Introduction

How much land does the government own, and where are its boundaries? Effective management of land, including its use to produce public goods such as infrastructure, its use by public bodies such as schools and security agencies, or its allocation for use by investors or land-poor farmers, is almost impossible unless these two questions can be answered. The ability to answer these questions requires having a detailed inventory of public land and its boundaries as well as its current occupiers and uses. Most countries in Sub-Saharan Africa (SSA) currently do not have that spatial and ownership information and thus need to undertake inventories of their public land. This case study reviews Ghana and Uganda’s recent efforts to address this problem. With support from the World Bank, both countries undertook systematic (as opposed to sporadic) land inventories of state-acquired and occupied lands; these represent the most recent attempts in SSA to accurately account for such land.¹

Ghana and Uganda are good case studies in the context of SSA given that both countries have a checkered and predominantly unfavorable history of compulsory alienation of land rights under the guise of the public interest before and after their respective independences. In both countries, accumulated government-owned or publicly vested lands are a source of continuing tension between the state, current occupants, and former inadequately compensated landowners, and the situation is aggravated by delayed payment of outstanding compensation to former owners. Other issues include nonutilization of all or part of the acquired land, various degrees of encroachment on acquired sites, and unauthorized changes in the use or disposition of parts of the acquired parcels. These patterns of mismanagement were found by the governments of Ghana and Uganda to be systemic enough to require a holistic examination of existing policy and practices to improve the management of government-acquired and vested land and the associated real estate assets.
To date, Ghana has been more successful in undertaking a systematic and substantial inventory of its state lands; Uganda has only done so more recently and on a more limited scale. Ghana’s land inventory exercises, initiated in 2003, had two objectives: (1) to enable land sector agencies to obtain up-to-date and accurate records on all government-acquired and occupied lands, and (2) to enable the government to formulate and implement policy guidelines on compulsory acquisitions, compensation, and divestiture of public lands no longer needed for their intended public purpose (World Bank 2003). About 60 percent of Ghana’s estimated public lands were included in the inventory exercises, which provided a clearer picture of the principal sources of tension in communities impacted by government land acquisitions. The inventory also helped the government to issue short-term policy guidelines for managing state land assets while waiting for information from the whole country inventory. In contrast, Uganda’s land inventory exercise, conducted from 2009 to 2011, covered only 10 percent of state lands and was faced with design and implementation problems that are being corrected before resuming the exercise under a follow-up project (World Bank 2013). The objectives of the land inventory in Uganda has been to identify, survey, confirm ownership, and determine the status of occupation of land with a view to determining the most appropriate policy and legal framework to underpin its optimal management and use (World Bank 2005).

**Objectives of the Case Study**

The objective of this case study is to draw lessons from Ghana and Uganda’s land inventory experiences to inform future work in this area in these countries and in others that may eventually undertake land inventories. Lessons of interest include those from the design and implementation of the land inventories as well as those on the use of the data generated to inform policies and actions to improve public land management. The case study is based on a review of relevant documents produced from the land inventory exercises, especially survey and valuation reports, as well as on interviews with relevant government officials and consultants involved in the exercises. The lessons learned are expected to enhance the processes of inventory acquisition and to improve the quality and reliability of the collected cadastral data and land use information; the latter should help improve policy development and implementation to better manage the stock of government-owned and vested lands and to dispose of surplus lands to investors and land-poor farmers more efficiently and equitably.

**Historical Background**

The government of Ghana launched a new Land Policy in June 1999 with the long-term policy goals of promoting social stability, improving security of land tenure, and simplifying the process for fair, transparent, and efficient administration of land. The development goal was to provide a framework for stimulating
economic development and reducing poverty. To pursue this, the government secured the assistance of the World Bank and other development partners and launched a 15–25-year Land Administration Program in October 2003 (World Bank 2003). The first five years of the associated Land Administration Project (LAP-1) focused on developing a new infrastructure and technology platform for a sustainable land administration system that would be efficient, decentralized, and capable of supporting implementation of the new Land Policy and providing a “one-stop-shop” land administration framework.

