

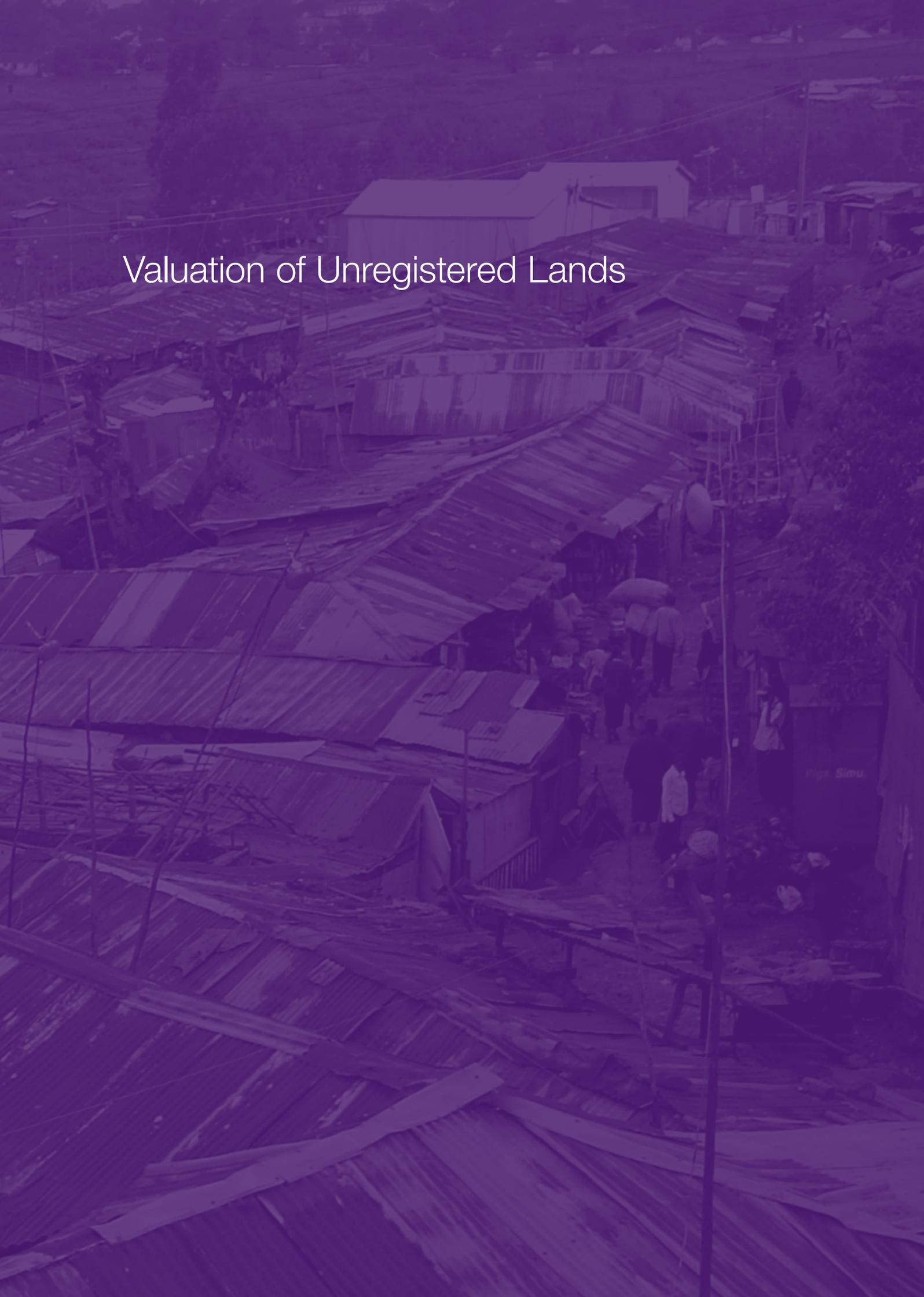
Report February 2013

RICS RESEARCH

Valuation of Unregistered Lands



Valuation of Unregistered Lands



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Front cover image: Kibera, Nairobi – informal settlement area (John Tracey-White)



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List of Acronyms

AMV	Automated valuation models
CBA	Cost benefit analysis
CEA	Cost effectiveness analysis
CLT	Community land trusts
CV	Contingent valuation
DCF	Discounted cash flow
FAO	Food and Agriculture Organisation
GIS	Geographical information system
GLTN	Global Land Tools Network
GPI	Gross potential income
HABU	Highest and best use
ISK	Institution of Surveyors of Kenya
IVS	International valuation standards
MCA	Multi criteria analysis
NOI	Net operating income
NPV	Net present value
NRV	Natural resources value
RCNLD	Replacement cost new less depreciation
RICS	Royal Institution of Chartered Surveyors
TOL	Temporary occupation licence

Background to the Study

The origin of the study was a proposal from RICS Kenya for developing pro bono valuation services targeted at women, initially in Kenya and later to be rolled out in other East African countries. It was to be targeted at innovative types of land tenure to be taken into account when designing equitable policy instruments aimed at eradicating poverty.

The project's main goal was to support vulnerable sections of Kenyan society; concentrating on the relationship between traditional customary rights, gender and asset values. Unregistered land (whether rural customary land or urban land squatted upon) is difficult to value because of

the uncertainty of title and an accepted and practical method for valuing unregistered land is urgently needed to remedy this problem. Widows, single mothers, older people and minors find it particularly difficult to approach this issue and are often unable to benefit from the nation's pool of professional surveying and valuation expertise. The project sought to provide a basis for a valuation protocol that would be agreed upon by lawyers, valuers and other stakeholders in order to provide a robust, reliable and generally accepted estimate that could be accepted by courts, banks and other financial institutions.

Figure 1

This baobab is a revered tree in the arid lands, with numerous cultural uses. The Swahili proverb “The shade of the baobab shelters he who is far” testifies to its size and importance



Photo: Madi Jimba

Study Methodology: Literature Review and Field Surveys

The majority of urban and rural land in Kenya and much of East Africa is unregistered and consequently difficult to value because of the uncertainty of not only title but also of the development control process. An accepted and practical method for valuing unregistered land is urgently needed in Kenya to address and relieve this problem. The process used for developing suitable valuation methods for unregistered land was as follows:

- A literature search and review from Kenya and other countries.
- Exploration of alternative valuation methods.
- Interviews of community's "willingness to pay" based on household interview surveys of "informal" sector land title holders using a stratified sample of urban and rural communities and their house type and level of access.
- Development of an appropriate valuation method based on the occupant and valuer's assessments.
- Peer reviews of the approach and methodology.
- A testing and validation workshop with stakeholders.

The main goal of the project was to support the valuation of unregistered urban and rural land and property in East Africa – ultimately through provision of land valuation services that would not otherwise be available. The development of alternative valuation tools would specifically benefit widows, HIV/Aids victims, low income women and other vulnerable groups without formal title and occupying unregistered land. The outputs from the activity would ideally be replicable in other parts of Kenya and then rolled out in other countries.

The study was intended to review alternative valuation methods e.g. using traditional techniques and consumer surplus loss, surrogate data, residual and contingent valuation methods to value rural trust land/tribal holdings and squatted land in urban slums. The study was grant funded through RICS Research Trust and UN Habitat GLTN (Global Land Tool Network) which is dedicated to developing tools addressing land tenure issues.

There were three stages to the Study were:

- **Inception Report:** literature review and developing a survey methodology
- **Interim Report:** data collection and analysis of survey. The scope of the survey covered unregistered lands in Mombasa, plus survey areas in Nairobi and Western Kenya. It included interviews with land owners/occupiers and property valuers. A total of 189 land owners/occupiers were interviewed, plus 17 valuers.
- **Final Report:** final draft to be peer reviewed and results to be presented at technical and stakeholder workshop in Mombasa.

Findings, Conclusions and Follow-up

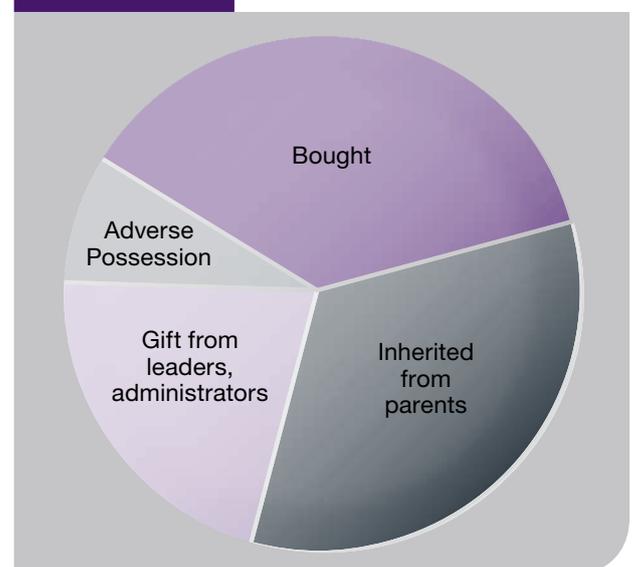
The analysis of the survey results and discussions at the Mombasa workshop came to the following conclusions:

- Unregistered lands are found across all three study areas as well as other parts of Kenya
- The ownership status is generally unclear, in terms of who owns what, how the lands were acquired, the cost of transactions and acquisition procedures
- The most common method used for making valuations was the Sales Comparison or Market Approach.
- The majority of respondents were not aware of the relevant legal procedures for transferring and owning land.
- Although the traditional uses of valuation have been market transactions and compulsory acquisition, new uses are emerging such as conservation easements.
- Although some valuers had difficulties in valuing such unregistered lands, many are prepared and able to adapt traditional valuation methods to suit unconventional situations. The issue is not, therefore, the valuation method – but the process.

What was striking from the workshop was the readiness of valuers to attempt such valuations, mostly relying on the use of comparables, corroborated in some instances with income data. In Mombasa the valuation of unregistered properties – characterized as "buildings without land" – was described as the "order of the day".

The workshop, which was attended by practitioners, government officials and academics, concluded that a policy should be put in place on how to value such lands, which needed to take into account practical factors on the ground.

Figure 2 How land was acquired



1.1 Study Purpose

The purpose of the project was to develop one or more methods for valuing unregistered lands, using Kenya as a case study. It was intended that the methods developed would be applicable in other African countries and even further afield, since this is largely uncharted territory. The results would therefore trigger a wider debate and experimentation aimed at widening the remit and utility of land and property valuation techniques.

1.2 Specific challenges to be addressed

There are broadly three types of land ownership in Kenya:

- Government land, owned by the State;
- Trust land (formerly “native” areas) which is administered by district governments in trust for local communities indigenous to the area; and
- Private land held by individuals or institutions as freehold or leasehold interests.

Unregistered land in Kenya is the dominant type of tenure. The most extensive form of unregistered tenure is trust land (and group ranches), which together comprise around 64% of the total land area, and are yet to be registered in the names of the individual owners. Other unregistered forms of tenure include urban squatted land, over which there are prescriptive rights. 60% of the population live in unplanned settlements using a wide range of innovative and unorthodox types of land ownership, which include community land trusts (CLTs), share certificates and temporary occupation licences (TOLs).

With all of these forms of customary and “informal” tenure there are occupational rights, but the process of document or title registration is very slow and most of these titles have been awaiting confirmation since independence. This proscribes the development of an efficient land market and frustrates the granting of mortgages and the issue of other financial instruments. An accepted and practical method for valuing unregistered land to relieve this problem is urgently needed in Kenya and much of East Africa. The situations that need to be addressed in developing a valuation method are:

- i. Inheritance:** When property changes hands on the death of the owner there are complex issues of inheritance tax and without proper valuation there is no logical means of partitioning and of ensuring that vulnerable groups, particularly women (widows, daughters, siblings, mother, etc.) are protected.
- ii. Eviction:** Effective representation at the rent tribunal and similar statutory mechanisms to protect workers and the poor require competent valuation methods (and expertise). The same thing applies to situations where slum dwellers are evicted and a price has to be put on their de facto interests.
- iii. Credit:** To borrow money, however little, an individual needs a market valuation and opinion on such indicators as VLR (value to loan ratio), costs, yields, capital growth prospects, etc. Simplifying valuation methods and reducing fees for applicants could make housing more affordable.
- iv. Court bail:** When accused persons apply for bail they need to produce a bond, either in the form of cash or title to property (e.g. one’s own or belonging to a relative). The value of the property has to be greater than the bond amount, which often means that an acceptable valuation has to be produced. If the property consists of unregistered land, valuation becomes problematic, even though there may be evidence of market transactions in similar properties.
- v. Disputes:** There are a number of circumstances where disagreements arise (between owners, users, neighbours, etc) and a reliable opinion of value is needed at minimum cost. Reconciliation becomes easier if respective financial outcomes can be accurately quantified.
- vi. Expropriation:** When government (national or local) announces its intention to acquire land compulsorily for public purpose, the result is usually fear, confusion and bitterness among the small-scale and poor land owners. Good valuation advice depends on the existence of an agreed valuation method and this can help relieve and reassure affected households, thereby smoothing the acquisition process and avoiding the political fallout such situations often engender.
- vii. Group action:** Slum upgrading initiated by non-public actors can benefit from aggregate valuations of the before-and-after-type. This is a technique which most mainstream valuers are not adept and specialised tools may need to be developed.

1.3 Comparable situations to the research study

Because of issues of mining rights, wildlife management and environmental impact assessment alternative methods of land and property valuation have been developed in a number of countries. Alternative valuation methods have been used for Canadian 1st Nation's land, Aborigine land (Australia), tribal reservation land (USA) and other indigenous communal and individual land and property rights systems e.g. Maori, Palawan, Fijian, etc. Sources of these case study materials include anthropological, legal and governance studies. The most detailed studies undertaken in this area of valuing indigenous people's rights have been those sponsored by the American Real Estate Society¹.

Other studies have covered topics such as valuing of cultural heritage², wetlands³, transferable development rights⁴ and oil spill damage. There is also an extensive economic theory literature on alternative econometric techniques and valuation methods e.g. consumer surplus loss, surrogate data, hedonic pricing, residual and contingent valuations. These have been reviewed and their applicability for valuing unregistered property assessed. Particular attention was given to the usefulness of contingent valuation techniques – using market research methods and statistical analysis to elicit people's valuation of assets, based on their willingness to pay, and aggregation from individual values.

