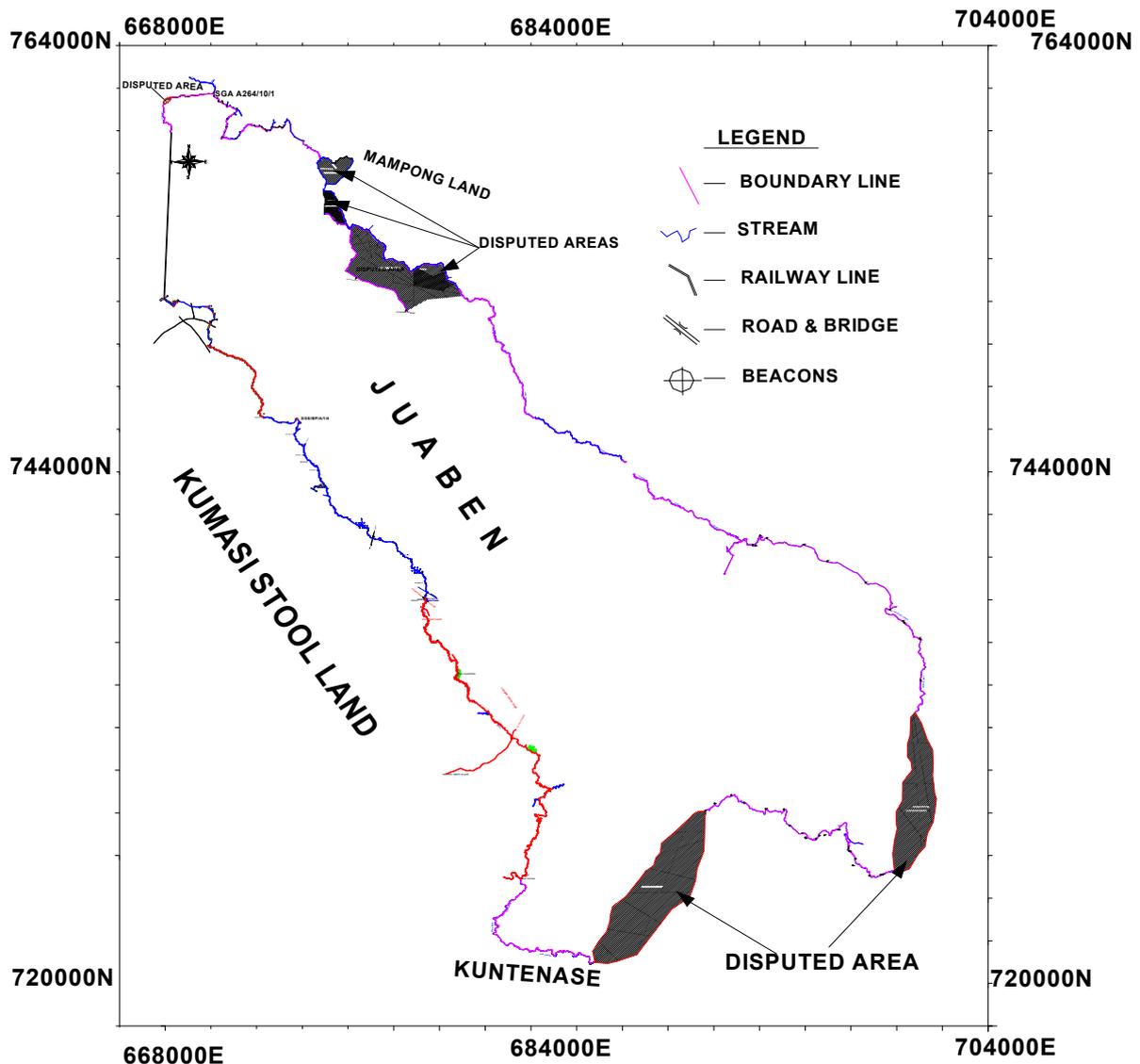
Fig 9 Boundary of Juaben Paramount Area

3.5 Discussion

Customary boundary demarcation is critical for the security of land tenure and land administration within the Juaben stool lands. The survey work must be planned with the Representatives of the Adjoining Paramount Stools (RAPS) and opinion leaders. The RAPS and leaders were sensitized to respect each party and to refrain from reigniting old controversies while in the field. The survey team ensured neutrality in the process.

The notable boundary points were all established on the map (Fig. 9). The over 190 km of boundary was line was clearly demarcated. Boundary pillars along stream and rivers were captured in a manner to show their courses clearly.

ADR was an important aspect of the boundary demarcation. Different conflicts required different approaches. It was important to recognize that given the importance attached to the ownership of land, the people would not give up land easily and the arbitration process required tact and skill to execute successfully.

Some of the RAPS relied on tenant farmers to show their boundaries. Some of the information by these tenant farmers were not reliable and had to be verified, creating delays. Protracted conflicts that were referred to Manhyia Palace (Court of the overlord) were decisively resolved. Participating communities appreciated civil and peaceful means of resolving land disputes instead of resorting to violence and invasion Traditional customs and beliefs were agreed upon. For example, on Tuesdays, the team could not go to the bush because it was forbidden.

The existence of some old pillars were noted and surveyed. Prominent among them were 'Fuller'

pillars planted between 1924 and 1928. Fortunately, the existence of these pillars as boundary demarcation was to a large extent accepted by all stakeholders especially the RAPS. Areas with Fuller Pillars generally had no conflicts. The presence of 'ntome' along portions of the boundary was also useful in confirming the boundary.

With the help of the GPS technique, all the positions of the boundary pillars were fixed irrespective of time of the day, weather, position etc. The river corridor was also captured with the hand-held GPS. All stakeholders appreciated the fact that it was easier and faster to use the GPS and that it was also futile to shift or destroy boundary markers of any kind or quality. It is important to state that adjoining paramount stools were educated that fifty feet (50ft) on both sides of any water body is a compulsory reservation for the protection of the water body. No paramount area could therefore claim ownership. The use of the handheld GPS with accuracy of 3m to capture water bodies in their meandered form was therefore acceptable for the Customary Boundary demarcation. The width of these water bodies differed depending on the season.

4 Conclusions and Recommendations

4.1 Conclusions

The research concludes that:

Customary boundary demarcation is an effective measure for ensuring land tenure security in the peri-urban and rural settlements. The boundaries must be clearly defined in the field as well as on maps. The demarcations were done with participation of neighbouring communities. Fairness, objectivity and cooperation were the underlying principle to ensure acceptability of defined boundaries. Where there were uncertainties in the boundary, compromises between contending parties are necessary.

The adoption of ADR was fully exploited in conflict resolution within the Juaben stool lands. Litigations among tenant farmers were mitigated through the ADR process. The formal court system was to be a last option. The CLS played a vital role in the land registration system to further strengthen the security of tenure. The local people appreciated the technology and know it is of no use to try to alter the positions of any pillar. The GPS could easily be used to re-establish the boundary at any time there is misunderstanding.

4.2 Recommendations

It is recommended that:

(i) The government partners the chiefs to reduce the huge cost in the boundary demarcation process. In this regard, it is important for chiefs and their people to recognize the importance of securing the boundaries of their lands through such exercise so they can contribute meaningfully to national development.
(ii) The Traditional Land Secretariats (TLS) should link up with the land sector agencies for collaboration to mitigate the multiple sales of lands and its attendant problems. Building capacities at the traditional level is important for effective land administration system.
(iii) Districts and Traditional authorities should engage the services of professionals in land management. The professionals must be equipped with modern technology to facilitate the overall development process.

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