In Uganda the scenario leading to the land inventory exercise was similar to that in Ghana. After approving a new constitution in 1995 with significant provisions on land, and a new 1998 Land Act thereafter, the government of Uganda prepared a 10-year Land Sector Strategic Plan (2001–11). The LSSP was to guide implementation of the land provisions of the new constitution and the 1998 Land Act (Government of Uganda 2001). The government of Uganda approved a comprehensive inventory of government land to support its improved management as one of the activities funded under the Second Private Sector Competitiveness Project (PSCP II), supported by the World Bank (2004).

**Institutional Challenges to Inventorying Government Land**

Planning and implementing a land inventory is challenging. Given the considerable level of corruption and mismanagement associated with government land, it takes political will and pressure against vested interests to mobilize resources and embark on a government land inventory meant to eradicate those vices (Mabogunje 1992). Another challenge is the incursion of central government powers into matters pertaining to autonomy over public property held by lower tier governments, ministries, departments, and statutory bodies, and the need to reform entrenched attitudes to improve accountability over such land assets.

Lack of transparency in government land transactions is not restricted to African and developing countries. Questionable dealings, “insider” transfers, secretive rezoning of land parcels, and other abuses are a common element of land transactions worldwide. Transfer of development rights through political processes not subject to scrutiny, transparency, and accountability have been found to permeate public sector procedures for property disposal, and income from corrupted property allocations represents a significant source of illicit payments in many countries. However, these challenges are not insurmountable if a central government is committed to promoting transparency and good governance.

**Defining Government Land**

Government land in both Ghana and Uganda comprises land that is occupied and used by the government for public purposes or reserved for future use by the government, plus land held in trust on behalf of the wider public. This definition includes land occupied by government offices, schools, hospitals, police stations, prisons, and military installations, land on which social infrastructure is located,
and land owned but not used or occupied by the government. For the purpose of this case study, government land is limited to that owned by either the central or local governments.

The principal difference between government and private land is that the public sector must recognize the public interest and the constitutionality of its obligations. The public interest may be reflected in a gazette notice or an executive instrument authorizing the acquisition and may include a broad array of activities, such as construction of public infrastructure; provision of education and health facilities, national parks and conservation areas, military facilities, and state, regional, and local government offices; the undertaking of urban development or redevelopment schemes; and establishment and operation of public parks. However, in addition to these clearly designated government land acquisitions, several other instances can be identified where allodial landowners, private institutions and churches, or local community leaders have formally or informally granted land for public use and operation as public facilities, requiring no payment of compensation by the government and without any formal documentation of the deed of gift. This class of government lands is the most likely to be subject to contradictory interpretations of original intent in the future.

The current legal frameworks in Ghana and Uganda are more focused on protecting the acquisition and ownership of lands by the government, and less on their management and upkeep or the possibility of deriving economic benefits from them. Similarly, the governments’ decision-making processes lean more toward protection of property rights than better management of land assets. In fact, the law in both countries provides guidelines to prevent the disposal of government lands as long as they are needed for public purposes. Yet on the whole, despite the unquestionably high public interest in government land and real estate assets, questions arise when excess land or underutilization of acquired lands exists, because this reflects symptoms of poor management.

**Institutional Framework for Government Land Administration**

The Lands Commission in Ghana and the Uganda Land Commission (ULC) have constitutional mandates to act on behalf of the government and to manage public lands and any other lands vested in the state or the Commissions. However, in Ghana the Lands Commission Act of 2008 (Act 767) also consolidated the mandate to include all land administration matters. The goal was to promote a “one-stop-shop” approach to land administration and the judicious use of land by society and to ensure that land is used to achieve development goals. To fulfill this broader mission, Ghana’s Land Commission collaborates closely on land management decisions with (1) the Office of the Administrator of Stool Lands, (2) the department responsible for town and country planning, (3) structures designed for the customary administration of stool, skin, family- or community-owned land, or any other land, and (4) other public agencies,
government bodies, and any other private body that has operations or activities relevant to the functions of the Commission.2

Similarly, ULC in Uganda is the custodian of all land assets owned by the national government. ULC also advises central government agencies, local authorities, and traditional leaders on the policy framework for development of land they occupy and is the principal agency authorized to allocate and/or divest government land for public and private use and occupation. Certain categories of land, such as road reserves, forest reserves, wildlife reserves, conservation areas, and wetlands, are managed by authorized statutory agencies of the government, with a clearly defined mission and legal and administrative mandates.