1.4 Goals and Objectives

The main goal of the present study was to support vulnerable sections of Kenyan society by concentrating on the relationship between traditional customary rights, gender and asset values. Unregistered land is difficult to value because of the uncertainty of title. An accepted and practical method for valuing unregistered land is thus urgently needed in Kenya to remedy this problem.

Land valuation is a regulated profession in Kenya, Tanzania and Uganda, and is dependant on there being an accepted and transparent framework to operate. Widows, single mothers, older people and minors find it particularly difficult to benefit from the nation's pool of professional surveying and valuation expertise – in part because the basic valuation tools that would match their needs are incomplete. Thus the specific objective of the study is to help to provide a basis for a valuation where it is needed but where professional valuer would have formerly been unable (and sometimes unwilling) to provide a reliable estimate of value.

Previous work by Professor Saad Yahya and Muhammed Swazuri focused on “Customary leaseholds and perpetual tenancies on the Kenyan Coast” (2007). This paper shows how the historical context has helped shape the current tenure types and identified a myriad of private arrangements, some traditional and others modern innovations responding to market and demographic pressures. Urbanisation also presents a new challenge of reconciling communal with private ambitions. The study included a household survey of five informal settlements in peri-urban Mombasa. Data was collected from civic records, government officials, local NGOs and activists, and a random sample of slum residents and property owners. The present study used a similar method of gathering background information.

The different tenure tactics discovered by Yahya and Swazuri (2007) covered a wide range, including “plot borrowing”, perpetual leases, ownership of buildings or permanent crops independently of the land, and traditional way leaves. There was also a strong relationship between family income, educational levels and type of tenure. The study recommended that there be a more sympathetic understanding of traditional land holding systems and markets; and it was essential that unconventional and innovative tenure types be taken into account when designing policy instruments aimed at eradicating poverty and achieving equity.

1.5 Data and information issues

There is presently a gap in the range of valuation techniques that are used for making non-traditional valuations. The main justification for using an improved methodology would be to allow a systematic assessment to be made of the valuation process. A number of other studies have found that the likely range of inaccuracies from using a contingent valuation method is believed to be substantially less than alternative valuation methods.

There is a wide academic literature providing analysis and guidelines on how to conduct reliable contingent valuation surveys⁵. Particular practical difficulties in conducting these type of surveys of simulated markets is the avoidance of wide range of biases, the care needed in framing the questionnaire, and how and in what manner and sequence the questions should be asked.

1.6 Target beneficiaries

It is envisaged that the project's main direct beneficiaries from the creation of an appropriate alternative valuation method will be following individual and community categories:

- Widows and orphans;
- Women's groups;
- Aged;
- Poor households, e.g. those living in slums or in rural poverty;
- Families impacted by natural and man made disasters;
- Internally displaced people;
- Bail applicants;
- Households affected by HIV/Aids, TB and similar life threatening diseases;
- Lawfully dispossessed land owners;
- Cooperatives and community groups;
- Environmental improvement projects in poor neighbourhoods; and
- Street hawkers, peddlers, informal market stall holders and unregulated businesses.

Expected indirect beneficiaries will be local surveyors who could receive improved skills in valuation and local NGOs and other voluntary organisations and who could be provided with technical information, which will allow them to improve the advice and services that they provide to their clients and other beneficiaries.

To legitimise the initiative any follow up activities will need to work closely with relevant civil society groups involved in sustainable livelihoods work, poverty reduction, land and housing rights. Kenyan civil society groups that will need to be approached should include FEDA (Federation of Women Lawyers) and Kituo cha Sheria (Legal Advice Centre) – in order to help to promote the initiative through case referrals.

Figure 3

Lamu: Architectural heritage – unique valuation problems



Photo: Rob Mahoney

Real estate appraisal, property valuation or land valuation is the practice of developing an opinion of the value of real property, usually its market value. The need for appraisals arises from the heterogeneous nature of property as an investment class i.e. no two properties are identical, and all properties differ from each other in their location, which is one of the most important determinants of their value. The absence of a market-based pricing mechanism determines the need for an expert appraisal/valuation of real estate/property. If the appraiser's opinion is based on market value, then it must also be based on the highest and best use of the real property

2.1 The Concept of Value

At the most fundamental level, value is created and sustained by the interrelationship of four factors that are associated with any product, service, or commodity. These are *utility*, *scarcity*, *desire*, and *purchasing power*. The working of the economic principle of supply and demand reflects the complex interaction of the four factors of value. The supply of a good or service is affected by its utility and desirability. The availability of the good or service is limited by its scarcity and effective checks on the purchasing power of likely consumers. The demand for a good or service is, likewise, created by its utility, influenced by its scarcity and desirability and restrained by limits on purchasing power. The utility for which a good or service is produced and the scarcity, or limited availability, of the good or service are generally considered *supply-related* factors. Consumer preferences and purchasing power, which reflect desire for the good or service and define the affordability of the item, are generally considered *demand-related* factors.

A *market* is an environment in which goods, services, and commodities are traded between buyers and sellers through a price mechanism. The concept of a market implies the ability of buyers and sellers to carry on their activities without restriction. The *principle of supply and demand* states that the price of a good, service, or commodity varies inversely with the *supply* of the item and directly with the demand for the item. In property markets, supply represents the quantity of property interests that are available for sale or lease at various prices in a given market within a given period of time, assuming labour and production costs remain constant. *Demand* constitutes the number of possible buyers or renters seeking specific types of property interests at various prices in a given market within a given period of time, assuming other factors such as population, income, future prices, and consumer preferences remain constant.

2.2 Price, Cost, and Value

Price pertains to the actual exchange of the good or service; cost reflects the expense of producing the good or service; value represents the price most likely to be concluded by the buyers and sellers of a good or service that is available for purchase. *Price* is a concept that relates to the exchange of a commodity, good, or service. Price is the amount that has been asked, offered, or paid for the item. Once the exchange has been transacted, the price, whether disclosed or undisclosed, becomes an historic fact. The price paid represents the intersection of supply and demand.

Cost is a production-related concept, distinct from exchange, which is defined as the amount of money required to create or produce a commodity, good, or service. Once the good is completed or the service is rendered, its cost becomes an historic fact.

The concept of *Value* addresses the price most likely to be concluded by the buyers and sellers of a good or service available for purchase. Value establishes the hypothetical, or notional, price that typically motivated buyers and sellers are most likely to conclude for the good or service. Thus, value is not a fact, but an estimate of the most likely price that will be paid for a good or service available for purchase at a given time.

A *Basis of Value* describes the nature of this hypothetical transaction, for example, whether or not it takes place in a public market and what accounts for the motivation and behaviour of the parties. It does not describe the status of the good or service involved in the transaction, for example, whether it is operational or non-operational, or whether or not it is aggregated with other assets.

A *Basis of Valuation* will, therefore, usually need to be accompanied by additional assumptions in order to adequately define the valuation hypothesis adopted. Different accompanying assumptions may result in different values for the same asset, and therefore, it is vital that these be clearly understood and expressed.

2.3 Types of Value

There are several types and definitions of value sought by valuations. These include;

- **Market Value:** The price at which an asset would trade in a competitive market setting. Market Value is usually interchangeable with Open Market Value or Fair Value. Market Value is the estimated amount for which a property should exchange on the date of valuation between an educated buyer and a reasonably motivated seller in an arms-length transaction after proper marketing wherein the parties had each acted knowledgeably, prudently, and without undue influence.
- **Value-in-use:** The net present value (NPV) of a cash flow that an asset generates for a specific owner under a specific use. Value-in-use is the value to one particular user, and may be above or below the market value of a property.
- **Investment value:** The value to one particular investor, and is usually higher than the market value of a property.
- **Insurable value:** The value of real property covered by an insurance policy. Generally it does not include the site value.
- **Liquidation value:** Either a forced liquidation or an orderly liquidation and is a commonly sought standard of value in bankruptcy proceedings. It assumes a seller who is compelled to sell after an exposure period which is less than the market-normal timeframe.

2.4 Basis of Value

The concept of *Market Value* is tied to the collective perceptions and behaviour of market participants. It recognises diverse factors that may influence transactions in a market, and distinguishes these from other intrinsic or non-market considerations affecting value. *Market Value* is market-based and therefore, all inputs should be developed from market data. Market-based valuations of property assume the operation of a market in which transactions occur without restriction by non-market forces. An accepted definition of market value derived from that given in the RICS Red Book⁶ and the international valuation standards⁷ (IVS) is:

Market Value is defined as the estimated amount for which a property should exchange on the date of valuation between a willing buyer and a willing seller in an arm's-length transaction after proper marketing wherein the parties had each acted knowledgeably, prudently, and without compulsion.

Market-based valuations must determine the highest and best use, or most probable use, of the property asset, which is a significant determinant of its value. Market-based valuations are developed from data specific to the appropriate market(s) and through methods and procedures that try to reflect the deductive processes of participants in those markets. *Market-based valuations may be performed by application of the sales comparison, income capitalisation, and cost approaches to value.*

The data and criteria employed in each of these approaches must be derived from the market. Besides the hypothetical exchange value concluded by two typically motivated market participants, valuations of property may also use measurement principles that consider alternative economic utility or function(s) of an asset, value attributable to unusual or atypical motivation on the part of the parties to a transaction, or value specified by statutory or contractual law.

Box 1

Non-market bases of valuation

Examples of bases of value other than Market Value are Fair Value, Investment Value, Special Value, and Synergistic Value. The additional assumptions required in applying these bases are often more specific than those required for establishing Market Value as they may relate to the circumstances of a particular party. For this reason, a valuation reported on one of these bases should ensure that it cannot be construed as Market Value

Valuation performed on a base other than *Market Value* must employ appropriate procedures and analyse sufficient data to produce a reasonable estimate of value. *Market Value* is a representation of value in exchange, or the amount a property would bring if offered for sale in the (open) market at the date of valuation under circumstances that meet the requirements of the *Market Value* definition.

To estimate *Market Value*, a valuer must first determine highest and best use, or most probable use. That use may be for continuation of a property's existing use or for some alternative use. These determinations are made from market evidence. *Market Value* is estimated through application of valuation methods and procedures that reflect the nature of property and the circumstances under which given property would most likely trade in the market. The most common methods used to estimate *Market Value* include the sales comparison approach, the income capitalization approach, including discounted cash flow analysis, and the cost approach.

The concept of *Market Value* is not dependent on an actual transaction taking place on the date of valuation. Rather, *Market Value* is an estimate of the price that should be realised in a sale at the valuation date under conditions of the *Market Value* definition. *Market Value* is a representation of the price to which a buyer and seller would agree at that time under the *Market Value* definition, each previously having had time for investigation of other market opportunities and alternatives, and notwithstanding the fact that it may take some time to prepare formal contracts and related closing documentation.

The market value concept presumes a price negotiated in an open and competitive market, a circumstance that occasionally gives rise to the use of the adjective open before the words *Market Value*. The words open and competitive have no absolute meaning. The market for one property could be an international market or a local market. The market could consist of numerous buyers and sellers, or could be one characterised by a limited number of participants.

Market valuations are generally based on information regarding comparable properties. The Valuation Process requires a valuer to conduct adequate and relevant research, to perform competent analyses, and to draw informed and supportable judgements. In this process, valuers should not accept data without question but should consider all pertinent market evidence, trends, comparable transactions, and other information. Where market data are limited, or essentially non-existent (as for example with certain specialised properties), the valuer must make proper disclosure of the situation and must state whether the estimate is in any way limited by the inadequacy of data. All valuations require the exercise of a valuer's judgment, but their reports should disclose whether the valuer bases the *Market Value* estimate on market evidence, or whether the estimate is more heavily based upon the valuer's judgement because of the nature of the property and lack of comparable market data.

Periods of rapid changes in market condition are typified by rapidly changing prices, a condition commonly referred to as disequilibrium. A period of *disequilibrium* may continue over a period of years and can constitute the current and expected future market condition. In other circumstances, rapid economic change may give rise to erratic market data. If some sales are out of line with the market, the valuer will generally give them less weight. It may still be possible for the valuer to judge from available data where the realistic level of the market is. Individual transaction prices may not be evidence of *Market Value*, but analysis of such market data should be taken into consideration in the Valuation Process.

In poor or falling markets there may or may not be a large number of "willing sellers." Some, but not necessarily all, transactions may involve elements of financial (or other) duress or conditions that reduce or eliminate the practical willingness of certain owners to sell. Valuers must take into account all pertinent factors in such market conditions and attach such weight to individual transactions that they believe proper to reflect the market. Sales, however, may take place without proper marketing or a reasonable marketing period. The valuer must judge such transactions to determine the degree to which they meet the requirements of the *Market Value* definition and the weight that such data should be given.

2.5 Valuation Methods

There are eight main standard methods for the valuation of land and property:

- i. The Cost Approach
- ii. The Sales Comparison Approach
- iii. The Income Capitalization Approach
- iv. Profit Method
- v. Residual Method
- vi. Contingent Valuation
- vii. Travel Cost Method and Hedonic Pricing Model
- viii. Automated Valuation Models (AVMs)

These methods are described in detail in Appendix A.1, based on the definitions contained in the RICS Red Book.

3.1 Overview

Valuation methods are increasingly applied not only in developed countries, but also in developing countries and countries with economies with transition. Rietbergen-McCracken and Abaza (2000) explain that:

“[U]p to recently, there was considerable scepticism, particularly among international development organizations and developing country governments (as end users of the valuation results) about the possibilities of using valuation methods outside the relatively resource-rich and data-rich environments of developed countries. It was generally felt that developing countries and countries with economies in transition presented too many difficulties (including a scarcity of statistical information; the presence of price distortions or undeveloped markets; and in some cases largely illiterate communities) to allow valuation methods to produce meaningful results. However, over the last five to ten years a growing body of evidence has emerged to refute these claims.”⁸

Rietbergen-McCracken and Abaza (2000) present a number of case studies of valuation studies undertaken in Africa, Asia, Latin America and Central and Eastern Europe, some of which also deal with biodiversity resources and functions, and the related ecosystem services. The IUCN guidelines for protected area managers on economic values of protected areas also provide summaries of a number of valuation studies in developing countries.⁹ The guidelines include a survey on the use of contingent valuation studies in developing countries, some of which address biodiversity-related studies conducted by FAO in 2001.¹⁰ By discussing issues of relevance to successful implementation of this technique, the FAO report can be used for guiding the work of practitioners who have a leading or technical contribution role in the design of CVM surveys. Humavindu (2002) also presented an analysis of valuation studies addressing nature-based tourism in Namibia.