The Challenge of Land Valuation and Compensation

With their wide range of functions and services, Ghana and Uganda’s public sectors have accumulated a very large and diversified portfolio of land, making them the largest land and real property owner in both countries. Not only is the value of government land assets enormous, but so are the costs associated with their effective management and protection, as well as the costs of resolving outstanding compensation claims. Optimizing the management of government land by developing an accurate inventory should result in significant savings to the government.

Tools for asset valuation, efficient utilization, and determining optimal disposal of land are available, but the political will to apply them in a transparent and consistent manner is not. Often there is political interference in the day-to-day work of the commissions. Well-conducted land inventories would help generate the necessary information to increase transparency, consistency, effectiveness, and efficiency in the management of land by the agencies that have been entrusted to manage the government land.

Acquisition and Disposal of Land by the Government

The application of a state’s power of eminent domain, principally through compulsory acquisition or occupation, often creates problems between the state and the expropriated owners. In Uganda the central government or local government can acquire land by compulsory acquisition under the police powers of the state. The procedure for such acquisition is governed by legislation. However, in addition to legal processes, government and statutory corporations, including ULC and District Land Boards (DLBs), can acquire land through tenancies, leases, and purchase under any of the statutorily recognized land tenure categories. No specific law regulates the contracts for land acquisition by the central government, local governments, or statutory corporations in both Ghana and Uganda. The practice has been to negotiate privately with vendors without having to follow the bidding and other competitive procedures required by the Public Procurement and Disposal of Public Assets laws in Ghana or Uganda. Such acquisitions are governed only by financial regulations on the use of funds by public authorities.
Regarding the disposal of land vested in ULC or municipal councils, previous guidelines in Uganda required this to be done under statutory leases.\textsuperscript{3} The absence of legal requirements for regulating the disposal of government land and real estate assets left much to the discretion of ULC and the municipal councils, including whether to advertise or sell the land by competitive means, as is required in many countries.\textsuperscript{4} The current practice is for ULC and DLBs in Uganda to act as if they are still making grants. The Ghana Land Commission and its Regional Land Offices act the same way.

Similarly, the disposal of land by local governments and statutory corporations is equally unregulated in both Ghana and Uganda. In most cases, tenancies, leases, and sales are not made under a competitive and transparent process that ensures that land is disposed for value. Consequently, inefficiencies in the form of physical and economic underutilization and insufficient monitoring, maintenance, and protection stem from the fundamental belief that land and real property held by government are free goods, owned by taxpayers, and not subject to the same economic rationalization that occurs in private ownership. In such circumstances, it is difficult, if not impossible, to measure the economic loss due to poor management and the inability to account for the stock and condition of government land. Lack of information creates multiple inefficiencies that may be attributed to the large amount of underutilized land held by government departments and agencies whose needs change faster than their ability to reuse or dispose of excess properties. This makes such government land assets a de facto liability in the affected communities, since the cost of holding these land assets is neither emphasized nor accounted for and there is therefore no incentive or financial benefit to relinquish them.

**Common Purpose of a Government Land Inventory**

The general paucity of information on government land and real property is a significant issue in SSA. According to Kaganova and McKellar (2006), only a few countries have computerized land information systems capable of generating a comprehensive inventory of government-owned land and buildings. Even the most advanced industrialized countries, including New Zealand, the United Kingdom, and the United States, had inconsistent inventory records of government-owned land and buildings as late as 2002. Although significant improvements in the quality of inventory data have occurred since then, government land and property inventory deficiencies are still the norm in most places (Kaganova and McKellar 2006). Apart from the actual number of holdings, the most conspicuous gaps include data on historic significance, utilization status or situation analysis, inventory of in-and-out leases, and reliable financial information for tracking revenues and expenses. Potential market value is frequently unknown, and the availability of information on legal status is often spotty. Detailed record keeping is essential to cope with disputes, ascertain market trends, determine values, and compare performance against public sector objective benchmarks.
Often some of the primary outputs from the maps and attribute information collected in an inventory of government land are the following:

- Baseline data on the location, size, and features of government land;
- Comprehensive management plans;
- Identification of government land for development;
- Identification of government land for education and social infrastructure;
- Evaluations or functional assessments of government land;
- Environmental impact assessments;
- Site selection for public infrastructure corridors (e.g., power lines);
- Analysis of forestry, conservation, and wildlife habitat policies.

Furthermore, to disseminate inventory information once it is created, the appropriate land sector agencies can create several products, such as the following:

- Maps in printed and digital format;
- Government land inventory reports;
- Government land utilization status reports;
- Government land values databases.

With thousands of acres and thousands of government buildings, parks, and reserves in the government land portfolios in both Ghana and Uganda, it is imperative to identify what the government owns, to determine whether government, community, or private ownership is most effective, and to streamline the equitable and efficient transfer of all unneeded land to communities or investors.

**Conducting a Government Land Inventory in Ghana and Uganda**

This section covers three key elements that underpinned the conduct of the government land inventories in Ghana and Uganda: (1) the rationale for the exercise, (2) the objectives of the exercise, and (3) the key steps involved in the exercise.

**Rationale for Conducting Government Land Inventories**

For Uganda and Ghana, the main rationale of conducting a government land inventory was to identify government land and to generate necessary information to improve its management. For Ghana, a long outstanding need was developing a policy to address delayed or lack of payment of compensation for postindependence land acquisitions of lands under the trust of traditional chiefs and clan heads. This required information on the location, size, value, and occupation status of such lands in addition to identifying former owners. For Uganda, the urgency for a government land inventory was to establish precisely the amount of land owned by the state and to confirm the ownership with a view to determine availability of surplus land that could be allocated to the landless poor and investors.
**Objectives of a Government Land Inventory**

The overall objective of the inventory exercise in both countries was to enable the government to formulate and implement realistic policies on state-acquired and occupied lands. The immediate practical emphasis in Uganda was to account for the stock of state or public lands as a clearly distinguishable ownership category in its National Land Information System. The ultimate goal was to ensure that all government land was surveyed and titled to the state and clearly distinguished from private land as a measure to protect government land assets and to manage them efficiently.

The specific objectives of Ghana’s inventory exercise, as stated in the LAP (World Bank 2003), were to do the following:

- Ascertain the stock of state or public lands including the effective usage of such lands; these include lands that have either been compulsorily acquired or occupied by the state without formal acquisition;
- Ascertain the instruments that were used for the acquisition as well as to determine how the state occupied the lands without any formal acquisition;
- Identify the boundaries of the acquired lands; this shall include the determination of the extent of acquisition as indicated in the cadastral/certified/land development plan, and to ascertain the actual area occupied by the beneficiaries, unoccupied areas and the method of protection of the boundaries, and where there are no plans, landmarks used by the occupiers for the identification of the boundaries shall be indicated;
- Determine the acquisitions for which compensation has been paid and those for which partial or no compensation has been paid;
- Determine the quantum of outstanding compensation;
- Ascertain acquisitions for which there has been change of use as against the original purpose of the acquisition; and
- Assess the extent of encroachment (if any) on the acquired or occupied lands.

These objectives illustrate that Ghana is moving to distinguish its land assets not by the nature of the appropriation, but according to ownership. The move also adds transparency by placing into a specific public portfolio government land assets that are exclusively dedicated to public use and thus governed by special legal and institutional procedures aimed at protecting such land assets against unauthorized use, encroachment, and mismanagement.

**Key Steps to Undertaking a Land Inventory**

The design and development of any land inventory system is a difficult, long-term undertaking that calls for careful planning, attention to methodological details, and sustained financial and technical capacity to execute and utilize the information collected after the initial compilation is over. As observed by Aronoff (1990), experiences in other countries, including Botswana, have shown that problems associated with people are almost always the most significant obstacle to successful implementation of a land inventory system. After the decision to
develop an inventory is made, several requirements for designing and responding to the needs and concerns that initially prompted the development of the inventory have to be identified and carefully defined as analytical requirements.

Key steps taken in the government land inventory processes used in Ghana and Uganda included the following major activities, described in more detail in the following sections:

- Preliminary scoping and workload assessment;
- Compilation of existing data and methodological refinements;
- Sustained communication and awareness campaign;
- Technically sound and cost-effective execution of field work.