The section is largely based on the review and assessment of valuation tools provided in chapter 2.3.3.1 of volume 1 of the Millennium Ecosystem Assessment. The reason for choosing this approach is that the report of the Millennium Ecosystem Assessment has already been extensively peer-reviewed and accepted by governments and experts.

Many methods for measuring the values of ecosystem services are found in the resource and environmental economics literature (Mäler and Wyzga, 1976; Freeman, 1979; Hufschmidt et al., 1983; Mitchell and Carson, 1989; Pearce and Markandya, 1989; Braden and Kolstad, 1991; Hanemann, 1992; Freeman, 1993; Pearce, 1993; Dixon et al., 1994; Johansson, 1994; Pearce and Moran, 1994; Barbier et al., 1995; Willis and Corkindale, 1995; Smith, 1996; Seroa da Motta, 1998; Garrod and Willis, 1999; Seroa da Motta, 2001; Pearce et al., 2002; Turner et al., 2002; Pagiola et al., 2005).

3.2 Methods used in Natural Resources Valuation

Approach

Some techniques are based on actual observed behaviour data, including some methods that deduce values indirectly from behaviour in surrogate markets, which are hypothesized to have a direct relationship with the ecosystem service of interest. Other techniques are based on hypothetical rather than actual behaviour data, where people's responses to questions describing hypothetical markets or situations are used to infer value. These are generally known as “stated preference” techniques, in contrast to those based on behaviour, which are known as “revealed preference” techniques. Some techniques are broadly applicable, some are applicable to specific issues, and some are tailored to particular data sources. As in the case of private-market goods, a common feature of all methods of economic valuation of ecosystem services is that they are founded in the theoretical axioms and principles of welfare economics. These measures of

Figure 4

Budalang'i: Survey discussions with local community group



Photo: David Brown

change in well-being are reflected in people's willingness to pay or willingness to accept compensation for changes in their level of use of a particular service or bundle of services (Hanemann, 1991; Shogren and Hayes, 1997). These approaches have been used extensively in recent years, in a wide range of policy-relevant contexts.

Any one valuation method is unlikely to be able to cover all of the different types of value given in the concept of Total Economic Value.¹¹ Different techniques may also be required for the same biodiversity resource evaluated at different scales. For example, the range of services of a forest, the type of value of those services, and their actual value to a local community living at the fringe of the forest, may differ significantly from the types of value and the value that the national and/or international community may assign to different services of the same forest. The selection of the method or methods should therefore depend on which types of value, and on which levels, are deemed the most important or likely in a given situation. Most valuation studies use several valuation methods, but some of them deliberately restrict their attention to only one or several components of total economic value.

Valuation is a process involving several steps. First, the services being valued have to be identified. This includes understanding the nature of the services (bearing in mind that, under the Millennium Ecosystem Assessment understanding, services may also include goods) and their scale (being local, regional and/or global, on-site or off-site), and how they would change if the ecosystem changed; knowing who makes use of the services, in what way and for what purpose, and what alternatives they have; and establishing what trade-offs might exist between different kinds of services an ecosystem might provide.

The bulk of the work involved in valuation actually concerns quantifying the biophysical relationships. In many cases, this requires tracing through and quantifying a chain of causality. Valuation in the narrow sense only enters in the second step in the process, in which the value of the impacts is estimated in monetary terms.

Appendix A.2 focuses on the methodological status of individual methods of valuing natural resources, with cross references to studies undertaken using these methods.



3.3 Summary Assessment of Valuation Methods

Each of the approaches reviewed above and detailed in Appendix A.2 has seen extensive use in recent years, and considerable literature exists on their application. These techniques can and have been applied to a very wide range of issues (Rietbergen-McCracken and Abaza, 2001), including the benefits of ecosystems such as forests (Bishop, 1999; Kumari, 1995; Pearce et al., 2002; Hanley et al., 2002; Merlo and Croitoru, 2005), wetlands (Barbier et al., 1997; Heimlich et al., 1998; de Groot et al., 2006), watersheds (Aylward, 2004; Kaiser and Roumasset, 2002). Other studies have focused on the value of particular ecosystems services such as water (Young and Haveman, 1985), non-timber forest benefits (Lampietti and Dixon, 1995; Bishop, 1998), recreation (Bockstael et al., 1991; Mantua et al., 2001; Herriges and Kling, 1999; Humavindu, 2002), landscape (Garrod and Willis, 1992; Powe et al., 1995), biodiversity for medicinal or industrial uses (Simpson et al., 1994; Barbier and Aylward, 1996), natural crop pollination and cultural benefits (Pagiola, 1996; Navrud and Ready, 2002). Many valuation studies are catalogued in the “Environmental Valuation Reference Inventory Web Site” maintained by Environment Canada (EVRI) 51 or the ENVALUE environmental valuation database developed by Australia’s New South Wales Environmental Protection Agency.¹²

It appears that, when applied carefully and according to best practice, valuation tools can generally provide useful and reliable information on the changes in the value of non-marketed ecosystem services that result (or would result) from management decisions or from other human activities. Data requirements may be quite demanding for a number of tools, as are the preconditions in terms of technical expertise. Moreover, conducting primary valuation studies is typically time-consuming and costly. According to the Millennium Ecosystem Assessment, measures based on observed behaviour are generally preferred to measures based on hypothetical behaviour, and more direct measures are preferred to indirect measures. However, it is also pointed out that the choice of valuation technique in any given instance will be dictated by the characteristics of the case, including its scope, and by data availability. Several techniques have been specifically developed to cater to the characteristics of particular problems. The travel cost method, for example, was specifically developed to measure the utility derived by visitors to sites such as protected areas, and could also be applied to similar areas of interest, but is of limited applicability outside that particular case. The change in productivity approach, on the other hand, is applicable to a wide range of issues.

Contingent valuation is potentially applicable to any issue, simply by phrasing the questions appropriately and as such has become very widely used – probably excessively so, as it is easy to misapply and, being based on hypothetical behaviour, is inherently less reliable than

measures based on observed behaviour. For instance, if the focus is on the quantification of indirect use values, the application of other valuation tools would often seem to be preferable. For some types of value, however, stated preference methods may be the only alternative. Thus, existence value can only be measured by stated preference techniques. Guidance on the appropriate use of the technique exists and needs to be followed closely.

Benefits transfer has often been used inappropriately but can provide valid and reliable estimates under certain conditions. Given the cost of undertaking primary valuation studies, benefits transfer when used cautiously is likely to be an increasingly appealing way for extending the use of valuation, including in developing countries. As stated earlier, undertaking valuation has the potential of improving public decision-making on projects or regulations as well as, under specific circumstances, of improving legal decision-making. In this connection, the synthesis report of the Millennium Ecosystem Assessment (2005) also notes that:

“[M]ost resource management and investment decisions are strongly influenced by considerations of the monetary costs and benefits of alternative policy choices. Decisions can be improved if they are informed by the total economic value of alternative management options and involve deliberative mechanisms that bring to bear non-economic considerations as well.”

Existing methods to support decision-making use valuation information to a greater or lesser extent. Economic frameworks such as cost-benefit analysis (CBA) and cost-effectiveness analysis (CEA) involve explicit monetary valuation. An important advantage of the valuation tools reviewed in the last section is that they provide numbers in a common (monetary) metric, which can thus easily be incorporated into these standard appraisal methods. In contrast, multi criteria analysis (MCA) typically avoids using a monetary unit of account.

Other non-economic approaches to prioritization include deliberative processes, scorecard approaches, expert judgment and satisficing. All of these approaches are but *tools* to support decision-making. All of them have specific advantages and limitations, and it cannot be claimed that one tool is generally superior, or that it should be used as an *exclusive* tool in decision-making. For instance, with regard to cost-benefit-analysis, it has to be acknowledged that economic efficiency is seldom the sole criterion for public investment decisions. The distributional impacts of decisions are often also important. While cost-benefit-analysis can be helpful in clarifying distributional impacts, it does not deliver recommendations with regard to preferable decisions from a distributional perspective. Often the different methods may be used in a complementary manner in order to support decision-making

The following section is a review of relevant literature on security of tenure as a basis for the development of methodology and training package for valuing unregistered urban and rural land and property in East Africa.

4.1 Security of Tenure

Introduction

Sessional Paper No. 3 (2009) on National Land Policy for Kenya defines land tenure as the terms and conditions under which rights to land and land-based resources are acquired, retained, used, disposed of, or transmitted. The term land tenure is derived from the Latin word *tenere* which means “to hold.” Tenure defines the social relations between people in respect of the object of the tenure, in this case land. Tenure also defines the methods by which individuals or groups acquire hold transfer or transmit property rights in land (Ogolla and Mugabe, 1996).

Property rights may include a variety of different rights as part of a continuum of rights, for example to build, to use, to transfer, to mine etc. The rights may be transferred or transmitted either together or individually at the discretion of the holder with or without limitations depending on the tenure system. Formal rules of tenure therefore define the nature and content of property rights in land or other resources and the conditions under which those rights are to be held and enjoyed (Waiganjo and Ngugi, 2001).

Various definitions of secure tenure however exist, but the most recent definition that was agreed upon during the Expert Group Meeting on Urban Indicators in October 2002, is:

“the right of all individuals and groups to effective protection by the state against forced evictions”.
Under international law, ‘forced eviction’ is defined as: ‘the permanent or temporary removal against their will of individuals, families and/or communities from the homes and/or land which they occupy, without the provision of, and access to, appropriate form of legal or other protection.

The prohibition on forced evictions does not, however, apply to evictions carried out by force in accordance with the law and in conformity with the provisions of the International Covenants on Human Rights (the International Covenant on Civil and Political Rights and International Covenant on Economic, Social and Cultural Rights).

Under international human rights law, secure tenure is one of the seven components of the right to adequate housing, which again is linked to the right to land. The other six components are:

- Availability of services, materials, facilities and infrastructure,
- Affordability;
- Habitability;
- Accessibility;
- Location; and
- Cultural adequacy.

All human rights apply equally to women and men, and women’s equal right to adequate housing, land and property is firmly entrenched in international law.

4.2 Forms of Tenure

Freehold and Leasehold

Freehold is the system of full private ownership, free of any obligations to the state other than payment of taxes and observance of land use controls issued in the public interest. Leasehold on the other hand is the system of tenure for a specified period for payment of rent, conferred by the owner, whether state or private. In general, the ownership on the basis of which the lease is issued cannot be transferred, but all and any other right that is part of the lease can be transferred.

Freehold and registered leasehold (*including co-ownership*) are the most expensive tenure types, because they use professionals to create the right, transfer it and maintain the (centralized) registration records over time. As a result of the length of time it takes, and the lack of human and financial capacity in government, most countries do not have universal registration coverage, and most developing countries only have around 10% of land parcels documented. Some of the other problems associated with freehold or registered leasehold are:

- Only a small proportion of households can afford even the subsidized cost of a site with a title. Those who can afford that cost often realize the true market value and sell to higher income groups.
- In customary areas, freehold creates classes of those with and those without land rights, as it cannot accommodate extended family and group rights easily. Where there are numerous tenants in an informal settlement or customary area, freehold often forces existing low-income tenants out of an area, as they can no longer afford the rents, which rise dramatically after titling.
- Titling without any protective measures/equal land rights has led to exclusion of women and children and created an increasing number of landless (in cases where freehold is still preferred, joint registration deals with this problem to a large extent).
- Even with a freehold title, household incomes are often too low for finance institutions to be interested in lending.

Documented Unregistered Rights

Tenure types in this category are:

- Unregistered lease or leaseholds,
- Rental,
- Occupancy right,
- Use right (including sub-lease, sub-rental and co-tenancy, and co-occupancy right).

As stated earlier, the ownership on the basis of which the lease is issued cannot be transferred, but all and any other right that is part of the lease can be transferred. Land leases that include most of those rights are generally *registered* and require inputs from surveyors and lawyers (which is why they are grouped under freehold). Land leases that include only a few rights are often administered by local authorities, using non professionals to create the land parcels and administer them. Leases for housing are usually administered by local authorities and their agencies for government-owned housing, and through private contracts for privately owned housing. The level of tenure security attached to each type of lease depends on a variety of factors. Local authority leases, while giving basic tenure security to residents, are generally more affordable and can be more transparent than freehold. They also provide more flexibility in the medium and long term to manage land development and land use changes in the city. Compared to freehold, leases are much cheaper, can be delivered faster, are more flexible and can be made even if a land ownership dispute is ongoing, can be upgraded incrementally as and when required and the technological system to handle leases can be much cheaper and simpler to use.

However, leases are only useful if the lessor is acceptable to the lessees. Partnerships, a user-friendly justice system, and the role of well informed NGOs is critical in the creation of good lessor-lessee relationships. The exclusion that women face in the titling process, also applies with regard to leases, and requires specific measures, such as joint registration or joint recording in both spouses' names. Community land trusts are a leasehold variant.

Group tenure is much more affordable than individual tenure, as it does not require such specialized land administration approaches to secure individual rights. It diminishes the number of registration units and thereby also the survey, registration and public land administration costs. The unit of group registration can be the land parcel (block), a building or plot of land (belonging to housing cooperative) or the area belonging to a customary group or sub-group. This unit can be registered in freehold or lease, for example in the name of a cooperative, community land trust or housing association, while individual occupation rights or sub-leases are granted by the group. Lease length and conditions, inheritance rights, rules on transfer of rights outside the group, maximum area, decision-making process etc are then decided by the group. Safeguards against transfer of the land and regulating transfer of the development on the land must be put in place to protect the group from land market pressures. To work successfully, land administration for group tenure generally involves partnerships between the communities, the local authority; NGOs who supply the technical know how, landowners and housing associations.

For women to also benefit from group tenure, protective measures must be included regarding internal distribution of individual rights, such as joint recording of occupation right/sub-lease/landhold title, inheritance rights for women, consent of spouse before an individual right can be transferred and so on. Finally, the group might be able to access channels of finance as a group, which they could not do as individuals. Strong social cohesion of the group is an important condition for group tenure to be a success.

Formal undocumented tenure types

Adverse possession, legal protection against forced eviction and use/occupancy rights without certificate are some examples of tenure types in the land rights continuum that provide a certain degree of security of tenure. For each of these types, however, improvements can still be made (e.g. regarding adverse possession: simplified and affordable procedures for claimants of adverse possession; regarding 'anti-eviction laws': conditions before, during and after forced evictions must be in compliance with international law requirements etc.).

Informal tenure types

These include a wide range of categories with varying degrees of legality or illegality. De facto recognition of occupation (e.g. political patronage, proof of payment of utility bills, oral evidence, informally recognized customary rights, perceived secure tenure etc.) form a major part of the tenure types found in slums and informal settlements. The level of security of tenure that they provide depends on various local circumstances, and whether any other protections against forced evictions are accompanying them. They include regularized and un-regularized

squatting, unauthorized subdivisions on legally owned land and various forms of unofficial rental arrangements. Neo-customary land delivery systems have also been detected in Sub-Saharan African cities, where, rather than allocating a right of use on communal lands, customary owners at the periphery of cities are selling plots of land for housing. They can be the basis from which an incremental approach to tenure improvements can be developed.

From Informal to Formal Rights

Some of the non-formal tenure categories, such as squatting, started as a response to the inability of public allocation systems or commercial markets to provide for the needs of the poor and operated on a socially determined basis. However, as demand has intensified, even these informal tenure categories have become commercialized, so that access by lower income groups is increasingly constrained.

Box 2

Main Categories of Land Tenure in Kenya

Sessional Paper No. 3 (2009) on National Land Policy for Kenya classifies land tenure into three categories as follows:

Public Land

Public land comprises all land that is not private land or community land and any other land declared to be public land by an Act of Parliament. The concept of public land ownership is largely a reaction to the perceived limitations of private ownership in that it seeks to enable all sections of society to obtain access to land under of increasing competition. Although it has frequently achieved higher levels of equity than private systems, it has rarely achieved high levels of efficiency due to bureaucratic inefficiency or systems of patronage and clientelism.

Community Land

Community land refers to land lawfully held, managed and used by a given community.

Private Land

Private land refers to land lawfully held, managed and used by an individual or other entity under statutory tenure. This system permits the almost unrestricted use and exchange of land and is intended to ensure its most intense and efficient use. Its primary limitation is the difficulty of access by lower income groups.

Note: A sessional paper is equivalent to a government white paper.

Public Tenure

Public lands are seldom registered in the conventional sense, since the presumption is that the government can guarantee the security of its own property. This is where land owned by the Government for its own purpose and which includes unutilised or unalienated government land reserved for future use by the Government itself or may be available to the general public for various uses. In Kenya the land is administered under the Government lands Act Cap 280. These lands are vested in the president, who has, normally through the Commissioner of Lands, powers to allocate or make grants of any estates, interests or rights in or over unalienated government land. Categories of government land include forest reserves, other government reserves, alienated and unalienated government land, national parks, townships and other urban centres and open water bodies (GOK, 1996). The Government Lands Act does not contain any notion of trusteeship by government of the land to her people. Indeed the government at times acts as a private owner and allocates parcels to those in its favour.

Government lands are often invaded and occupied by individuals or groups of people especially in urban areas and in forest reserves. Due to insecurity of tenure and lack of any registrable interest in the occupied lands, the occupants have a tendency to over exploit the resources therein leading to severe environmental degradation.

The law in Kenya does not recognize this type of tenure called squatting and it is in fact regarded as trespassing. In land registers, such lands are treated as vacant. However, more than 50% of the urban population in Kenya have lived in these settlements for more than two decades. These squatter or informal settlements are characterized by inadequate basic services and widespread poverty. They are subjected to constant harassment by local authorities as their dwellings are under constant threat of demolition. It is generally acknowledged that widespread poverty in those settlements is accentuated by lack of security of tenure.

The problem of squatters is widespread also in forests where there are constant incursions by not only the poor and landless but also by wealthy individuals for farming purposes or for expropriating high valued timber and other forest products. This has contributed to massive soil erosion and its disastrous consequences downstream, displaced wild animals from their natural habitat and other negative environmental consequences. With time the squatters demand to be allocated the occupied lands and have in the past, out of political expediency, succeeded thereby encouraging further and further incursions.

At the same time, the land allocation process prescribed in the Government Lands Act has largely failed in that it rarely incorporates the ancestral rights of the people. The process is by and large insensitive to the landless. Allocations are often to the powerful, leaving the local people landless and very angry.

Other Interests

These include:

- Reservations of other government or trust land to government ministries, departments or parastatals for their use.
- Minor interest such as easements, wayleaves or temporary occupation licences.
- Non formalized de facto tenure by which people, individually or in groups invade and occupy other people or government land particularly in major urban centres of Nairobi, Mombasa and Kisumu.

4.3 Perceptions of Entitlements

The perception of land owners on their entitlements to land has a bearing on how they develop and invest on it to make it more productive. This perception is closely linked to the security of tenure they enjoy. Secure property rights are critical in establishing a structure of economic incentives for investment in land-based activities. A bundle of characteristics define property rights over land: exclusivity, inheritability, transferability and enforcement mechanisms (Alchian and Demsetz, 1973). Any land holding system defines the legitimate exclusive uses of land and identifies those entitled to those rights. Land rights may also include stipulations of the circumstances and conditions for transfer or inheritance. The value of these rights will however depend on the formal mechanisms for defining and enforcing those rights. The tenure regimes outlined above imply different property rights. In the case of customary regime, property rights are assigned to a specific community. Members of the community are able to exclude outsiders from using the land and are able to control and regulate its use by members. Although exclusion of non-members is possible in customary tenure systems, there are incentive problems related to the unwillingness of individual members to undertake fertility-enhancing investments in land. Usually, the larger the size of the community the greater is the unwillingness of individuals to invest in customary land.

Public ownership implies that the state (or state agents, such as local authorities and municipalities) possesses property rights. These rights are however temporarily transferable to individuals or communities in the case of leases. To ensure its rights over land, it is important that the state asserts its authority otherwise its rights may become *de facto* private property if individual or communities establish their rights by physical possession. The squatter problem in Kenya is partly due to lack of assertiveness by the state.

Under the private tenure system, property rights are assigned to specific individuals or corporate entities. The individual or corporate body is free to do what it wishes with the land. Ideally, this system guarantees incentives for land improvement and conservation.

However, certain formal or informal restrictions on rights weaken the inherent investment incentives. Restrictions on rights can come from formal legal and non-legal inhibitions, customary conventions or inadequate enforcement (Salazar et al., 1995).

Certain restrictions to the time horizon over which property may be held, for example the duration of leasehold, or other limitations on use may weaken the investment incentives. There are also restrictions on transferability of property rights, for example restrictions on the sale of agricultural land. The more these rights are restricted, the weaker the investment incentives and the lower the productivity of land.

Box 3

Recognised versus Registered Land Rights in a Nairobi Slum

Kibera is located entirely on government-owned land and residents do not have secure tenure. Some have Temporary Occupation Licenses or title deeds, but the government can revoke these at any time. This insecurity has *“bred a mentality of fear, suspicion and at times open hostility in the community”*.

This situation is made worse by the provincial administration especially the office of the chiefs who have taken advantage of this situation and are constantly extorting bribes from the residents.” There are four categories of people who claim rights to land in Kibera and whose overlapping claims must be negotiated for the upgrading plan to be successful: the Nubians, absentee landlords, structure owners who live in the settlement and tenants.

The Nubians, the original settlers of Kibera, have always laid claim to the land and are currently pursuing the issuance of title deeds from the British government based on a 70-year-old letter of allocation from the colonial authorities.

Disputes among different groups within the Nubian community have led to recent violence; the Nubian Council of elders claim only 350 acres of land, whereas the “Young Turks” claim all of Kibera’s land. Some structure owners have title deeds, but many of these were attained fraudulently. Other structure owners retain recognized but unofficial land allocations given by local authorities. This group includes absentee landlords, structure owners who live in the settlement, community-based organizations, non-governmental organizations and churches.

Areas under Group Representatives

In the drier regions of Kenya land has been registered as group ranches. In some of these areas there has been considerable pressure especially from the well educated members on the community to subdivide the group ranches into individual units. This is especially so in Narok and Laikipia districts. This move to subdivide group ranches portends an economic, ecological and a cultural disaster for the communities especially the Maasai (Ogolla and Mugabe, 1996). This is because practical experience has demonstrated that faced with adverse climatic and ecological conditions the pastoralists do not respect the sanctity of private property (Wanjala, 2000).

Restricting access rights through the subdivision of group ranches and the creation of private property rights will not only imperil the existing pastoral economy but also adversely affect the cultural practices and traditions of the Massai (Ogola and Mugabe, 1996). The land (Group representatives) Act was seen by government as a compromise between individual ownership and granting access to the communities for large tracts of land. This was an attempt to provide for customary rules within a statutory framework (Wanjala, 2000). The creation of group ranches with the members having exclusive use of the ranch resources have created conflicts and confusion regarding the locus of authority and uncoordinated situation in the use of the common resources. Some members have agitated for and have managed to parcel out individual ranches or parcels. This is leading to over parcellation, over exploitation of land due to overgrazing, deforestation and increased landlessness.

Is Unregistered Land Less Precious than Registered?

There is a widespread belief among development specialists that tenure security is an important condition for economic development (Barrows and Roth, 1990).

Tenure security is believed to:

- Increase credit use through greater incentives for investment;
- Improve creditworthiness of projects and enhanced collateral value of land;
- Increased land transactions, facilitating transfers of land from less efficient to more efficient uses by increasing certainty of contracts and lowering enforcement costs;
- Reduce land dispute incidence through clearer definition/enforcement rights; and
- Raise productivity through increased agricultural investment.

However, whether security of tenure only comes through registration rather than customary systems is a mute debate (Okoth Ogendo, 1991; Bruce and Migot-Adholla, 1994). Similarly, secure tenure is necessary but not sufficient for agricultural development, and expected benefits would be strongest in situations of dynamic technology and well functioning markets. For instance, farmers may be unfamiliar with technological options, investments may be unprofitable, or investment returns may be risky. Poorly developed input distribution systems may fail to supply enough complementary inputs or may result in unaffordable input prices. Although credit access for some individuals with title may improve, credit supply in aggregate may remain inelastic. Poorly developed financial systems may result in exorbitant administrative charges and poor delivery of credit services to rural areas. People's preferences, whether they want to be on the farm or off-farm, including migration to urban areas, will also affect the outcome of tenure reforms.

In the Kenyan case, although individualization of tenure was justified on economic grounds, its implementation was decidedly political (Bruce and Migot-Adholla, 1994). Colonial policy makers thought that it would be the beginning of a process that would create a class of African rural elite, rooted in land and committed to private enterprise, which would also provide liberal political leadership. The tenure individualization did not increase the quantum of land but put emphasis on improvement of technology of production on the basis of existing patterns of land distribution that was already skewed. Many people, especially in central Kenya, were uprooted from familiar terrain through consolidation. The reform, therefore, aggravated landlessness as those accommodated through customary tenure had their rights extinguished through registration. It has also been observed that since only male heads of households were generally registered as parcel owners, the reform undermined the rights of women and children, and rendered them liable to landlessness should the owner decide to transfer the land.

During the early 1960s, Kenya had two substantive regimes in property law and five registration systems supported by administrative institutions, which have persisted to the present day. The net effect of this system of land administration was to perpetuate a dual system of economic relationships of an export enclave in the relatively high potential regions of the country and a subsistence system periphery operated by a large number of peasantry in the marginalized areas. The duality was manifest in three ways:

- a. Two systems of land tenure based on the principles of English property law applying to high potential areas, and a largely neglected regime of customary property law in the so called "marginal areas".
- b. A structure of land distribution characterized by large holdings of high potential land, and highly degraded and fragmented smallholdings in other regions.
- c. A policy environment designed to facilitate the development of the high potential areas and the neglect of counterpart marginal areas.

The total land area of Kenya is roughly 582,646 square kilometres (58,264,600 hectares) comprising 98.11 percent land and 1.89 percent water surface. Only 20 percent of the land surface can support rain-fed agriculture (medium to high potential). About 75 percent of the population lives in these areas with population densities as high as 2,000 persons per square kilometres in some parts of the country. Land holdings are now small and are suffering continuous fragmentation into uneconomic sizes. The remaining land, mainly the unregistered 70 per cent, is arid and semi-arid and largely devoted to pastoralism and wildlife (and also coinciding with the national park system).

Figure 5

Lamu – Typical informal housing area



Photo: Rob Mahoney

Figure 6

West Kenya – rural settlement at Budalang'i



Photo: David Brown

5.1 Overview of Kenyan Practice

Rights: According to Waiganjo and Ngugi (2001), interests in land broadly fall into two groups, rights that are held through traditional African systems and rights that derive from the English system introduced and maintained through laws enacted by colonial and then the national parliament. The former is loosely known as customary tenure bound through traditional rules (customary law). The latter body of law is referred to as statutory tenure, secured and expressed through national law, in various Acts of parliament e.g. Government Land Act (cap 280), Registered Land Act (Cap 300), Registration of Titles Act (cap 281), Trust Land Act (cap 288) of the Laws of Kenya.

Ownership: Most of land in Kenya is still largely communal (65.4%) despite the fact that individualization of tenure started in the 1950s. County Councils hold this land in trust on behalf of the communities, but it is often mismanaged in total exclusion of the communities. Only 18.3 percent of the land, covering 108,403 square kilometres, has been adjudicated and registered and this is mainly in the medium to high potential areas.

Gender: There are also gross disparities in land ownership with regard to gender and inter-generational discrimination in succession, transfer of land and the exclusion of women and the youth in land decision-making processes. With regard to inheritance rights, customary laws and traditions that are still widely applied exclude widows from inheritance and only rarely allow daughters to inherit (Benschop, 2002). Under Islamic law, which applies to the Muslim community, widows and daughters can inherit but their share is smaller than that of men.