**Preliminary Scoping and Workload Assessment**

Preliminary scoping is important for clarifying user requirements, examining the appropriateness of the methodology, and determining technical and administrative capacity requirements and potential budgeting needs. In addition, information gaps discovered during scoping help to sharpen the terms of reference, the scope of work, and the performance obligations of both the public and private sector participants in the inventory exercise.

For the Uganda land inventory, the activities undertaken during the scoping study, aptly described as an “Assessment of Workload Study,” included the following:

- Assembling the project team, which consisted of key players in the Land Administration division of Uganda’s Ministry of Lands, Housing and Urban Development, the Digital Mapping Unit of the Surveys and Mapping Department, and a private survey firm as consultants;
- Reviewing existing functions and processes at every stage of the land title registration process and determining which new applications would be required;
- Making an initial assessment of the workload.

The scoping exercise in Uganda was instrumental in providing sample data for projecting the mean workload for each district and rough projections for a comprehensive national land inventory. Where possible, interviews were conducted with stakeholders, for example, with land managers of the districts, local administrators, relevant technocrats, knowledgeable elders, and locals in the proximity of the land parcel. The “Assessment of Workload Study” also served as a pilot training program for the land sector agencies and private contractors who were expected to play complementary roles during implementation. Building capacity in the private sector had the added advantage of enabling private firms to play a more active role in delivering land services at the local level.

The nature of engagement with stakeholders, including traditional authorities and local political leadership, the communication and awareness creation, and other lessons learned during the assessment exercise, enabled guidelines for the inventory exercise to be developed. The information gathered was also used to
develop a standardized data collection form for organizing field data for each land parcel detailing the location of the parcel, the tenure status, current and/or planned land use, level and nature of encroachment, and people’s attitudes toward ownership and utilization.

**Compilation of Existing Information and Methodological Refinements**

The absence of reliable information is a fundamental reason for conducting an inventory, but the primary decision of whether to undertake an inventory depends on the types of questions the inventory is expected to answer. For example, in Ghana, prior to the consolidation of all land administration agencies under the new Lands Commission in 2009, government land information was held by the old Lands Commission and three other public sector land agencies, namely, the Land Valuation Board, the Survey Department, and the Town and Country Planning Department. Most of the information had not been updated for years, and in some cases, the records could not be found. Consequently, neither the total number of acquisitions—complete and incomplete—nor the extent of development could be ascertained. There was no comprehensive record of all the government land and the developments on it.

The methodology for conducting the inventory had five distinct steps:

- Desktop research including review and compilation of existing documents;
- An assessment of the pilot workload and development of guidelines (including a manual and a diary of activities);
- Communication and awareness creation including sensitization workshops;
- Field activity by survey teams, valuers, land officers, and planners;
- Data analysis and continuous user acceptance reviews.

In the Uganda government inventory, land officers with extensive experience in compulsory acquisition schedules were deployed in three teams to compile the list of acquired lands and prepare proprietary and acquisition plans for the field work. Desktop research and additional information revealed during the sensitization workshops were made available to the private sector consultants.

A broad consultation exercise was undertaken with several government ministries and departments, local government, DLBs, statutory corporations, and agencies to generate an initial list of government land. However, to ensure completeness, this list was reviewed and reconciled with a second checklist developed by community leaders, traditional authorities, and local residents and certified by local administrators. This approach helped to account for local parcels that may have been missed by the public sector agencies.

**Communication and Awareness Creation Campaign**

A key to the success of a land inventory lies in the creation of effective public awareness and sensitization of all stakeholders. Communication and awareness creation are essential to inform the public and to ensure the safety of contractors. The awareness step also provides an early opportunity to explore system
development questions, such as: What land inventory system to develop? Which agencies should participate in the development of the system? How and why is public participation important throughout the inventory development process? (Wagner 2009). Typical communication and public awareness tools include the following:

- Fliers explaining the exercise;
- Radio discussions;
- Documentaries for television and other audiovisual broadcasts;
- TV discussions;
- Public information dissemination by Information, Education and Communication Services divisions;
- Timely newspaper adverts and feature articles;
- Interactions with police, traditional authorities, and other related institutions;
- Public meetings, workshops, and press conferences.