Under the statutory law, which applies to many areas in

Kenya, widows only receive a life interest until they remarry or die. Moreover, nine areas in the country (Wajir, West Pokot, Turkana, Tana River, Garissa, Marsabit, Isiolo, Mandera, and Lamu) are excluded from the operations of the statutory law of inheritance. If a person dies intestate in these areas, customary law applies with regard to agricultural land and livestock. As in many of these areas, livestock and agricultural land may be the only property owned by a deceased person. This provision has the effect of excluding women from inheritance. In these areas, land is also still owned communally and, as such, it may be difficult to apportion land to individuals

Land Use: Various land use practices which are based on customary practices of communal ownership have persisted even in areas where land is registered. This is especially so in areas where the land-use practices are driven by the diversity of soil type fertility and related crop diversity. Under such conditions communities have continued to use customary rules of access to multiple sites e.g. salt lakes, water points etc. instead of relying solely on their registered parcels.

The practice of inheritance where normally a father shares his piece of land to his adult sons (and increasingly to unmarried daughters) has led to subdivisions of agricultural lands to a very high extent. Apart from increasing the number of boundary related disputes, the subdivisions have created intrinsically small parcels, some of which can hardly sustain a family unit even for subsistence. The small parcels are over exploited and lose their fertility quickly as a result of overgrazing, soil erosion and other poor farming practices.

5.2 Customary Land Tenure

This refers to unwritten land ownership practices by certain communities under customary law. Kenya being a diverse country in terms of its ethnic composition has multiple customary tenure systems, which vary mainly due to different agricultural practices, climatic conditions and cultural practices. However most customary tenure systems exhibit a number of similar characteristics as follows:

First, individuals or groups by virtue of their membership in some social unit of production or political community have guaranteed rights of access to land and other natural resources (Ogendo 1979). Individuals or families thus claim property rights by virtue of their affiliation to the group. Secondly, rights of control are vested in the political authority of the unit or community. This control is derived from sovereignty over the area in which the relevant resources are located. Control is for the purpose of guaranteeing access to the resources and is redistributive both spatially and inter-generationally. Its administrative component provides the power to allocate land and other resources within the group, regulate their use and defend them against outsiders (Ogola and Mugabe, 1996).

Thirdly, rights analogous to private property accrue to individuals out of their investment of labour in harnessing, utilizing and maintaining the resource. Thus the present cultivator of some piece of land has the greatest rights to it. These rights transcend mere usufruct and encompass transmission and in some communities transfer (Elias, 1956).

Lastly, resources that do not require extensive investment of labour or which by their nature had to be shared, for example, common pasturage are controlled and managed

by the relevant political authority. Every individual member of the political community has guaranteed equal rights of access thereto.

The regulatory mechanisms imposed by the political units such as exclusion of outsiders, seasonal variations in land use and social pressure ensured sustainable resource utilization. This mode of ownership in Kenya is currently governed by the Trust Land Act by which all land in the rural areas which is neither government land nor individually owned is vested in the county council in trust for the residents living there.

5.3 Heritage Assets

In addition to customary or “ancestral lands” there are other assets which are amenable to valuation. For example, baobab trees, common on the Kenya coast and adjacent arid areas, are highly valued by local communities as well as European immigrants and tourists (mainly German and Italian), but for different reasons. While a Giriama smallholder farmer will treasure the tree on his plot, and even hold it in veneration, for its mystical qualities, the Italian will be prepared to pay extra for the plot because he sees in the tree certain exotic attributes which a European would appreciate more, such as the huge trunk, the wildlife seeking refuge in the foliage, the strangely shaped fruit, and the manner it sheds leaves in the summer to conserve moisture. Another example is unregistered land and property in or adjacent to old cities such as Lamu, Shela, and Faza in the Lamu archipelago, only some of the many such ancient cities on the east African coast. The valuation of such assets calls for special approaches.

Figure 7

Abandoned properties built of coral stone in lime mortar, though unregistered, may remain unclaimed for generations, but ownership is permanently etched in community memory, and descendants can always claim the property back if they can agree among themselves. Such properties, now rare in east African coastal towns, are in great demand from tourism industry investors



Photo: Madi Jimba

Figure 8

Nairobi: mixed use commerce, formal/informal housing



Photo: John Tracey-White

6.1 Overall Survey Scope and Approach to Field Surveys

The survey activities undertaken were driven by factors listed in Appendix B.2 (Framework for testing traditional land holding systems) and by the following values or principles:

- Focus on the project objectives by adding value to the unrecognised and rights of poor and disadvantaged people;
- Simplicity of approach and ease of execution;
- Relevance to local community situations be it in urban slums, peri-urban areas, rural villages or forests; with respect to the local customs and laws
- Consistency with internationally accepted valuation methods; and
- Compatibility with market realities.

The survey data was collected using combination of questionnaires and lengthy interviews with respondent families in the three study areas. A total of 206 respondents were interviewed, of which 189 were landowners/occupiers and 17 were valuers (see Table 1).

Table 1

Survey Framework

Survey Location	Owners/occupiers	Valuers
Mombasa	40	11
Nairobi	45	4
Western Kenya	104	2

Study Survey Areas:

The survey was conducted in three areas in Kenya:

1 Western Kenya: Igigo, Bumadeya and Budalang’i

These are rural holdings in Busia County, in low lying wetland areas prone to annual flooding, where most land is under customary tenure and unregistered. A major challenge is to relocate during floods. The main economic activity there is trade with neighbouring Uganda, although the county’s economy heavily relies on fishing and agriculture, with maize, millet, cassava, sweet potatoes and beans being the main crops. Population density in the county is at 430 persons per sq. km, against the national average of 66, and the poverty rate is 37% against a national average of 47.2% (Commission on Revenue Allocation, 2012).

The survey was undertaken in three settlement areas. The Igigo location is a typical area of rural holdings with pockets of registered land. Most of the land, however, remains unregistered and ownership is still under customary tenure. The Bumadeya’s land holding system is similar to that of Igigo, except that Bumadeya is a low lying wetland area that is prone to annual flooding. Although households have settled and there are designated homesteads, the major challenge has been where to relocate during flooding. Budalang’i is perhaps the area most affected by perennial flooding. Landholding is similar to the other two areas.



2 Mombasa: Mikindani, Bangladesh, Shika Adabu and Mburukenge

Mombasa County lies in the eastern coastal region of Kenya, and its main economic activities are harbour/port operations, tourism, fishing, agriculture and maritime businesses and commerce. The population density of Mombasa County is 4,284 persons per sq. km, the highest in Kenya. Like in the rest of the coastal region, land ownership in this county is characterized by high numbers of squatters, large land parcels owned by a few individuals, absentee landlords, extensive areas of unoccupied land and a lack of title deeds among many legitimate owners of unregistered lands.

Mburukenge is an urban slum adjacent to affluent residences; Shika Adabu and Mikindani are examples of failed or incomplete government settlement schemes. The land is unregistered or illegally occupied. The settlement is located within the Indian Ocean mangrove swamps.

3 Nairobi: Athi River, Mathare, Huruma and Korogocho

Nairobi is the capital city of Kenya and the administrative, industrial and commercial hub not only for Kenya but also the entire East Africa region. Population estimates for greater Nairobi, a metropolitan region extending over a 50 km radius, are at least four million, although the actual figure is probably higher, at six million. A larger part of Nairobi is registered land and most titles are already with land owners.

In Nairobi, the focus was on Athi River as a peripheral area that has a mixture of industrial and agricultural land uses. Although part of the land surrounding Athi River is mapped and registered, quite a sizeable portion is unregistered. The other study areas in Nairobi – Mathare, Huruma and Korogocho – are at the edge of the central business district; and are three of the largest urban slums in East Africa. Land in these settlements remains largely unregistered and ownership is marred in controversy since the squatters have settled on either private or public land.

It was envisaged by the study that by combining and analysing information from across this range of study areas, patterns of ownership and valuation methodology could be developed. This will be a way of recognizing the existence of transactions in unregistered “informal” lands in rural and urban areas, and perhaps it will shed light on acceptable means of estimating the worth of such properties.

6.2 Results of Full Survey: Occupants and Land Owners

Land Ownership

Land ownership was an unclear subject to most respondents, mainly because the majority of them are either partially or totally unaware of the actual meaning and implications of land ownership. Some respondents liken ownership to occupation and use only, while only a few know that ownership has to be formalized. Other respondents claimed both renting and ownership of the land they were found on. There was still another category of respondents who only rented the parcels of land, but could not divulge details on the arrangements pertaining to those parcels. These assertions explain why the totals returned in Table 2 below exceed the 104 sampled respondents.

Such multiple arrangements were found across all the study areas, despite the fact that two of these areas were in the largest cities of Kenya. Details of ownership are shown in Table 2 as follows:

Types	Frequency	Percentage
“Legal owners” (with proof)	43	23%
Claimants – not legal owners	94	49%
Renters/users	53	28%
TOTAL	190	100%

Proof of Ownership

Half of the land owning/using respondents claimed legal ownership, but:

- Proof of ownership was difficult to verify as owners either refused to show title deeds or the documents were difficult to authenticate
- For those who claimed ownership the following “proofs” in Table 3 were offered:

Type of proof	% claimants
“Sale agreement” with previous owner	30%
Letter of recognition from village elders or local chief	12%
Have witnesses who can verify ownership	9%
No document but believe land is theirs	24%
Inherited from parents	4%
Resident on the plot for a long time	21%

In short, only 30% of those interviewed had any form of documentary proof of ownership, and even then that evidence was not conclusive in many cases because they may not have bought from a legitimate owner, or the document was not necessarily formally registered with the Lands Registry or municipal authorities. The majority of such claimants produced either handwritten or typed “sale agreements” that are binding. It would appear that sale or transfer agreements between “sellers” and “owners” are the trusted documents in these areas. Given that official government papers require lengthy procedures, trust amongst the parties has replaced officialdom. The next significant “document” of proof was length of stay on the land, followed by belief that from ancestral times, the land was theirs irrespective of what laws were passed by the government. Other than those who produced sale agreements, about 57% of those who claimed to own the land actually had no documents to base their claims on.

Acquiring Land

The methods by which lands were obtained are shown in Table 4. Sale or transfer agreements between “sellers” and “owners” were the trusted documents – not official government papers.

- Trust amongst the parties has replaced officialdom
- Majority of claimants and users bought the land from others
- No proper records were available to ascertain exact status

Table 4 How land was obtained

	% of respondents
Bought from others	42%
Inherited from parents	37%
Gifted from leaders	20%
Adverse possession/squatted	11%

Although no proper formal records were available to ascertain the exact status of ownership, the survey results showed that the most prevalent mode of acquisition is purchasing the land from others. As has been indicated earlier, the so called “owners” may be persons who had only previously stayed on the plot and who had adversely possessed the land. The other common modes of acquisition in descending order were inheritance, gifted property or being obtained by squatting.

The second commonest mode of acquisition of land was through inheritance from parents, underscoring the fact that land has either not been registered in the study areas, or the “owners” of adversely possessed plots have taken a long time to claim back their lands.

One parcel in five was a “gift from leaders” or administrators, which testifies to the power and influence that leaders wield in local communities. This is also a convenient way of repelling accusations of squatting, since a generous gesture by a powerful administrator or politician is in itself seen as a stamp of legitimacy.

Figure 9 Location of Nairobi slum areas



Size of Land Holding

Ownership or occupation of land is for certain purposes. In both the urban areas of Nairobi and Mombasa, residential user was the most prevalent, while agriculture was dominant in western Kenya study areas. This means that in the case of western Kenya, sizes of land ranged from ¼ an acre to five acres. About 58% of the respondents did not know the size of parcels occupied. Similarly, more than 60% of the agricultural plots were sub-divided into even smaller sizes, while in urban areas the plot sizes were static from the time of occupation. That is because plots in slum areas are generally small in any case; there is intense competition for building space, and large plots have to be vigorously defended. Prices of lands sold were quite modest, sometimes as a mere proportion of the land value, at other times the buyer paid only a token fee for a start. It was, therefore, not possible from the survey results to determine the cost per unit of land measure, especially given that the land market appeared largely informal and unregulated.

Ignorance about plot sizes is not surprising in the absence of a formal survey. Traditional measures based on pacing out the length and breadth, or on the number of rooms the plot can accommodate, are instead commonly used.

Valuing Unregistered Land

Just as many respondents did not pay colossal sums to purchase their lands, and many others either inherited the lands, or were given as gifts, it was equally difficult for the respondents to fix the worth of their parcels. For those who invaded the lands (took adverse possession), the issue of land values was completely beyond their consideration. The parcel was valuable because it produced food, or it carried the family shelter, not because of its exchange value. Only a handful of respondents, 18%, gave a hint of how much their land was worth, and even these values were way far below the “market values” in the respective study areas. Arising out of this, the study found that more than 88% of the respondents were unable to prescribe a method of valuation in case their parcels were to be assessed, which was not surprising. Indeed, many had not even heard of the available methods of valuation, although the Comparison or Market Approach was the most mentioned method, at least to those who had an idea of valuation.

It should be remembered that the study intended to determine the factors that ought to be considered when valuing such unregistered land. Even with little or no knowledge of valuation, it was still possible to infer the factors that were to be considered in any valuation of land for sale, or exchange or transfer of any sorts. The results of this assessment are shown in Table 5.

From the point of view of “land owners”, value would be contributed to most by the expenses (costs) incurred in acquiring that land (i.e. the actual purchase price and associated costs), the value or prices of comparable sales in the vicinity and the location of that parcel of land in that order. Availability of services and facilities, and distance from water bodies featured less prominently as factors to be considered in valuing the subject lands. These two last factors appeared more important in Nairobi and Mombasa Island only. In western Kenya and Bangladesh and Mburukenge in Mombasa, nearness to water in fact was a disadvantage to the safety of the “land owners”. Water bodies not only harbour mosquitoes, crocodiles and other “serpents” but also pose a threat to children (of non-fisher-folk) who cannot swim, not to mention flood risk. In slum areas, land near the water is also more costly to build on.