Experience has shown that communication campaigns should always be a public sector activity led by multidisciplinary teams. They should involve different strategies and tools to facilitate access to the community and to elicit the cooperation of local stakeholders. The inventory exercises in Ghana and Uganda included a rapid response component to the implementation teams to further ensure quality, to improve communication links with the public sector agencies, and to resolve any potential problems in a timely fashion. In Ghana, at least two officers from the land sector agencies (one of whom was a land surveyor) were attached to each private contractor and paid a daily subsistence allowance (DSA) from the project’s operational funds. In Uganda, on the other hand, a special committee of government officers (composed of a land surveyor, a land administrator, a geographic information system (GIS) specialist, and a social economist) served as a “rapid response” link between the contractor and the government to address implementation issues and contract execution challenges without delay. However, because its members were not embedded with the field team, failure to promptly communicate problems and botched attempts by the contractor to independently resolve challenges in the field politicized some problems, escalated public animosity toward the inventory exercise, and limited its success.

**Execution of Field Work**
The public sector took the lead role in the inventory exercise in both Ghana and Uganda to perform the following actions:

- Provide access to data held in public agencies’ records;
- Engage with local political leadership and traditional authorities to create access for the contractors;
- Communicate and raise awareness;
- Provide quality control and supervision.
In both countries, private sector contractors were responsible for the following:

- Collection of field data;
- Data analysis and report writing;
- Application and all supporting documents for registration and titling of previously unregistered government land.

Private contractors conducted the pilot land inventory in selected districts in each country. This allowed the methodologies and strategies to be tested before scaling up. Additional orientation and training was organized for interested firms, including practical field work with the field officers from the public sector. The public sector support and quality control role was also tested and refined.

Contractors were given access to data held by the following public sector agencies (in all cases, private properties occupied by state and parastatal agencies were excluded from the inventory):

- The ULC in Uganda;
- The Lands Commission in Ghana including the Survey, Valuation and Registration Divisions;
- The Survey Department and the Valuation Division in Uganda;
- The Land Registries in Uganda (leasehold, freehold, and mailo);
- Town and Country Planning Departments in both Uganda and Ghana;
- District Assemblies in Ghana and District Councils in Uganda;
- Ministries and municipalities in both Uganda and Ghana.

The actual field work comprised surveying, updating the status of land use, and conducting valuation activities. In Ghana, contracted firms were required to use predesigned LAP forms to capture and analyze the relevant data. Although a similar data capture template was provided in Uganda, the contractor chose to use its own format and software, making it extremely difficult for the Survey Department to check and approve the results. In both countries the data captured for each parcel of government land for each of the three major activities can be summarized as follows:

1. Surveying
   - Identify and demarcate boundaries.
   - Determine acreage:
     - Total land acquired;
     - Extent of development for the intended purpose;
     - Undeveloped portion;
     - Area encroached upon (if any); and
     - Change of use by beneficiary government agency (if any).
   - Provide points of departure to the required survey standards on each site.
   - Produce provisional survey plans for sites without plans with the use of GPS.
2. Land use information
   • Where there is a planning scheme, indicate whether development does or does not conform.
   • Indicate where there are no schemes and state the dominant land use.
   • Indicate the state, nature, and source of encroachments.
   • Take terrestrial photography of important and/or interesting landmarks.

3. Valuation
   • Discuss evidence of values with management of the Land Valuation Board before submission of draft valuation report.
   • Determine compensable values and submit draft valuation reports after consultation with the Land Valuation Board in situations where compensation has not been paid and where acquisition is incomplete (i.e., state occupied sites).
   • Take terrestrial photographs where necessary (i.e., photographs of sites of massive encroachments, vast undeveloped portions, etc., of the acquired/occupied sites).

In both countries, the exercise was expected to achieve the following outputs:

- A well-informed public, fully sensitized to the government’s intentions in undertaking the inventory exercise;
- Up-to-date data sets on state-acquired and -occupied lands;
- Enhanced capacity of both the public and private sectors;
- Reports on the inventory exercise available to all user agencies.