Factors Considered	Frequency as %
Expenses incurred in acquiring the land	48%
Comparable sales	30%
Location of the property	16%
Availability of services and facilities	5%
Distance from water bodies	1%
TOTAL	100%

6.3 Results of Survey on Views of Valuation Surveyors

Factors Considered

Seventeen valuers were interviewed, who were selected randomly from a list of practicing valuers in Mombasa, Nairobi and Western Kenya as provided by the local chapters of the Institution of Surveyors of Kenya. The project attempted to determine factors that valuers ought to consider when valuing unregistered land. The average results from the survey are shown in Table 6:

Factors affecting values	100%
Expenses incurred in acquiring the land	48%
Comparable sales	30%
Location of the property	16%
Availability of services and facilities	5%
Distance from the water bodies	1%

Period in Practice

Out of the seventeen valuation surveyors interviewed, only 17.6 % had practiced in the study areas for more than ten years. A large majority of the respondents, (70.6 %) had practiced for between five and ten years, while two were only a year old in practice.

The number of valuers who had participated in valuing unregistered lands was highest in Mombasa because a large number of valuations in that region involve buildings “without land” i.e. buildings constructed on land without title deeds or any other official documentation. These buildings owe their existence courtesy of bilateral trust between willing sellers and buyers. It is common in some parts of Mombasa to find buildings owned separately from the land, and this is a recognized form of tenure.

Valuers frequently interact with property owners, prospective property buyers, renters and users. They are thus able to understand how values are determined since they participate in land transactions. Those valuers who had practiced for more than ten years appear to have been involved in valuing unregistered lands, and had a lot of experience with such parcels. Most of these valuers were found in Mombasa, where incidences of valuations of land without formal title documents are most common, even in settled urban estates.

Types of Land Holding

Valuers interact with property owners, prospective property buyers, renters and users i.e. they participate in land transactions; 45 % of valuers had valued unregistered lands within Mombasa and Nairobi, none in western Kenya. The remainder of valuers had not been approached to prepare a valuation or had declined owing to the lack of registered title. The types of unregistered lands valued by the respondents are shown in Table 7:

Types	10 parcels
Private land	4 parcels
Customary land	4 parcels
Squatter land	1 parcel
Unclear ownership	1 parcel

Purposes of Valuation

Most unregistered lands that was valued belonged to the customary category and because customary lands are under group ownership that is as secure as having a registered title. Owners of unregistered private lands and those on squatter land were unlikely to require their lands to be valued because of the queries on the legality of ownership.

- Main purpose for most valuations (75%) was for inheritance
- If a property had to pass on from the parent to children – it was not necessary to obtain fresh ownership details, especially as probate and estate administration issues take a long time to be resolved
- The balance of valuations for unregistered lands were for the purpose of accounting, bookkeeping or asset valuations

Can Unregistered Land be Valued?

Respondents were also asked whether unregistered land can be valued.

- 14 of the 17 valuers said ‘Yes’, while 3 said that it was ‘not possible’ to determine the values of unregistered lands
- For valuers who insisted that unregistered lands could not be valued, their main reasons was that land was never valued for its own sake
- It is the type of interests in the land that make the parcel worth the ascribed value
- Without declaring registered interests, it is difficult and rather impractical to return a proper value for any such piece of land

Types of Valuation Methods Used

Valuers who had valued unregistered land were asked to state the methods that they had used. The responses are shown in Table 8. No single method was useful on its own in valuing unregistered land because:

- comparable sales were rare to obtain
- transactions were taking place without the need for valuations
- land development was either minimal or non-existent

Surprisingly, none of the valuers had used the Income or Investment Method as a single method of valuation. The reason for this was that in western Kenya, most of the properties involved were lands used for subsistence farming or only for grazing, as was also the case in Athi River. Deriving incomes for such lands or determining incomes capable of being generated by them appeared rather abstract, particularly without supporting market evidence.

The survey responses show that the Market Comparison Method was the most widely used method in actual valuations of unregistered lands. Informal but active land markets were found in all the three study regions, and these markets involved unregistered lands. In Nairobi and Mombasa regions especially, “landlords” and house renters reported high and rising incomes, translating into higher values for their properties.

Parcels and properties keep changing hands on a daily basis and comparable sales are not that difficult to obtain. Imputing potential incomes from such properties, although risky and unreliable, is not far-fetched. For parcels in Mombasa’s study areas, the researchers found that “owners” ranged from true squatters to the middle income earners, and to a substantial extent, even high-income earners. In some of these settled areas e.g. Shika Adabu, it was found that many of the structures put up there were of a permanent and durable nature. Several formal real estate agents were found to be actively engaged in transactions on the ground. And although such properties are not generally accepted as collateral, informal finance institutions fully recognise and accept them as solid collateral for short term loans.

Table 8 Valuation Methods Used

Method	Number
Market or Comparison Method	8
Cost or Contractor’s Method	1
Combination of two or more methods	5

Challenges in Valuing Unregistered Land

In the view of the interviewed valuers, the main challenges faced in attempting to value unregistered lands are:

- i. Determining the real owner(s) of the subject parcels:** As most lands were not registered, it was difficult to identify the real owners of the subject lands. Cases of people claiming ownership were the majority, although proof of ownership could not be ascertained. At times, disputes were reported over more than two people or communities claiming ownership over the same parcels.
- ii. Lack of ownership documents:** Valuation involves determining the value of an interest in property. Where interests are not recorded or registered in official and acceptable documents, it is as if the interest is not recognised. In most of the study areas, very few respondents who claimed to be owners were able to show any ownership documents. Cases of multiple ownerships of the same parcels existed and these disputes over ownership lead to uncertainty in the validation process.
- iii. Vacant land:** In Nairobi, it was rare to find vacant land in the specific study areas, owing to the high density of population, intensity of land uses and the high demand for settlement space.
- iv. Hostile land occupants:** Mostly squatters who fear the consequences of any official transactions and activities. Although no valuation was attempted, whenever the land occupiers and others were asked about previous valuation transactions, they almost always gave hostile responses. Even hypothetical questions on valuation were met with resistance. Determining some of the variables necessary for carrying out valuations, or assisting in the valuation process proved difficult.
- v. Comparables:** Inability to obtain appropriate comparables: Some of the parcels under study were adjacent to areas whose lands had title deeds for which transactions were in the formal property markets. Details of comparable sales were relatively easier to obtain than in the informal real property market where transactions are done in secrecy for fear of “exposing yourself” to the authorities. Although there were vibrant real property markets in all the study areas, obtaining acceptable and reasonable direct comparables was not easy.
- vi. Documentation:** Due to lack of documents, it is not easy to determine the true boundaries and sizes of the lands: Boundary disputes made it very tedious to determine actual sizes of land plots and parcels owned and/or occupied. Indeed the majority of the respondents could not state with any accuracy the actual size of their parcels. Yet valuation requires that the size of the land must be known (more or less accurately) for its value to be assessed.
- vii. Valuation Methods:** The survey endeavoured to determine the appropriate method to be used for the valuations: All the valuers who were asked this question agreed that the valuation methodology for any parcel depends on the purpose of the exercise. However, owing to deficiencies in getting full information on ownership, sizes of the parcels, level of development on the properties and estimating future potentials, arriving at an appropriate valuation method was equally daunting. In the absence of such important details most valuers had to fall back to what prices at which property had changed hands in an already extremely imperfect market, or resort to combining more than one method of valuation, and even this after a lot of adjustments and modifications.

6.4 Mombasa Case Study

Apart from the data collected from the three locations in Mombasa, including an inner city slum and a settlement snuggling among mangrove groves and home gardens at the water’s edge, there are other situations and issues deserving close attention, including the following.

- i. For historical and religious reasons the city has a complex mosaic of land holding systems which are markedly different from those in upcountry Kenya. The range of types of unregistered land is therefore wider.
- ii. The existence of different layers of interests on a single plot makes valuation more challenging; for instance buildings or trees can be held and change hands separately from the land, or a lease can be held for an indeterminate period as long as certain conditions are met.
- iii. The foreshore is a special category of unregistered land which is technically public land but subject to a variety of claims by local communities and clans. The continental shelf is also defined as land in Kenya’s constitution and land laws; however the valuation of accompanying resources has unfortunately received hardly any attention. Disputes regarding exploitation rights for these resources (biomass/timber/dyes from mangrove forests, fisheries, sea-weed harvests, minerals and etc.) are on the increase and sound valuation techniques could help efforts to resolve such disputes.

- iv. The widespread incidence of grabbed land poses special problems to the valuer because of the threat of repossession by the government; that is although grabbed land may have been registered, it enjoys an inferior status in the market and could in practice be considered semi-registered. Valuers normally qualify their assessments with a caution as well as a substantial discount consistent with the perceived risk.
- v. Tourism and rapid urban growth is posing enormous stresses on fishing communities, e.g. restricted access to beaches, shrinking villages, limited access to traditional means of livelihood, and creation of MPAs (marine protected areas) which are normally created without consulting local people. Thus, traditional community based conservation practices are fast disappearing.

All these trends place additional and special pressures on local valuers to be creative in choosing and blending different available methods to suit a particular assignment. The valuation of unregistered urban land close to established residential areas is made that much more difficult by market trends driven by the emergence of a new class of wealthy business people able and willing to pay very inflated prices for new property in the high income suburbs of Mombasa.

Figure 10

Remote beaches such as this one in Lamu, actually breeding grounds for turtles another protected species, are coming under increasing pressure from speculators



Photo: Madi Jimba

6.5 Mombasa Roundtable Workshop

A one-day roundtable workshop was held on 19th July 2012 in Mombasa, Kenya, attended by 17 private and government sector participants and facilitated by RICS HQ staff (John Tracey-White, International Sustainable Development Advisor and Ben Elder, Global Director of Valuation).

This was a final step in the study, the goal of which was to develop an appropriate methodology for valuing non-market property in general (environmental assets, easements, spiritual and historic sites) and unregistered land in particular. The workshop was intended to advance the valuation process by reviewing the background to these issues and to draw some concrete conclusions on the next steps in developing appropriate valuation methodologies.

The workshop started with an introduction by Dr. Muhammad A. Swazuri, Deputy Principal, followed by a presentation by John Tracey-White FRICS on the FAO voluntary guidelines on responsible governance of tenure of land, fisheries and forest and their relevance to valuation. Madi-Jimba Yahya presented a paper on the pressures of land markets in historic cities, focusing on Lamu, which has been suffering from externally financed gentrification process, with European film stars willing to pay 10 times the "local" market value.

The valuation process for unregistered land in Zanzibar was described by Khamis Faraji Abdalla, Senior Legal Advisor from the Land Registry Office, who explained that the registration process was very slow and presented a number of challenges for valuation of unregistered land, including a lack of security, under-valuation of property, double compensation and an increase in Land Tribunal disputes.

Dr. Saad S. Yahya FRICS, Emeritus Professor at University of Nairobi presented in Mombasa on land and fisher folk, which concluded that although the benefits of a professional approach to valuation is indisputable, there may be negative aspects, including the extent to which valuations fuel price rises and speculation and whether market data can be used to dispossess and disenfranchise poor people, raising the question as to what ethical considerations need to be considered when it comes to perfecting a valuation methodology.

Ben Elder FRICS then presented a paper on valuing unregistered land holdings, particularly stressing the importance of standardised valuation approaches to improving market efficiency and reducing risk.

An interesting discussion ensued after Bernadette Gitari's presentation on the Valuation of Environmental Easements as defined in Kenya's Environmental Management and Coordination Act (EMCA) 1999. The purpose of such an easement is to permanently limit the use of private land to protect its conservation values as embodied in agreement between the owner and say a charitable organisation. So the issue was, does a conservation easement enhance or diminish the market value of a property? While it was generally agreed that the answer would vary according to the particular circumstances of a case, the preferred valuation method should be the Value Before/ Value After approach.

Private and government valuers from Mombasa then presented their experience in valuing unregistered land in the city. What was striking was the readiness of valuers to attempt such valuations, mostly relying on the use of comparables, corroborated in some instances with income data. In Mombasa the valuation of unregistered properties, mainly characterized as "buildings without land", was described as the "order of the day" and this practice was generally recognised by the courts if there was a local dispute. In fact there was normally two "valuations", a private one and a government one, and these were used as the basis for a negotiated value for acquisition purposes, onto which a 35% disturbance fee was added. The valuations of unregistered land were also used for estate duty and succession purposes.

There was also a willingness of some of the local banks to use these valuations for mortgage security, albeit for a limited number of years and only if there was some form of reference number attached (for a temporary or permanent structure) and ideally if the building plan had been endorsed by the land owner and/or municipal authorities.

The workshop concluded that a policy should be put in place on how to value such lands, which needed to recognise transactions in unregistered lands that took account of practical factors on the ground. It was also recommended that Institution of Surveyors of Kenya (ISK) should update its own valuation handbook to take into account the increasing volume of transactions in unregistered land

Figure 11

Nairobi streets



Photos: Aliya Chaudhry / youthjournalism.org

7.1 Findings

The findings of this study could be summarised as follows:-

- a. Unregistered lands are found across all the three study areas, and registered parcels were also found intermixed with unregistered holdings.
- b. Ownership of these lands is still unclear, in terms of who owns what, how the lands were acquired, the cost of transactions and procedures in transfer and acquisition.
- c. Most of the respondents inherited the lands from their departed parents, which means that there have been long periods of land occupation without registration.
- d. Majority of respondents were not aware of the legal procedures for transferring and owning land, let alone the benefits of and procedures for valuing such lands.
- e. Valuers had difficulties in valuing unregistered lands although values can still be estimated for these properties – sometimes referred to as “vernacular” valuations.
- f. The most commonly used method in preparing such valuations was the Sales Comparison or Market Approach, but other methods were also used. The issue was not, therefore, the valuation method as such but the context and the process in which it was to be applied in the valuation and transfer of rights. The wide range of tenure types that form the “continuum of rights” need to be accommodated in the valuation process: formal, and informal, legal and illegal, secular and religious (e.g. Islamic tenure categories), secure and insecure, and modern and customary. This is a similar conclusion to that found in other RICS funded research studies in Kenya, Uganda and Ghana.
- g. No official valuation guidelines are available in Kenya for such valuation exercises, neither from the ISK nor the Lands Ministry. This is despite the fact that two thirds of the land mass in Kenya is unregistered. Yet land transactions are still carried out. Valuers rely on personal ingenuity to return values for such lands, however rudimentary the level of supporting data available.
- h. In remote areas of Kenya, services of valuers and similar professionals are not utilized, either because potential clients are not aware of the existence of such services or they do not see their importance, or the professionals themselves are not stationed there, preferring instead to locate in towns where their services are regularly required and adequately paid for.
- i. Other than in rural western Kenya all the “unregistered parcels” in the study area in urban Nairobi and Mombasa were found adjacent to relatively higher income areas. Mburukenge in Mombasa, for instance is next to the Tudor area, perhaps the most valued residential neighbourhood on the island of Mombasa. The same can be said of Huruma in Nairobi and Mikindani also in Mombasa. It would appear that these are areas that attract “invaders” who offer labour services (e.g. domestics, maids, gardeners, night guards and drivers) to their more economically affluent neighbours.