Institutional Weaknesses in Managing the Uganda Inventory

Considerable weaknesses were present in the conducting of the government land inventory in Uganda, partly because of institutional weaknesses in government to supervise and manage the exercise. Symptoms of these weaknesses could even be seen from the status of formalization of government ownership of the various land parcels claimed by government from the scoping exercise before the inventory itself started. Many of the land parcels were far from reaching the final stage of registration, with many of them either surveyed and not titled, not surveyed though gazetted, and neither surveyed nor gazetted. The incompleteness of the formalization of ownership of land claimed by government pointed to a need to review the functions and technical capabilities of the agencies directly responsible for identifying, gazetting, surveying, and registering government land. The analysis revealed that both the ULC (the authorized body that owns and manages land on behalf of the central government) and the DLBs (which administer land on behalf of the local government) lacked the professional and technical capacity for processing the information generated to complete the inventory.

Further analysis of the steps mandated by law for conducting and approving cadastral surveys identified other bottlenecks including critical staff shortages at
every stage of the process, inadequate geodetic controls, and general lack of technical capacity in District Land Offices. These limitations made it difficult for these agencies to monitor the contractor’s survey teams in the field and contributed to significant delays in the approval of survey data presented by the contractor. In several documented instances, the private contractor was forced to supply the software for checking the contractor’s outputs and the stationery required by District Land Offices to produce deed plans just to complete that stage of the exercise.

Financial Arrangements

In the case of the public sector–led pilot in Ghana, LAP funding covered four teams of field officers—two of them consisting of only land surveyors and the other two comprising valuers, land officers, and planners—to conduct the field activities under the direct supervision of a task leader in the time frame established. Each site was first visited by the surveying teams who, in addition to their demarcation responsibilities, were also responsible for securing access to each site. This paved the way for the land administration teams to follow. The private consultants were also advised to follow the same model and to use predesigned field data capture forms to organize the data captured and to facilitate analysis.

Similarly, PSCP II in Uganda provided the funding for engaging the services of a single contractor selected through international competitive bidding, but was reluctant to provide funding for the public sector staff responsible for monitoring and quality assurance or for members of the Technical Link Committee to visit sites for inspections. The Land Act in Uganda, for example, stipulates that Area Land Committee members have to observe and approve all demarcations for cadastral surveys in their jurisdiction. Furthermore, the contractor’s data have to be checked by the District Surveyor before deed plans can be presented to the DLB for consent to register. Unfortunately, the normal annual budgets for Area Land Committees and DLBs were not adequate to handle the exponential increase in activity generated by the inventory exercise, and no supplemental funding was provided by PSCP II or the contractor. In the end, the poor performance of the Uganda exercise was partially attributed to inadequate supervision and delayed interventions to resolve bottlenecks and unexpected challenges.

Lessons Learned

According to seminal work by Crain and MacDonald (1984), the compilation of a land inventory is only the first stage of a three-tiered integrated land information system (LIS). The other two stages, analysis applications and management
applications, are currently being developed as part of a parcel-based LIS in both Ghana and Uganda (see chapter 5). However, the experiences there have shown that there are no easy, ready-made solutions available, hence the need for careful strategic planning, learning from past experiences, and building capacity to manage and sustain the systems built. Just developing an inventory is not sufficient. The integrated LIS has to be supported and continuously updated to ensure its reliability, and staff must be trained to monitor, sustain, and improve the system for it to achieve its intended policy and national development objectives.

At least seven lessons can be drawn from Ghana and Uganda’s experiences with land inventory exercises:

• The methodology to identify government land parcels in each district should allow public verification of independently generated lists of government land from various sources before arriving at the final approved list of government land in each district.

• When special projects such as land inventories are being implemented, the capacity at the district level should be augmented to handle the additional work load. Arrangements should include (1) a dedicated amount of time to accompany the contractor in the field, (2) elimination of the backlog of office work created as a result of the demands of the inventory project, and (3) accommodations for the volume of additional work generated (computing, plotting, and preparation of deed plans).

• A public-private partnership (PPP) arrangement (as was used in Ghana) seems to be more appropriate than either a purely public or private arrangement for conducting land inventory projects. It is necessary to provide extra facilitation in the form of DSAs for public sector employees at all levels of government, as well as targeted technical support and additional human resources to facilitate data handling, information processing, and analysis at all stages of the process, especially at regional and central government levels to avoid inordinate delays in completing the project.

• The use of manual records for operational purposes in the land offices is costly, inefficient, and unlikely to meet the land information needs of the user departments and the society at large. Thus there is a need to modernize routine administration and land management functions, particularly the processing of applications for land allocation and approval of consent to register land by Land Boards.