7.2 Conclusions and the Way Forward

Respondent valuers were asked to suggest the way forward in valuing unregistered lands. All of them acknowledged that such an exercise poses an intriguing challenge to the valuer, mainly because of the illegality of ownership or lack of documented interests in the property. Their proposals were that:

- a. A policy guideline and methodological approach should be put in place to assist in valuing unregistered land. In order to achieve this, ISK, RICS Kenya and the government (including the National Land Commission) will have to work together more closely. This could be the first step towards developing continent-wide standards under the aegis of the African Union in its ongoing Land Policy Programme. UN-Habitat /GLTN could also provide additional support.
- b. A legal and/or policy framework should be put in place in Kenya to recognize legitimate transactions in unregistered lands, given that such transactions are quite numerous and spread across large areas.
- c. The government should speed up the process of registering land all parts of the country, while not forgetting the need to leave an adequate reserve of public and community land for future use. This will enable interests to be determined and recorded, transactions to be recorded and monitored, owners to benefit from the properties and valuers to conduct work in a standardized, clear way.
- d. Valuation and related services should be disseminated to areas with unregistered parcels and eventually to all rural areas. It should be made easier to access such services, so that the people know of their existence. This will also eliminate the practices of unprofessional and fraudulent land agents and brokers, most of whom are responsible for the distorted land and real property markets in the country.
- e. The ISK should study and perhaps incorporate/adopt the recently published FAO Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests to enable valuations of such unregistered lands to be acceptable. Although the Voluntary Guidelines give no detailed guidance on valuation techniques, they do offer useful ideas on matters to be taken into account for instance in assessing compensation for land acquisition including resettlement and livelihood issues.
- f. Practically, these recommendations could be part of explored through a series of **technical training workshops** with valuers and with more generalised stakeholder workshops with NGOs and civil society. Initial coverage of these workshops could be Kenya and than expanded to other East African countries (Uganda, Tanzania and Rwanda). **Workshop teaching material** in English and local languages will need to be prepared for these workshops. To implement these workshops training materials will need to be developed, including documentation of good practices, practical experience and lessons learned in using valuation methods.
- g. At a more theoretical level, and outside the immediate concerns of professional valuers, it will be important for research work on the topic to continue in order to not only refine existing valuation tools but also deepen the understanding of market structures and processes where land registration as currently practiced internationally does not exist; where new forms of cadastre are emerging; or where a register once existed but has since been rendered extinct or useless by a natural disaster or civil war and other conflicts.
- h. This study has shown how valuers are ready and willing to improvise in order to deliver a credible opinion of value when needed to facilitate market or official transactions. That has been made possible by a solid foundation of knowledge acquired in their training, on the cardinal principles of valuation. That knowledge ought to be expanded and enriched in valuation schools, which ought to be better equipped to produce the valuers of the future.
- i. Finally, a **Scoping Study** needs to be prepared to explore development of further valuation tools, new and extended research requirements, enhanced capacity/ training needs of survey professionals and further improvement of survey methods.

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- Commission on Revenue Allocation, 2012
- Land Act 2012
- Land Registration Act 2012
- National Land Commission Act 2012
- Land and Environment Court Act 2011.

Appendix A.1 Standard Land and Property Valuation Methods

The Cost Approach

The cost approach was formerly called the summation approach. The theory is that the value of a property can be estimated by summing the land value and the depreciated value of any improvements. The value of the improvements is often referred to by the abbreviation RCNLD (reproduction cost new less depreciation or replacement cost new less depreciation). Reproduction refers to reproducing an exact replica. Replacement cost refers to the cost of building a house or other improvement which has the same utility, but using modern design, workmanship and materials. In practice, appraisers use replacement cost and then deduct a factor for any functional disutility associated with the age of the subject property.

In most instances when the cost approach is involved, the overall methodology is a hybrid of the cost and sales comparison approaches. For example, while the replacement cost to construct a building can be determined by adding the labour, material, and other costs, land values and depreciation must be derived from an analysis of comparable data.

The cost approach is considered reliable when used on newer structures, but the method tends to become less reliable for older properties. The cost approach is often the only reliable approach when dealing with special use properties.

The Sales Comparison Approach

The sales comparison approach in a valuation is based primarily on the principle of substitution. This approach assumes a prudent individual will pay no more for a property than it would cost to purchase a comparable substitute property. The approach recognizes that a typical buyer will compare asking prices and seek to purchase the property that meets his or her wants and needs for the lowest cost. In developing the sales comparison approach, the valuer attempts to interpret and measure the actions of parties involved in the marketplace, including buyers, sellers, and investors.

Data are collected on recent sales of properties similar to the subject being valued, which are called “comparables”. Sources of comparable data include real estate publications, public records, buyers, seller, real estate brokers and/or agents, appraisers, and others. Important details of each comparable sale are described in the appraisal report. Since comparable sales are not usually identical to the subject property, adjustments may be made for date of sale, location, style, amenities, square footage, site size, etc. The main idea is to simulate the price that would have been paid if each comparable sale were identical to the subject property. If the adjustment to the comparable is superior to the subject, a downward adjustment is necessary. Likewise, if the adjustment to the comparable is inferior to the subject, an upward adjustment is necessary. From the analysis of the group of adjusted sales prices of the comparable sales, the valuer selects an indicator of value that is representative of the subject property.

Steps in the Sales Comparison Approach

- (i) Research the market to obtain information pertaining to sales, listings, pending sales that are similar to the subject property.
- (ii) Investigate the market data to determine whether they are factually correct and accurate.
- (iii) Determine relevant units of comparison (e.g., sales price per square foot), and develop a comparative analysis for each.
- (iv) Compare the subject and comparable sales according to the elements of comparison and adjust as appropriate.
- (v) Reconcile the multiple value indications that result from the adjustment of the comparable sales into a single value indication.

The Income Capitalization Approach

The income capitalization approach (often referred to simply as the “income approach”) is used to value commercial and investment properties. As it is intended to directly reflect or model the expectations and behaviours of typical market participants, this approach is generally considered the most applicable valuation technique for income-producing properties, where sufficient market data exists to supply the necessary inputs and parameters for this approach.

In a commercial income-producing property this approach capitalizes an income stream into a value indication. This can be done using revenue multipliers or capitalization rates applied to the first-year Net Operating Income. The Net Operating Income (NOI) is gross potential income (GPI), less vacancy and collection loss (= Effective Gross Income) less operating expenses (but excluding debt service, income taxes, and/or depreciation charges applied by accountants).

Alternatively, multiple years of net operating income can be valued by a Discounted Cash Flow analysis (DCF) model. The DCF model is widely used to value larger and more expensive income-producing properties, such as large office towers. This technique applies market-supported yields (or discount rates) to future cash flows (such as annual income figures and typically a lump sum reversion from the eventual sale of the property) to arrive at a present value indication.

Profit Method

Used for trading properties where evidence of rates is slight, such as hotels, restaurants and old-age homes. A three-year average of operating income (derived from the profit and loss or income statement) is capitalized using an appropriate yield. Note that since the variables used are inherent to the property and are not market-derived, therefore unless appropriate adjustments are made, the resulting value will be Value-in-Use or Investment Value, not Market Value.

Residual Method

This is used for properties ripe for development or redevelopment or for bare land only.

Contingent Valuation

Contingent valuation is a survey-based economic technique for the valuation of non-market resources, such as environmental preservation or the impact of contamination. While these resources do give people utility, certain aspects of them do not have a market price as they are not directly sold e.g. people receive benefit from a beautiful view of a mountain, but it would be tough to value using price-based models. Typically the survey questionnaire asks respondents how much money they would be willing to pay (or willing to accept) to maintain the existence of (or be compensated for the loss of) an environmental feature, such as biodiversity.

Travel Cost Method and Hedonic Pricing Model

These approaches are discussed in Chapter 3. They are based on how to ascertain values to natural resources (including land as a natural resource) and the application of valuation methods in the valuation of unregistered land parcels and based on an understanding of how communities attach values to the various parcels of land they hold as property.

Automated Valuation Models (AVMs)

Automated valuation models (AVMs) are growing in acceptance. These rely on statistical models such as multiple regression analysis or geographic information systems (GIS). While AVMs can be quite accurate, particularly when used in a very homogeneous area, there is also evidence that AVMs are not accurate in other instances such as when they are used in rural areas, or when the appraised property does not conform well to the neighbourhood. AVM's have also gained favour in class action litigation, and have been substantiated in numerous cases, both in Federal and state courts in the USA, as the appropriate method for dealing with large-scale real estate litigation problems, such as contaminated neighbourhoods.

Appendix A.2 Natural Resources Valuation Methods

a. Changes in Productivity

One widely used technique, thanks to its broad applicability and its flexibility in using a variety of data sources, is known as the “change in productivity technique”. The method consists of tracing through chains of causality so that the impact of changes in the condition of an ecosystem can be related to various measures of human well-being. Such impacts are often reflected in goods or services that contribute directly to human well-being (such as production of crops or of clean water), and as such are often relatively easily valued. The valuation depends on the type of impact but is often straightforward.

The impact of hydrological changes on use of water for human consumption, for example, begins by tracing through chains of causality to estimate the changes in the quantity and quality of water available to consumers. This is itself often difficult. For instance, the relationship between tree cover and water productivity in a watershed is complex and often not well understood. Further scientific research into this relationship and the chains of causality will in such cases be a key precondition for valuation. In the case of marketed goods, the actual valuation is relatively straightforward. For instance, the net value in reductions in irrigated crop production resulting from reduced water availability is easy to estimate, for example, as crops are weighed for selling. (Even so, it is a very common error to use the reduction in the gross value of crop production rather than the net value. Using gross value omits the costs of production and so overestimates the impact.)

Where the impact is on a good or service that is not marketed or where observed prices are unreliable indicators of value, the valuation can become more complex. In the example above, it has to be noted that the prices charged to consumers for water consumption are typically not reliable measures of the value of the water to consumers, as they are often set administratively, with no regard for supply and demand (indeed, in most cases water fees do not even cover the cost of delivering the water to consumers, let alone the value of the water itself). The value of an additional unit of water can then be estimated in various ways, such as the cost of alternative sources of supply (cost-based measures are described later) or asking consumers directly how much they would be willing to pay for it (contingent valuation, described later). Note that it is very important to use the value of an additional unit of water, since some amount of water is, of course, vital for survival. Thus an additional unit of water will be very valuable when water is scarce, but much less so when water is plentiful. In this case, as in many others, averages can be misleading.

When the impact is on water quality rather than quantity, the impact on well-being might be reflected in increased morbidity or even mortality. Again, the process begins by tracing through chains of causality, for example by using dose-response functions that tie concentrations of pollutants to human health. Valuing the impact on health itself can then be done in a number of ways (see cost of illness and human capital, in the next section). In some cases, the impact is on relatively intangible aspects of well-being, such as aesthetic benefits or existence value. Starting in the 1960s, particular efforts have been made to develop techniques to value such impacts, including hedonic price, travel cost, and contingent valuation methods, and considerable progress has been made since then (see below for further discussion).

b. Cost of Illness and Human Capital

The economic costs of an increase in morbidity due to increased pollution levels can be estimated using information on various costs associated with the increase: any loss of earnings resulting from illness; medical costs such as for doctors, hospital visits or stays, and medication; and other related out-of-pocket expenses. The estimates obtained in this manner are interpreted as lower-bound estimates of the presumed costs or benefits of actions that result in changes in the level of morbidity, since this method disregards the affected individuals' preference for health versus illness and restrictions on non-work activities. Also, the method assumes that individuals treat health as exogenous and does not recognize that individuals may undertake defensive actions (such as using special air or water filtration systems to reduce exposure to pollution) and incur costs to reduce health risks.

When this approach is extended to estimate the costs associated with pollution-related mortality (death), it is referred to as the human-capital approach. It is similar to the change-in-productivity approach in that it is based on a damage function relating pollution to productivity, except that in this case the loss in productivity is that of human beings, measured in terms of expected lifetime earnings. Because it reduces the value of life to the present value of an individual's future income stream, the human-capital approach is extremely controversial when applied to mortality. Many economists prefer, therefore, not to use this approach and to simply measure the changes in the number of deaths or in the probability of death (without monetary values), or measures such as disability-adjusted life years.

c. Cost-Based Approaches

The costs of replacing or restoring the services provided by the environmental resource can sometimes be a relevant variable in decision-making. For example, if ecosystem change reduces water filtration services, the cost of treating water to make it meet the required quality standards could be used. The major underlying assumptions of these approaches are that the nature and extent of physical damage expected is predictable (there is an accurate damage function available) and that the costs to replace or restore damaged assets can be estimated with a reasonable degree of accuracy. It is further assumed that the replacement or restoration costs do not exceed the economic value of the service, bearing in mind that potential externalities generated by the replacement options should also be taken into consideration. These assumptions may not be valid in all cases. It simply may cost more to replace or restore a service than it was worth in the first place - for example, because there are few users or because their use of the service was for low-value activities.

Even while there is not necessarily any relationship between the replacement or restoration cost and the value of the service, cost-based approaches can provide useful guidance in a number of cases, in particular when the specific decision-making problem calls for a comparison of the costs resulting from all different replacement or restoration options. For instance, in an often-quoted case, the New York City water authority avoided spending US\$6-8 billion on water purification plants by investing US\$1.5 billion for protection and restoration of the upstate watershed of the Catskills Mountains.