• Land inventory contracts should be awarded only with an agreed upon approach for specifying the actual number of parcels to be surveyed in each lot by the contractor. An acceptable margin of error should be established to guide negotiations once the activity is under way. In addition, establishing clear criteria for determining changes in the scope of work, such as the discovery of
additional government land parcels in the course of the activity, would help not only in improving contract management but also in establishing predictable budget ceilings for the activity.

- The participation of public officials whose role in executing the land inventory is considered indispensable, especially if mandated by law, should be planned for and financed to ensure capacity limitations do not become an insurmountable bottleneck to project completion. The nature of the public-private interface mandated by existing laws for executing any land demarcation and registration exercise should be defined to ensure that adequate capacity exists for successful execution of the contract.

- The source and magnitude of the financial, technical, and material resources required to support all aspects of the land inventory should be clearly indicated, and budget lines established for each activity phase. The time frame for execution of the contract should be adhered to, with positive as well as punitive incentives built in to ensure all parties comply with the delivery timelines established for each stage of the activity.

Using a PPP, the land inventory can be structured in three stages to ensure a timely and uninterrupted execution:

**Stage I:** A team of officials appointed by the lead central land agency, working with land officials at lower levels of government, should be charged with identifying and preparing a comprehensive list of government land to be included in the inventory on a district-by-district basis. The number of parcels identified for each district should provide a certified list of plots upon which to base the contract prices and implementation budget requirements for each district. It is also important to establish a per-parcel delivered price range, possibly based on standardized parcel attributes, to guide bidders. Public awareness, sensitization, and training activities should be placed exclusively in the hands of a carefully appointed interdisciplinary team of public and private sector professional and technical specialists. This team should take full responsibility for the training of public sector participants at the national, regional, and district levels, and for raising the awareness and sensitizing stakeholders in the private sector and local communities. This team should also train and orient all key participants throughout the inventory process.

**Stage II:** The adjudication, demarcation, and preparation of sketch maps, surveying and computation, geo-referencing and plotting of the data collected, and preparation of registration plans and applications should be contracted out to private survey firms. The deliverables from this stage include (1) approved field survey data presented in a form prescribed by the receiving public sector department; (2) updated district cadastral index maps; (3) government land situation analysis reports indicating the level of encroachment, land use, improvements, and other specified user requirements; and (4) approved applications for titles and the accompanying approved deed plans.
Stage III: The results of the district-level operations should be transferred to the Survey and Mapping Division at the central government level for final checking. These should later be transferred to the Land Administration Department and finally to the Commissioner for Land Registration, who should issue the titles. These Stage III activities are required by law to be performed by authorized government officers and cannot be delegated to private contractors. Thus the private contractor should submit all required information to the appropriate public sector agency for final processing.

Conclusions

This case study has highlighted the similarities of and differences between Ghana and Uganda’s efforts to develop and implement government land inventory systems. Given the impetus from recent institutional reforms in both countries, the development of new land information management technologies capable of supporting land inventory systems has made it imperative for Ghana and Uganda to verify the status of government lands as a springboard to improving their management. Although both countries faced considerable challenges in their initial attempts, the experience provided valuable lessons that can inform a more realistic approach in their next attempt. The experience can also inform other SSA countries preparing for similar exercises.

Overall, this case study found that in addition to addressing capacity constraints, measures are needed to deal with overarching fundamental land policy and land administration issues, particularly those related to the legal framework, land valuation, and outstanding compensation payments. Finally, there is a clear need to ensure that the land inventory system is planned in conjunction with the development of integrated land information management systems.

Notes

1. The most comprehensive attempt at developing a comprehensive land inventory system in SSA prior to the attempts in Ghana and Uganda was in Botswana (Government of Botswana 1995; UN-Habitat 2010).
2. “Stool or skin lands are community lands vested in the traditional chief or other community leaders on behalf of the tribe” (Kuntu-Mensah 2006, 3).
5. Direct communication with the Director of Lands Department in Uganda’s Ministry of Lands, Housing and Urban Development.
7. Field work comprising surveying, valuation, land management, and land use planning activities was undertaken from September 1, 2004, to December 19, 2005.

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