Here, the decision making problem was simply to minimize the cost of meeting an objective, by comparing the costs resulting from replacement and from restoration options. The priority given to the objective itself (a reliable supply of drinking water meeting certain quality standards) was unquestionable and, hence, not part of the decision-making problem.

d. Hedonic Analysis

The prices paid for goods or services that have environmental attributes differ depending on those attributes. Thus, a house in a clean environment will sell for more than an otherwise identical house in a polluted neighbourhood. Hedonic price analysis compares the prices of similar goods to extract the implicit value (also dubbed “shadow price”) that buyers place on the environmental attributes. This method assumes that markets are transparent and work reasonably well, and it would not be applicable where markets are distorted by policy or market failures. Moreover, this method requires a very large number of observations, so its applicability is limited.

e. Travel Cost

The travel-cost method is an example of a technique that attempts to deduce value from observed behaviour in a surrogate market. It uses information on visitors' total expenditure to visit a site to derive their demand curve for the site's services. From this demand curve, the total benefit visitors obtain can be calculated. (It is important to note that the value of the site is not given by the total travel cost; this information is only used to derive the demand curve). Technically, the total benefit is expressed as the area under the demand curve minus the costs - this is equivalent to the sum of the consumer surplus and the producer surplus. This method was designed for and has been used extensively to value the benefits of site-seeing or of recreation at particular sites; but the method has limited utility in other settings.

f. Contingent valuation

Contingent valuation is an example of a stated preference technique. It is carried out by asking consumers directly about their willingness-to-pay to obtain an environmental service. (Or under some circumstances their willingness-to-accept). A detailed description of the service involved is provided, along with details about how it will be provided. The actual valuation can be obtained in a number of ways, such as asking respondents to name a figure, asking them whether they would pay a specific amount (dichotomous or polychotomous logistical choices) or having them choose from a number of options (choice modelling). However, respondents do not necessarily have to provide a monetary figure.

Contingent valuation can, in principle, be used to value any environmental benefit simply by phrasing the question appropriately. Moreover, since it is not limited to deducing preferences from available data, it can be targeted quite accurately to ask about the specific changes in benefits that the change in ecosystem condition would cause. Because of the need to describe in detail the service being valued, interviews in contingent valuation surveys are often quite time-consuming. It is also very important to identify the relevant population, to ensure representativeness of the sample of respondents, and to have the questionnaire extensively pre-tested to avoid various sources of bias.

A potentially important limitation in terms of applying these methods to ecosystem services is that respondents cannot typically make informed choices if they have a limited understanding of the issue in question. Choosing the right approach and the adequate intensity of efforts in improving the understanding of biological complexity of the sample group is a challenge for stated preference methods. Contingent valuation methods have been the subject of severe criticism by some analysts, in particular because a number of biases can occur that would lead contingent valuation studies to not reflect true preferences.

One major issue is that of so-called zero-bids, that is, respondents that state to have no willingness-to-pay at all. In some cases, such an occurrence can be explained by economic theory – the service in question is not valued by the respondent or his/her budget restrictions are too tight. However, zero-bids can also reflect protest – respondents who do not agree that they should pay for the service in question and who consider someone else responsible, for instance the government or the polluter. A zero-response may also be given when no trade-offs for the service are accepted at all (so-called lexicographic preferences). Finally, protest bids can also occur when the survey itself is rejected as a methodology, or payment vessels are not accepted. The payment vessel can be refused because another is considered superior (e.g. taxes vs. fees), or the responsible institution is not considered trustworthy.

- Exaggerated willingness-to-pay statements are possible as well, for different reasons:
 - The phenomenon of “yea-saying” has been shown to occur sometimes - respondents will agree to a proposal or bid to please the interviewer or avoid further questions.
 - The existence of a “warm glow” can also have an influence; respondents tend to feel good about giving, about being “good” or “nice”, and will initially offer higher willingness-to-pay than after thorough consideration.
 - Strategic behaviour can occur: participants will state unrealistic willingness-to-pay numbers in an attempt to influence the outcome of the study.
 - Willingness-to-pay statements tend to also be elevated due to a lack of awareness of possible substitutes.
- Another source of bias can be through the interviewer giving information that is not fully neutral, or formulating questions to favour certain answers. A “blue-ribbon” panel was organized by in the United States following controversy over the use of contingent valuation to value damages from the 1989 Exxon Valdez oil spill. The report of this so-called NOAA panel (Arrow et al., 1993) concluded that contingent valuation can provide useful and reliable information when used carefully, and it provided guidance thereon that can help to reduce or avoid many of the biases described above. This report is generally regarded as authoritative on appropriate use of the technique.

The guidance of the panel includes inter alia the following requirements:

- The design of contingent valuation studies should be conservative, always rather allowing for an underestimate than an overestimate of willingness-to-pay.
- Because the concept of willingness-to-accept is a source of potential bias, willingness-to-pay should be preferred over willingness-to-accept.
- The valuation questions are to be asked as a not completely open referendum vote
- Sufficient information must be provided, however care is necessary in the use of pictures, including the pre-testing their effect on participants, and possibly making another choice.
- Participants should be made aware of substitutes for the good being evaluated.
- Sufficient time should pass after a negative impact on the ecosystem before a contingent valuation study is conducted in order to avoid answers out of a momentary disposition.
- Answers averaged over several points in time can avoid catching temporary changes in preferences.
- Respondents should be able to refuse an answer, with an attempt to be made of finding out the reasoning behind both refusals to answer and yes/no answers.
- A high quality survey would also include questions on socioeconomic data and respondents’ general attitudes and perceptions of the issue at stake, with the influence of these variables on the willingness-to-pay being analyzed.
- Lastly, with all the above guidelines met, the questionnaire must still be easy enough to understand and not take an excessive amount of time to complete.

Dichotomous or polychotomous choice is a variant of Contingent Valuation where instead of open questions the respondents are asked whether they would pay a certain amount. Dichotomous choice allows only for “yes” and “no” answers, polychotomous choice provides more options such as “probably pay”, “certainly pay” or “not sure”. Questions can be single-bounded, where only one question is asked, or multiple-bounded, where follow-up questions with higher or lower amounts, depending on the initial reply, are asked. There are usually different versions of a questionnaire with different amounts being initially offered for choice. This technique makes answering easier for respondents, thereby reducing the chance of unrealistic statements. It does however bear the risk of starting point bias, that is, researchers influencing outcomes by choosing certain starting points.

g. Choice Modelling

Choice modelling (also referred to as contingent choice, choice experiments, conjoint analysis, or attribute-based stated choice method) is a newer approach to obtaining stated preferences. It consists of asking respondents to choose their preferred option from a set of alternatives where the alternatives are defined by attributes (including the price or payment). The alternatives are designed so that the respondent's choice reveals the marginal rate of substitution between the attributes and the item that is trade off (e.g., money). These approaches are useful in cases in which the investigator is interested in the valuation of the attributes of the situation or when the decision lends itself to respondents choosing from a set of alternatives described by attributes.

Choice modelling has several advantages: the control of the stimuli is in the experimenter's hand, as opposed to the low level of control generated by real market data; the control of the design yields greater statistical efficiency; the attribute range can be wider than found in market data; and the introduction or removal of products, services and attributes is easily accomplished (Louviere et al., 2000; Holmes and Adamowicz, 2003; Bateman et al., 2004). Conjoint analysis to value ecosystem services in different rural areas has been used in Colombia in a project by the Alexander von Humboldt Institute in cooperation with the University of Massachusetts (see Colombia, 2002).

The method also minimizes some of the technical problems associated with contingent valuation, such as strategic behaviour of respondents. The disadvantages associated with the technique are that the responses are hypothetical and therefore suffer from problems of hypothetical bias (similar to contingent valuation) and that the choices can be quite complex when there are many attributes and alternatives. The econometric analysis of the data generated by choice modelling is also fairly complex.

h. Benefits transfer

A final category of approach is known as benefits transfer. This is not a methodology per se but rather refers to the use of estimates obtained (by whatever method) in one context to estimate values in a different context. For example, an estimate of the benefit obtained by tourists viewing wildlife in one park might be used to estimate the benefit obtained from viewing wildlife in a different park. Alternatively, the relationship used to estimate the benefits in one case might be applied in another, by using adjusted data from this case in conjunction with some data from the site of interest ("benefit function transfer"). For example, a relationship that estimates tourist benefits in one park, based in part on their attributes such as income or national origin, could be used in another park, but with data on income and national origin of that park's visitors.

Benefits transfer has been the subject of considerable controversy in the economics literature, as it has often been used inappropriately. According to the Millennium Ecosystem Assessment, a consensus seems to be emerging that benefit transfer can provide valid and reliable estimates under certain conditions. These conditions include the requirement that the commodity or service being valued be very similar at the site where the estimates were made and the site where they are applied and that the populations affected have similar characteristics. Up to a limit, differences in the population's characteristics can be addressed by using benefits functions transfer.

Of course, the original estimates being transferred must themselves be reliable in order for any attempt at transfer to be meaningful. As the conditions at the two sites are unlikely to be perfectly identical, some transfer error is to be expected. This feature, however, does not speak as such against the application of benefits transfer in real-world decision-making. This is because estimates based on benefits transfer can be generated with considerably less time and resources than primary studies. In a world of scarce resources and typically very costly primary studies, decision makers may be willing to trade quick and cheap numbers against a certain loss in accuracy, provided that minimum quality standards are met. They may even be more ready to do so when the relevant alternative, under given resource constraints, is simply to have no estimate at all. Moreover, benefits transfer may be attractive when decision makers request, as is frequently the case, quick (but not necessarily final) answers from administrators – it may hence play a role within rapid assessment methodologies. Christie et al. (2004) notes in this connection that: "Finding acceptable benefits transfer methods is essential to the wider use of environmental valuation in policy". However, the standards of accuracy required in academic work may exceed those viewed as tolerable by policy-makers. The key question is: how close is close enough for policy purposes?

Appendix B.1 Pilot Questionnaire: Nairobi Peri-Urban Areas

Location: _____	
Date: _____	Interviewer: _____
1.	Is there a postal address here? (Give it)
2.	Are you: <input type="checkbox"/> Owner? <input type="checkbox"/> Occupier? <input type="checkbox"/> Renting (on what basis?) _____ <input type="checkbox"/> In name of (i.e. husband/wife)? _____
3.	Number of people who live here with you: Adults _____ Children _____
4.	How much land do you have here?
5.	Is it sub-divided?
6.	Do you have tenants?
7.	How did you come to be here?
8.	If you own your plot, how much did you pay?
9.	How long ago?
10.	Did you build? If so, how was it funded?
11.	What services do you have?
12.	What documents, title deeds and permits do you have?
13.	If lease, what period?
14.	Do you understand the process of obtaining title deeds?
15.	Do you have any mortgage/loans raised on the property?
16.	What is good about this property/area?
17.	What is bad about this property/area?
18.	What improvement would you like to see in the area?
19.	What future intentions do you have for the property?

Figure 12



Photo: africa924 / Shutterstock.com

Appendix B.2 Framework for testing traditional land holding systems

a. Sample Areas and focus groups

Type of land holding system [#]	Survey location
Customary rural holding	Igigo, Budalang'i, West Kenya
Customary wetland holding	Bumadeya, Budalang'i, West Kenya
Fishers – lake fishing rights	Port Victoria, West Kenya
Peri urban occupants	Nairobi periphery
Urban slum area	Nairobi periphery
Urban slum area	Mombasa
Fishers – beach lands	Mombasa
Fishers – delta area and creeks*	Mombasa
Fishers – mangrove swamps	Mombasa

Such as: “plot borrowing”, perpetual leases, occupancy rights, ownership of buildings and/or permanent crops independently of the land, easements, harvesting rights, and traditional way leaves

* Including riparian rights

b. Stratified sampling framework

Main category	Sub-category
Access	On/near main path or road
	Not on/near main path or road
Construction quality	Temporary wall materials – GI, ply, board
	Wattle and daub walls
	Permanent walls – block, brick, stone
Flood conditions:	Annual flooding
	No regular flooding

Appendix B.3 Pilot Questionnaire: Land Owners and Occupiers

1.	Do you own this land? <input type="checkbox"/> Yes (go to 2) <input type="checkbox"/> No
2.	Do you have any legal documents to prove ownership? <input type="checkbox"/> Yes (go to 3) <input type="checkbox"/> No Why? _____ (go to 4)
3.	What legal document(s) do you have? (Tick where appropriate) <input type="checkbox"/> Title deed <input type="checkbox"/> Certificate of lease <input type="checkbox"/> Temporary occupation licence <input type="checkbox"/> Allocation letter/certificate
4.	What then proves that you are the owner?
5.	How did you acquire the land? (Tick where appropriate) <input type="checkbox"/> Bought <input type="checkbox"/> Gift <input type="checkbox"/> Inherited <input type="checkbox"/> Adverse possession <input type="checkbox"/> Grant from central government <input type="checkbox"/> Grant from the local government <input type="checkbox"/> Grant from the local leaders <input type="checkbox"/> Grabbed <input type="checkbox"/> Invaded
6.	Do you know the size of this land? <input type="checkbox"/> Yes <input type="checkbox"/> No How do you know the size?
7.	Do you know the value of your land? <input type="checkbox"/> Yes <input type="checkbox"/> No
8.	If yes to 7 above, how do you know the value?
9.	If no, would you like to have it valued? <input type="checkbox"/> Yes <input type="checkbox"/> No
10.	If yes to 9 above, for what purpose? (Tick where appropriate) <input type="checkbox"/> Advisory <input type="checkbox"/> Sale <input type="checkbox"/> Sub division <input type="checkbox"/> Mortgage
11.	Have you ever engaged the services of a valuer before? <input type="checkbox"/> Yes <input type="checkbox"/> No
12.	Do you know any land valuation method(s)? <input type="checkbox"/> Yes <input type="checkbox"/> No State them:
13.	Which valuation method would you like applied in valuation of your land?

Appendix B.4 Questionnaire for Valuers

1.	Name of the valuer/firm/company (optional)
2.	How long have you been practicing
3.	Have ever valued any unregistered land for whatever purpose? <input type="checkbox"/> Yes <input type="checkbox"/> No
4.	If yes state the purpose(s)
5.	Which valuation method(s) did you adopt?
6.	Have you encountered any challenges in valuing unregistered land? List them:
7.	Do you have any legal documents to prove ownership? <input type="checkbox"/> Yes which valuation method(s) is appropriate? <input type="checkbox"/> No give reasons
8.	Is there any difference in valuation of registered and unregistered land? <input type="checkbox"/> Yes State the difference(s) <input type="checkbox"/> No
9.	In your opinion, what is the way forward in valuation of unregistered land?

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